OUTLOOK | **2020**

Staying positive in a negative (yielding) world

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Private Banking for Global Citizens

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Discover Outlook 2020

David Bailin
Chief Investment Officer

Foreword

As we close out 2019, Citi Private Bank is confident that the coming year will be brighter than many expect. The global economy is holding up well, despite the headwinds of international trade tensions and widespread political uncertainties. Timely interest rate cuts and other monetary accommodation from key central banks have been successful in sustaining economic growth. We see the global economy's notable resilience continuing, supported by robust consumer activity and a rebound in manufacturing. Our view is that a pick-up in economic activity will feed through into solid corporate revenue growth and modest earnings growth in 2020, buoying equity markets and causing longer-term rates to rise somewhat more than the consensus expects. For these reasons, we have a clear and simple message: stay positive. Welcome to Outlook 2020!

Of course, many investors and pundits still seem to disagree with us. Despite the economy's resilience and the markets' powerful rally in 2019, we still hear the refrain that a US recession is imminent. We therefore set out our evidence for ongoing US and global economic growth in **Avoiding the madness of crowds** and in **Regional asset class previews**. By focusing on hard economic facts, figures, and notable trends, we believe it is possible to avoid getting caught up in the fear and paralysis that have kept many investors from participating in 2019's upside. In short, we want you to participate wisely in the upside 2020 may bring – see **Staying positive in a negative (yielding) world**.

As well as cutting through negativity, an even bigger challenge in 2020 comes from negative bond yields. We think today's unprecedented global shortage of yield calls for major changes in most portfolios. We see little point in investing in very low or negative yielding bonds. Our recommendation is to avoid such assets and seek portfolio income instead by reallocating to a range of other investments. You can find out which ones in **Realigning income portfolios**. In **Unstoppable trends**, we also highlight three powerful long-term forces that are likely to transform their industries and offer sustainable growth potential for your portfolio.

Outlook 2020 explains where you should make new investments, but also takes a step back to explore some even bigger issues. Our Investment Philosophy presents proven principles that have helped some families remain among the world's wealthiest for generations. In today's often unsettled environment, we explain **Why an investment philosophy matters more than ever**. We then demonstrate the ways that we put our philosophy into action in your portfolio – **How we do what we do**.

Citi Private Bank remains your partner and guide, explaining what matters in 2020 and how to make your portfolio stronger, smarter and more forward-thinking, even amidst today's negative yielding world. Let us help you stay positive and take action.

1 Overview

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1.1 Staying positive in a negative (yielding) world

DAVID BAILIN, CHIEF INVESTMENT OFFICER

Amid today's negativity and negative rates, our goal is to help you stay positive by looking beyond the daily news and focusing on hard economic facts.

KEY MESSAGES

- Poor sentiment and negative yields persist as we enter 2020
- By contrast, global corporate earnings may grow by 7% or more if policymakers simply choose to avoid escalating the trade war in 2020
- We advise staying fully invested and selectively positioned for equity upside
- Market timing attempts will likely prove as costly in 2020 as they did in 2019

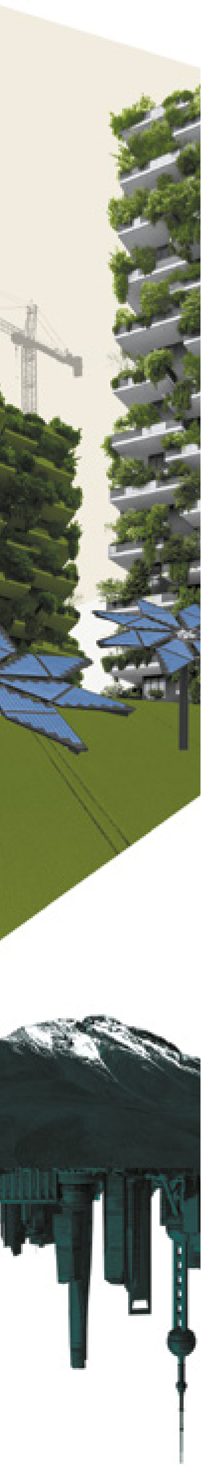
Introduction

As global equities climbed in 2019 amid low volatility and declining rates, investor anxiety rose. Retail investor outflows from equities persisted throughout the year, with sentiment staying remarkably bearish. Meanwhile, interest rates declined so much that by October, more than 25% of all developed market investment grade debt traded at negative yields. Rampant trade tensions, populist anger spilling into street protests from East to West, and the impeachment inquiry into President Trump provided the backdrop of fearfulness.

In last year's Outlook, we argued that growth would continue through 2019. We maintained that stance even after last December's sharp sell-off and recommended adding to equity and credit holdings in January. Many others did not see things our way, though. Even as the US Federal Reserve cut rates to help preserve growth, pessimists have continued to convince themselves that 'the end is nigh' for several reasons. These include the record length of the US economic expansion, the lack of a trade deal with China, US trade threats against European and Mexican manufacturing, economic disruptions from populist leaders, half of Saudi Arabia's oil supply being knocked out in a drone attack, and the impending 2020 US elections.

Sure, there were bits of hard data to support some of the doomsayers' negativity. The global economy did indeed slow and manufacturing weakened along with it. The US yield curve inverted, a traditionally reliable signal that recession might be on the horizon. A slowdown in industrial production drove earnings per share downgrades and led some observers to declare a peak in profits. Looking back, 2019 had echoes of 2017. Investors were pretty certain that 2016 was the beginning of the end of the recovery back then.

A major reason that 2019 ended well for investors was that decision by the Federal Reserve to make an about-face. Within a few weeks, it went from trying to head off potential inflation to seeking to mitigate the more pressing threats to growth of disinflationary pressures, global trade tensions,



and political conflicts. Its policy reversal also spoke to another realization: that it had only a limited ability to address an economic contraction and the deflationary forces that a global downturn would unleash. In our view, it was therefore wise that the Fed acted preemptively to extend the recovery.

In light of this, it turns out that 'math still works' – or at least the high correlation between earnings and equity prices. With unemployment low and money still cheap, the global consumer continued to make purchases regardless of the news. The demand side of the global economy that makes up 76% of global GDP remained strong. Earnings growth slowed, but revenues continued to show modest progress, growing roughly 4% across the world, as of the third quarter of 2019. Unemployment remained very low by historical norms. Inflation stayed quiescent and unthreatening. Therefore, the signs of recession highlighted by falling bond yields did not appear, just as we thought they would not.

2020 has promise

The current economic expansion has room to run. In our view, corporate earnings may grow by 7% or more if policymakers simply avoid escalating the trade war in 2020. Global purchasing manager indexes (PMIs) will likely rebound as inventories of goods become unsustainably low. Moreover, the Federal Reserve has achieved its goal, at least for now, of sustaining the recovery that it had almost destroyed at the end of 2018. Given this backdrop, our Global Investment Committee is forecasting parallel equity returns in the US and globally of about 7% in 2020.[1]

We are not particularly concerned about valuations. Equity prices have really not moved all that much higher. Over the past two years, global equities have risen by only 11% and US equities by 21%. The S&P 500's price/earnings multiple for 2020 is about 18, which is not unusually high given how low interest rates are. By rotating into the right markets and sectors, therefore, we see opportunities for meaningful appreciation. In short, we do not want you to miss out on 2020.

Sure, we acknowledge that there will be a recession – someday and somewhere. However, when that recession arrives we do not envisage a repeat of 2008's long and deep contraction. At that time, you will be better off having a fully diversified, global portfolio that has appreciated thanks to wise investments made in 2020 and prior, rather than cash waiting on the sidelines. Paralysis through negativity is actually the bigger threat to wealth creation for the period ahead.

Our goal in Outlook 2020 is to help you to stay positive in today's world of negativity and negative yields by focusing on hard economic facts. Sustaining wealth for generations requires looking beyond the daily news and rising above the negative confirmation bias from which many investors suffer. In turn, we stress taking positive action in your portfolio. In **Outlook 2020: Actions to take**, we outline key actions we recommend for shifting your investments towards more conservative, stronger, and more resilient holdings. We stand ready to help you implement them.

Lessons learned and what to watch

Throughout the enduring economic expansion in 2019, negativity remained pervasive. Many individual investors reduced their positions or sat on the sidelines in cash, waiting for the 'right' entry-point. Various empirically-based studies and our many decades of observing client portfolios have demonstrated clearly that such market timing efforts are a fool's game. They proved so once again in 2019, with markets set to end the year much higher than they started. But most market timing investors missed the recovery rally. They risk doing so again in 2020 and beyond. We highlight why staying fully invested is superior to market timing – alongside other vital principles – in **Why having an investment philosophy matters more than ever** and **How we do what we do**.

Monetary easing by the Fed and other central banks helped sustain growth and drive returns in 2019. It should continue to support markets in 2020, albeit to a lesser extent.

1 All forecasts are expressions of opinion and are subject to change without notice and are not a guarantee of future events.

However, it is important to recognize what monetary policy can and cannot now do. We believe we are at or nearing the end of a global monetary easing cycle that has done about all that it can to drive lending and investments globally. We can see the limits of these cheap money policies in the private sector, since real growth and capital investment are rising only modestly. Inflation also remains too tame.

In addition, cheap money causes market anomalies of which we need to be wary. In venture capital, for example, there are numerous instances where money is virtually being forced upon companies on the presumption that it provides competitive advantages. We also see companies' valuations rising from one venture capital funding round to the next faster than those companies' financial results. We are very wary of firms whose rapid burn rates do not ensure them either the market share or long-term profitability they seek. Cheap money is likewise affecting the private equity (PE) buyout space. In 2019, many large corporate transactions were sales between PE firms themselves. The incentive for PE firms to put new money to work and crystalize performance fees should make investors in those funds wary.

Given monetary policy's limits, we hear increasing talk about fiscal stimulus as a likely government response to a future slowdown. With high debt levels in many countries and with US corporate borrowings at record levels, the absence of any discussion about the need for fiscal restraint is striking. For example, there is literally no candidate in the 2020 US elections who talks at length about the risks posed by the current near-$1tn annual US deficit. Rather, the talk is about how and where to spend more, as well as the need for higher taxes on the wealthy to fund redistributive policies. We explore the implications of populism and politics in **The challenges of de-globalization and populism** and **Avoiding the madness of crowds**.

Outlook 2020: Actions to take

- Fixed income performed strongly in 2019. We think this rapid bond price appreciation is unsustainable. We urge you to avoid negative and extremely low yielding bonds. However, certain parts of the fixed income market offer attractive relative yields. These include US bank loans, emerging market bonds, and US securitized debt, particularly US non-agency residential mortgage-backed bonds. We advocate shifting your fixed income holdings towards these assets – see **Where the bonds still have yield**.

- With rates so low and unlikely to go much lower in 2020, we advise you to seek portfolio income from equities of companies that are growing their earnings and their payouts to investors via dividends – see **Realigning income portfolios**.

- In early 2020, the yield curve will likely steepen, with global industrial sectors continuing a rebound, and investors gravitating towards goods-producing businesses. At least around the start of the year, we favor cyclical and value-oriented equities.

- While challenging for income seekers, today's low interest rate environment is beneficial for certain investments. Private equity and real estate are two of the alternative asset classes we continue to favor. That said, we are highly selective as to what transactions and industries we prefer. We look for opportunities to use capital, data and technology to enhance returns across industries.

- US equities maintained their strength of the last decade in 2019. However, it is worth remembering that the best performing asset class of one decade has never gone on to repeat that performance in the next decade. As investors gradually need to raise allocations to regions outside the US, a greater dispersion of returns is likely and possible to exploit in less efficient markets. Seek out the active managers and hedge funds who may benefit from non-US returns.

- We have identified unstoppable trends that we believe may bolster your portfolio's returns. These include cybersecurity, fintech, and renewable energy. Certain leading companies in these areas may be able to generate sustainable double-digit revenue and earnings growth for a decade or more. Adding opportunistic exposure to such sustainable growth may help portfolios to outperform – see **Unstoppable trends**.

1.2 The challenges of de-globalization and populism

DAVID BAILIN, CHIEF INVESTMENT OFFICER

In recent decades, world growth and investment returns benefited greatly from the stability and opportunities created by moderate mainstream political leadership and increasing globalization. Both of these factors are now under attack. We believe this has important implications for investors, with events requiring constant monitoring.

It has become obvious that the relationship between the world's current and future superpowers – the US and China – is deeply strained. The divergence of policies, politics and business objectives are creating growing fractures in the bilateral understandings that have governed their relationship for the past thirty years and more. We expect that these stresses will grow. The contrast between US/Western and Chinese policies associated with intellectual property rights, access to markets, differences in privacy standards and political rights is crystal clear. As a result, China is taking numerous bold steps to become even more independent, as exemplified by their accelerating strategies to drive technology and health care innovation and to bifurcate markets via their new Silk Road initiatives.

We refer to this as the 'development of a G2 world'. Whether this 'de-globalization' is ultimately conflictual or results in new economic compacts is unclear. What is clear is that investors will need to modify portfolio construction to take advantages of winners and losers. We expect major developments in capital markets as a result, too. For China to meet its goals, the country, its industries and its innovators will need more access to much more capital over time. Investment opportunities will therefore change with geopolitics.

A second observation is that scrutiny in the West of major technology companies and tech industry sub-sectors is rising and accelerating. The market value and economic power of the leading players and their impact on traditional businesses and business models is the basic issue. However, there are also more complex and politically sensitive issues regarding data privacy, data usage, taxation, non-competitive practices, advertising standards, and potential political influence that are attracting ever greater scrutiny. This has not impacted the tech giants' equity valuations to the degree we might expect.

Finally, the spread of populism globally speaks to the failure of governments and parties to address changes in what their constituents value. The tendency of people to seek information consistent with their views is nothing new, but the ability of social media outlets to offer compelling narratives that polarize society and demonize the opposition is. We see a wide variety of flashing warning signs. There is growing distrust of governments that have allowed too much wealth to become concentrated in too few hands, 'fear of loss' related to the impact of technology on industry, and anti-immigration sentiment as people believe that their opportunities are less promising that they were in the past. Responses by leaders and legislators have been insufficient to quell the uprisings. We expect new policies to be formed to address voter concerns and many unconventional candidates to serve in even more governments around the world.

We are closely watching the impacts of all this on the global economy and will keep you abreast of impacts and trends in 2020 and beyond.

Nine steps to strengthen portfolios for 2020 and beyond:

1 **Assess your portfolio now.** Request your Outlook Watchlist and discuss opportunities with your Investment Counselor. Seek our Global Investment Lab's insights.

2 **Understand your risk profile.** Adjust your portfolio if your circumstances or risk tolerance has changed.

3 **Don't try and time the markets** – it's a fool's game.

4 **Preserve your portfolio's value** by diversifying globally and adding higher quality assets.

5 **Have a discretionary manager who will rebalance your portfolio** as events unfold.

6 **Manage your cash** – all of it – more wisely.

7 **Explore risk management tools as well as strategies** with different risk-return characteristics.

8 **Create an opportunistic element within your portfolio** to allow you to invest during unusual events and short-term market dislocations.

9 **Seek our advice more frequently**, and let us help you understand the data and interpret the guideposts.

Start today with step one

OUTLOOK | **2020**

Watchlist

Make sure your portfolio is strong. Compare your holdings to our Outlook recommendations.

Failing to follow a disciplined long-term investment plan poses many risks to your wealth.

To help keep your portfolio aligned to your recommended allocation and to our investment themes, we can provide you with a detailed report showing how your portfolio compares to key benchmarks.

Your relationship team can then recommend ways for you to address any issues identified.

More than 3,435 clients received their personalized Outlook Watchlist report in 2019.* Why not request yours from your relationship team today?

*As of 25 Nov 2019. Recommended allocation is the reference allocation that reflects our understanding of your investment objectives and risk tolerance.

1.3 Avoiding the madness of crowds

STEVEN WIETING, CHIEF INVESTMENT STRATEGIST AND CHIEF ECONOMIST

The fundamental outlook for 2020 calls for positively positioned portfolios with broad diversification after a strong 2019. Fears over politics and trade caused many investors to miss out in 2019, something we would like them to avoid this year

KEY MESSAGES

- The resilience of consumer demand has taken producers by surprise, setting the stage for a manufacturing and trade rebound in the coming year. Corporate profits should rebound 7% in the US and globally
- From current levels, we expect global equities to advance a modest 6%-8% in total return. Global fixed income overall should struggle to produce 1%-2% returns
- We expect intensifying 'noise', especially in relation to the US election and global political events. The trade war may become a theme in the 2020 campaign. But noise and news require discernment
- Investors should maintain strong, globally diversified portfolios with a preference for growing dividend income in equities and standout quality, higher yielding segments of fixed income

Introduction

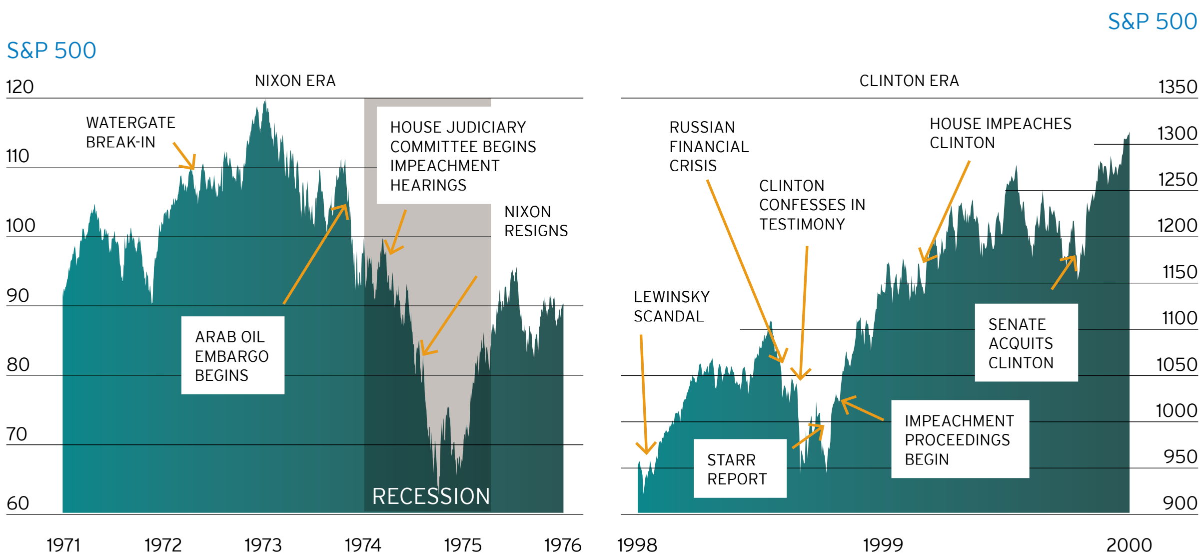
Was your investment decision-making impacted by the noise from the news in 2019? The constant din – particularly around global and regional politics and trade – caused many investors to stay on the sidelines. However, it was ultimately economic fundamentals that drove the markets for the year. Our message throughout 2019 was to focus on factors like prospects for continued economic expansion and future earnings growth. Global equity and fixed income markets went on to record gains of 22% and 8% respectively as of 22 November. We now offer two important forecasts for 2020. First, we expect the economic expansion to remain intact and corporate profits to rebound by about 7%. Second, we expect the 'noise' in markets to intensify in volume. Which are you going to listen to in 2020?

US and global political outcomes will increasingly dominate many investors' thinking as the year unfolds. Investors will be confronted by ever more details of proposed policies of political candidates and policymakers. The proposals of the Democratic contenders for the US presidency will be watched more and more closely as the likeliest challengers to Donald Trump emerge in the first half of the year. Many of the potential candidates' commitments on tax, trade, energy, and healthcare have already unsettled investors – overleaf.

Would a victory for the populist Democrat Elizabeth Warren lead to tax hikes, new taxes, and fresh regulations on doing business in the world's largest national economy? Would a re-elected Republican Senate block such changes for at least two more years? Or, if President Trump wins reelection, would he feel empowered to open new fronts in his trade war in 2021? We will certainly focus on the result of November's US presidential election, as it will likely be material for the global economy and financial markets. We simply urge you not to let it become an all-consuming issue in the meantime.

In our view, too many clients are presently dwelling on political uncertainties that will have no clear resolution for another year or longer. Aside from policy permutations arising from the election result, we hear frequent concerns about the current impeachment inquiry into President Trump. For those who are worried about this, our message is to heed the lessons of previous impeachment episodes.

FIGURE 1. TWO US PRESIDENTIAL SCANDALS, DIFFERENT OUTCOMES



Source: Haver and Citi Private Bank, as of 24 Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

US DEMOCRATIC PRESIDENTIAL NOMINEES' STANCES

	BIDEN	SANDERS
REALCLEARPOLITICS POLL AVERAGE	27.0%	16.0%
INCOME TAX	Repeal Trump tax cut for wealthy	Unspecified
WEALTH TAX	No specified policy	Wealth tax
CORPORATE TAXES	Raise rates, but lower than 2017	No specified policy on rates, eliminate tax breaks for offshoring
CAPITAL GAINS TAX	Increase capital gains tax	Increase capital gains tax
WALL STREET TAXES	No specified policy	Financial transactions tax
USMCA TRADE BILL	Demand changes to USMCA	Demand changes to USMCA
USE TARIFFS FOR POLICY AIMS	Don't use tariffs to pressure countries	Use on selected countries
OIL AND GAS	End new oil & gas leases on Federal land and offshore drilling	Ban fracking
CARBON	Tax carbon emissions	Impose regulations
HEALTH CARE	Build on ACA foundation	Medicare for all
MINIMUM WAGE	Raise to $15	Raise to $15

Source: RealClearPolitics.com, Isidewith.com, candidates' websites, New York Times, as of 4 Dec 2019.

WARREN	BUTTIGIEG	BLOOMBERG
14.0%	11.4%	4.0%
Unspecified	Higher tax rates for the top brackets	Lower tax rate and remove loopholes
Wealth tax	Wealth tax	Unconstitutional
Raise rates on some corporations above 2017 rate	No specified policy	Lower tax rate and remove loopholes
No specified policy	Increase capital gains tax	No specified policy
No specified policy	Financial transactions tax	No specified policy
Demand changes to USMCA	Demand changes to USMCA	No specified policy
Use on selected countries	Don't use tariffs to pressure countries	Don't use tariffs to pressure countries
Ban fracking	End new oil & gas leases on Federal land and offshore drilling	Increase fracking regulation and transition away
Impose regulations	Tax carbon emissions	'Achievable' green new deal
Medicare for all	Rethink the whole system	Build on ACA foundation
Raise to $15	Raise to $15	Raise and index to inflation

Source: RealClearPolitics.com, Isidewith.com, candidates' websites, New York Times, as of 4 Dec 2019.

In the early 1970s, the resignation of President Nixon that halted his impeachment after the Watergate scandal was unnerving for investors – **figure 1**. However, the driver of the severe equity bear market of that time was the deep recession caused by the Arab oil embargo of 1974. The impeachment of Bill Clinton contributed to temporary market fears in 1998 and 1999. But its importance was much less than that of the lingering Asian financial crisis, whose impacts were spreading as far as Latin America and Eastern Europe by then. The economic expansion still had two years left to run, which was strongly reflected by equities surging to history's highest valuation in early 2000. Then, as now, fundamentals held sway.

The future of US fiscal policy after the 2020 election is another big issue on many investors' minds. Trump's 2017 tax cut helped US equities to outperform many other markets for some of 2018 and 2019. Its reversal would indeed impact US corporate earnings and markets negatively. However, we are still far off finding out whether and when US tax rates might change again. This is true even if one US presidential candidate polls well ahead at some point before the actual election.

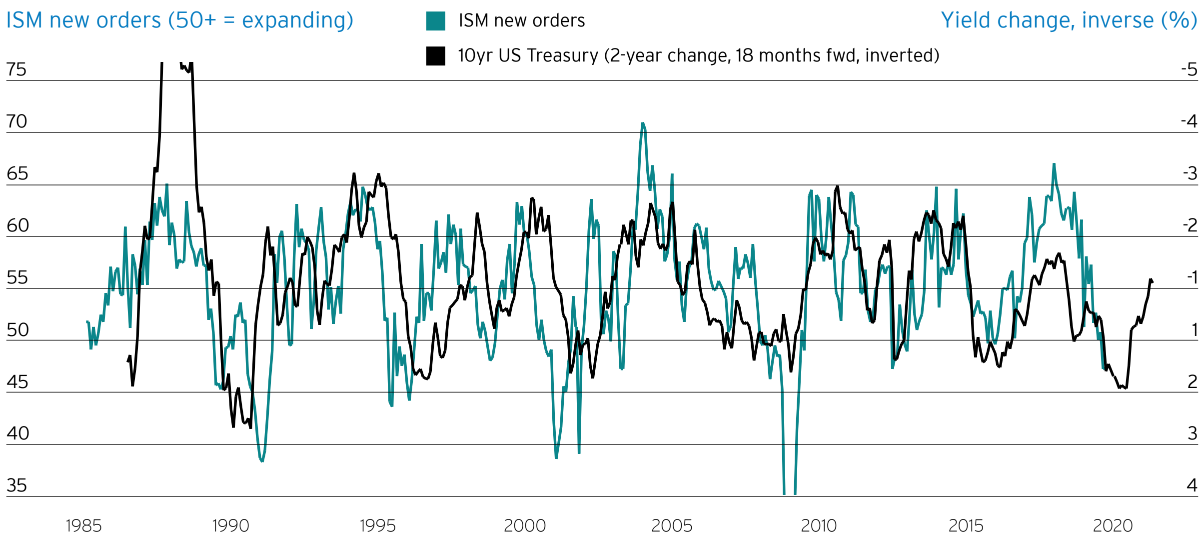
Why fundamentals matter most

The US and global economic expansions remain intact. In the US, for example, core nominal retail sales grew 4.5% over the past year. This was aided by low inflation, a historically high savings rate, and the lack of excesses during the expansion to date. The expansion has continued in spite of the intermittent inversion of the US yield curve between March and October of 2019, a signal that has appeared before each of the nine recessions going back to 1955. We believe the US Federal Reserve made the right decision by switching from monetary tightening to easing. Had it not changed course, the US expansion would have indeed ended. Easier monetary policy from the Fed and more than forty other central banks worldwide has helped to cushion consumer demand.

This resilience of demand has taken producers by surprise. In anticipation of weaker demand, manufacturers cut back production over the last year. This is a global condition. The same indicators from Beijing to Berlin show a contrast between contracting manufacturing output and robust demand data. As a result, we have been arguing that the stage is now set for a recovery in manufacturing and international trade. Cheaper money tends to benefit goods producing industries after a lag averaging eighteen months – **figure 2**. Global goods producers have reduced output below demand levels, leaving inventories contracting. The imbalance for the US, for example, is shown in **figure 3**. We now see early signs of a recovery in new manufacturing exports orders and trade.

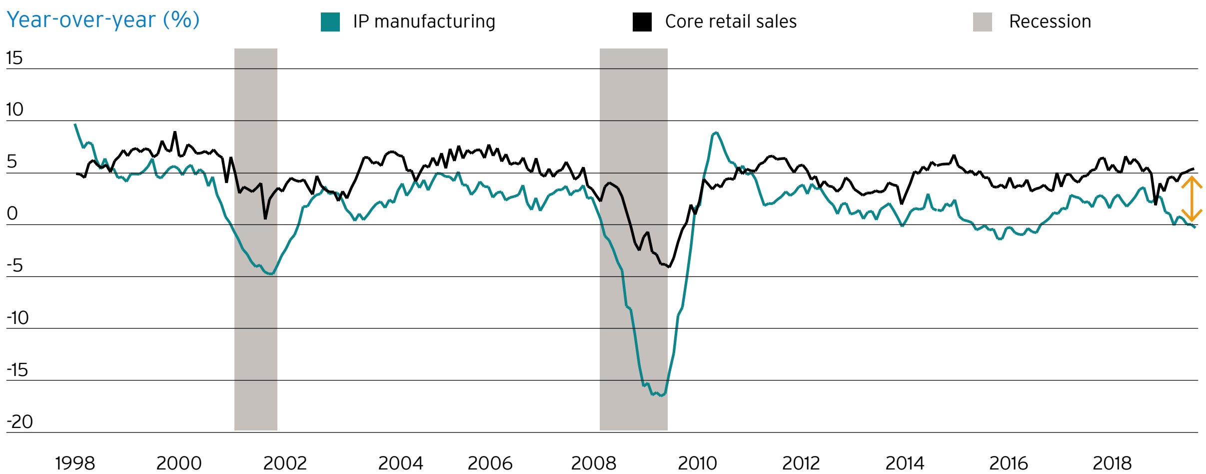
Of course, there are still notable risks to our view of continuing expansion in 2020, particularly the trade war. However, a new, larger trade war shock would likely hinder or terminate the snapback in global manufacturing and trade activity we expect.

FIGURE 2. LAGGED CHANGES IN US TREASURY YIELDS AND MANUFACTURING ORDERS



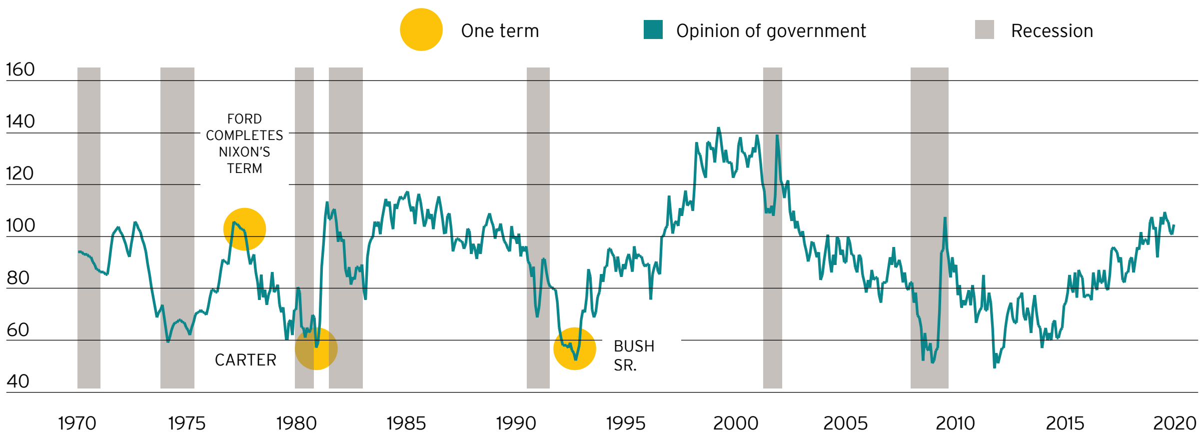
Source: Haver, as of 20 Nov 2019. Past performance is not indicative of future returns.

FIGURE 3. MANUFACTURERS RETRENCH WHILE CONSUMERS HOLD UP



Source: Haver, as of 20 Nov 2019. Past performance is not indicative of future returns.

FIGURE 4. APPROVAL OF ECONOMIC POLICY VS LOSSES FOR FIRST-TERM INCUMBENT US PRESIDENTS



Source: Haver, as of 24 Nov 2019. US Consumer Survey: Net Approval Rating of Government Economic Policy.
1 - Over the past century, US voters have reelected the incumbent president in 10 of 13 contests (77%) and in 6 of 8 contests (75%) in the past half century. It has been historically rare for one party to retain the presidency for longer than two terms. However, Trump is a first-termer. What also bears watching is the unusually low level of polled respondents saying the economy is their main concern behind their voting intentions.

It is clearly in the Trump administration's interest to avoid major additional trade tensions prior to the November 2020 elections. So far, aside from any personal polling, the US public's approval rating for government economic policy has been high – **figure 4**. Historically, positive economic conditions have typically led to the reelection of the incumbent.[1] Lately, though, the president's economic rating has begun to slip slightly. A pause in the trade war could help preserve the expansion and Trump's reelection prospects.

Position portfolios positively for 2020

We believe how economic fundamentals unfold is key to investment returns. We anticipate a rebound in cyclical industries' profits in 2020.

After their nearly flat 2019, we have upgraded our view of US and global earnings per share (EPS) from a likely gain of 4% to 7% - **figure 5**. EPS could indeed grow by more than this, as they did in 2017. However, our base case is consistent with at least a narrow agreement being struck to avoid tariff escalations between the US and China and the US and EU in the coming year. That said, our outlook does not require an unwinding of the tariffs and related actions of the past two years. But if such a rollback of trade war did occur, it might provide a significant boost to business confidence, economic activity, and EPS.

The likely continuation of growth in the coming year is good news for equity returns. Given our base case, we look for global equities to rise around 6% to 8% in 2020. That appears modest because of the strength of the gains

OUR POSITIONING

- OVERWEIGHT
- UNDERWEIGHT
- NEUTRAL

	DECEMBER 2018	DECEMBER 2019
GLOBAL EQUITY	1.0%	1.5%
DEVELOPED EQUITIES	0.4%	1.2%
EMERGING EQUITIES	0.6%	0.3%
GLOBAL FIXED INCOME	-1.0%	-2.5%
DEVELOPED INVESTMENT GRADE*	-2.1%	-3.5%
DEVELOPED HIGH YIELD	0.3%	0.0%
EMERGING MARKET DEBT	0.8%	0.9%
DEVELOPED SOVEREIGN US	2.5%	3.8%

* FACTORS IN NON-US DEVELOPED INVESTMENT GRADE UNDERWEIGHT

OPPORTUNITIES

- GLOBAL DIVIDEND GROWER EQUITIES
- TURNING EQUITY VOLATILITY INTO INCOME IN SECTORS SUCH AS TECHNOLOGY, HEALTHCARE AND RETAILING
- EXTENDING DURATION IN US INVESTMENT GRADE BONDS
- US HIGH YIELD BANK LOANS
- BORROWING CHEAPLY TO INVEST IN HIGHER YIELDING ASSETS
- CYBERSECURITY, INC. CLOUD SECURITY AND NEXT GENERATION ENDPOINT SECURITY
- FINTECH, ESPECIALLY PAYMENTS
- CLEANER ENERGY AND BATTERY TECHNOLOGY (LONG-TERM PORTFOLIOS)
- REBOUNDING TRADITIONAL INDUSTRIALS, FINANCIALS, ENERGY AND MATERIALS (NEAR-TERM)

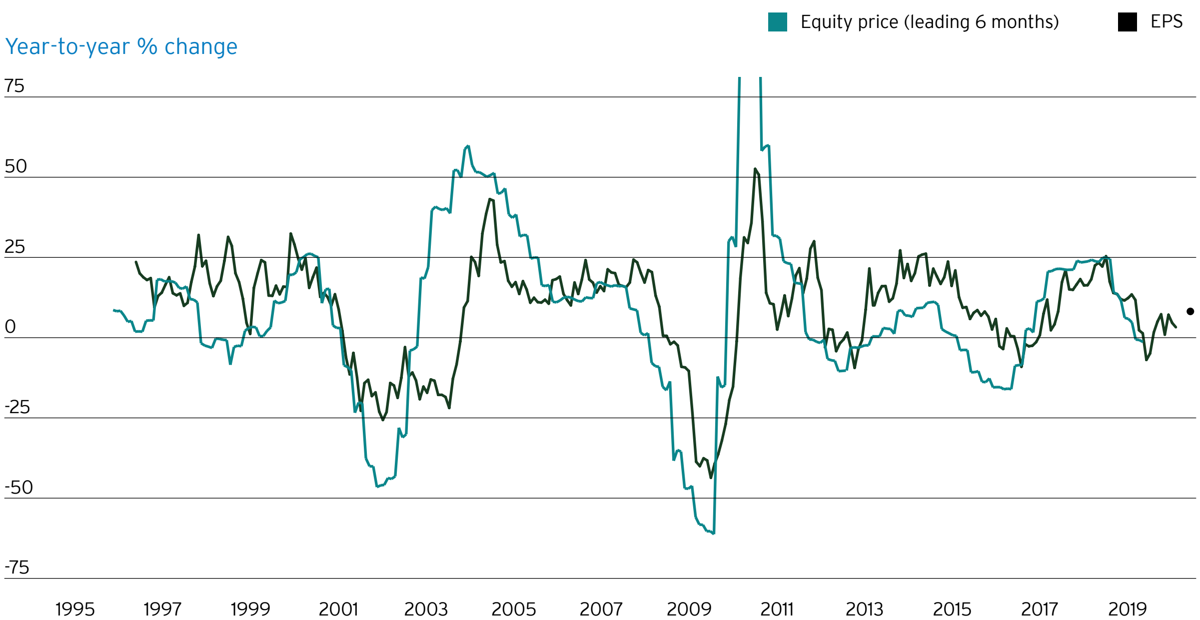
Citi Private Bank, as of 20 Nov 2019

that we have already seen in 2019. Value and cyclical equities will likely outperform at least at the start of 2020. For 2020 as a whole, though, we would not count on cyclicals to continue this strong outperformance.[2] Markets may also vacillate in 2020 over political and policy concerns before eventually focusing on the economic outlook for 2021. However, history suggests that political worries should not drive markets in the first half of 2020.

Dividends to stand out

For longer-term investors who are unwilling to trade sectors and style over the shorter term, we think the highest probability is outperformance in 2020 by high quality firms that are able to pay and grow dividends. Earning a present income in a world where half of non-US investment grade bond yields are negative also has clear attractions. We make the case for this in **Realigning income portfolios: Stocks for bond people**. Although there is some underperformance risk for diversified investors in allocating to such equities given their past tendency to lag behind in very strong bull market conditions, we see modest equity gains as the base case for 2020.

FIGURE 5. EARNINGS DRIVE EQUITIES



Source: Haver, as of 20 Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

2 See Citi Private Bank Quadrant, Nov 2019

FIGURE 6. OUR 12-MONTH TACTICAL RETURN ASSUMPTIONS (BASE CASE)

US EQUITIES	+7%
GLOBAL EQUITIES	+7%
GLOBAL FIXED INCOME	+1.5%
US INVESTMENT GRADE FIXED INCOME	+2.5%
US HIGH YIELD FIXED INCOME	+5%
EM HARD CURRENCY FIXED INCOME	+6%

Source: Citi Private Bank Global Investment Committee, as of 20 Nov 2019. Returns expectations are total over a 12-month period % total return, US dollars. There is no assurance that return expectations will be met or achieved. See Glossary for definitions.

Technological promise and disruption remain intriguing prospects for 2020 and beyond. We identify some vital areas set to benefit from significant investment, like cybersecurity in our update of our **Unstoppable trends** theme. We also highlight other gradually emerging secular trends, such as alternatives to fossil fuels.

In fixed income, we do not see 2019's exceptionally strong returns as repeatable in 2020. Global aggregate benchmarks have gained over 8%. Investment grade (IG) corporates, preferred stock, high yield bonds and other long-duration high quality assets have generated equity-like returns between 10% and 20%. As a result, global benchmark yields are roughly 1.6%, only 20 basis points above their historical lows. Simultaneously, global credit spreads have tightened near an 18-month low. We believe the bond price gains – and thus fall in yields – in 2019 were overdone.

Given the rebound in late 2019 global economic activity, it has been no surprise to see global yields rising. In 2020, we think global bond returns will likely stay in a 1% to 2% range – **figure 6**. The risks to fixed income look highest in Japan and particularly in the Eurozone, where negative yields are prevalent. A resolution of Brexit or positive developments in the trade war could conceivably see Eurozone bonds lose more of their value. We enter 2020 deeply underweight of negative yielding sovereign debt. We set out our preferred fixed income markets in **Realigning income portfolios: Where the bonds still have yield** and **Our positioning**.

Our expectations for EPS growth should prove reasonable for 2020. While we do not wish to play down political risks or trade war uncertainties, these are likely to play a secondary role when all is said and done. For our views beyond 2020, see **Looking over the horizon to 2025**. But for now we strongly believe the most appropriate course of action for investors is to maintain strong, globally diversified core portfolios for the year ahead and beyond. These should include ample allocations to certain low risk bonds and potentially other portfolio hedges. Avoid the madness of crowds, focus on fundamentals, and position your portfolio positively for 2020.

1.4 Looking over the horizon to 2025

STEVEN WIETING, CHIEF INVESTMENT STRATEGIST AND CHIEF ECONOMIST

With investors wrongly focused on an imminent recession and political news, looking over the horizon to 2025 allows for the likely results and data to inform portfolio decisions.

KEY MESSAGES

- Hard data can give us indications much further out than 2020
- Resource constraints will likely limit developed economy growth in the next five years
- We expect lower returns from developed equities in the next five years than in the past five
- Dividends, dividend reinvestment, proper portfolio management, and asset allocation will be essential in the lower return environment we see ahead

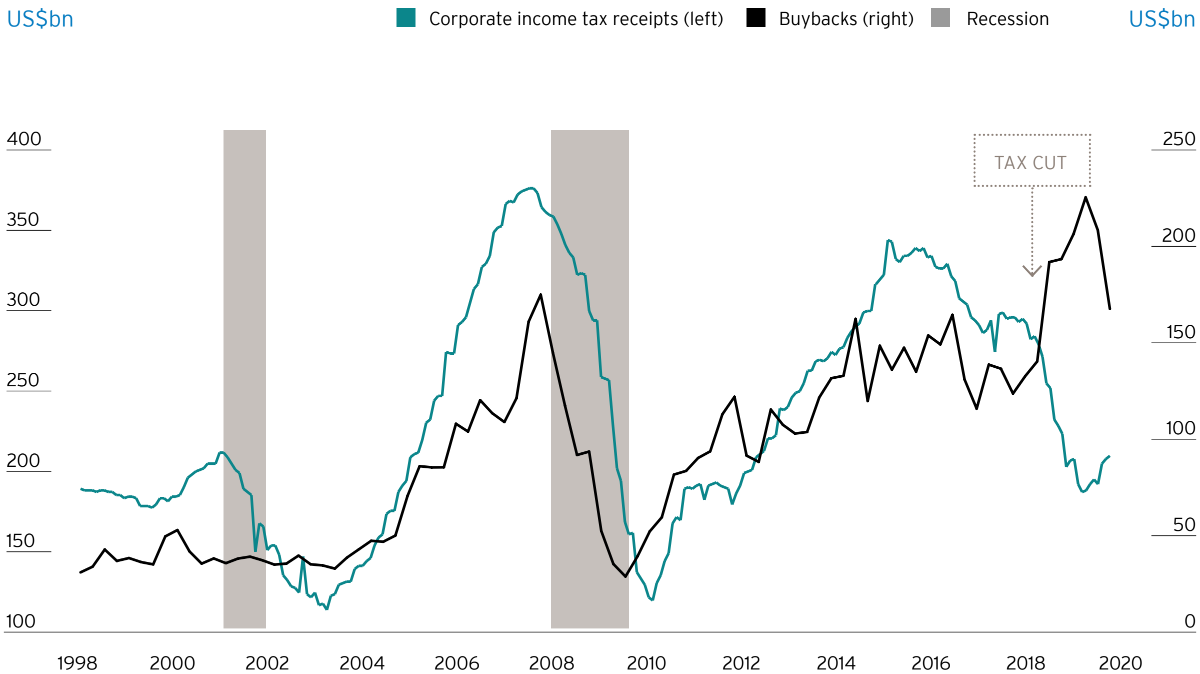
Let us look beyond the looming US elections and out to 2025. To consider the prospects for the next five years, we must assess which particular policies countries are likely to pursue. In the previous two articles, we considered a pair of policy concerns for investors. By now, most will have realized that trade wars are not 'easy to win,' even for the world's largest economy and military power. US-China commercial ties have a very long, evolutionary path ahead – see **The challenges of de-globalization and populism**. For the European Union, a future tit-for-tat tariff war over autos and agriculture with the US could either be a tipping point for its economy, or a negative offset to European fiscal easing stimulus steps that we see as increasingly likely in coming years.

In the US, a shift from populist right to populist left could challenge US assets in many ways. Most directly, 2018's corporate tax cut was built into US equity prices. US equities rose nearly 14% relative to other countries where corporate taxes were not cut. Tax-related impacts explain most of this, apart from pure economic performance – **figure 1**. While it is unlikely that US policymakers would ever reset corporate taxes just as they were previously, a Democrat sweep of the Presidency and both houses of Congress could present a unique idiosyncratic risk for US assets. For US-centric investors, this argues for international diversification in ways we discuss elsewhere – see **Our Investment Philosophy** and **How we do what we do**.

A discrete readjustment to corporate taxes or even capital gains taxes – which could cause a reset in asset pricing – does not fully describe the economic risks of a new fiscal regime. A redistribution of taxes that is fiscally neutral would not, by itself, have a very large, immediate impact. The political left argues that the higher consumption propensity of the poor would mean that redistribution boosts the economy. The political right argues that it would reduce savings for investment spending, thereby slowing economic growth.

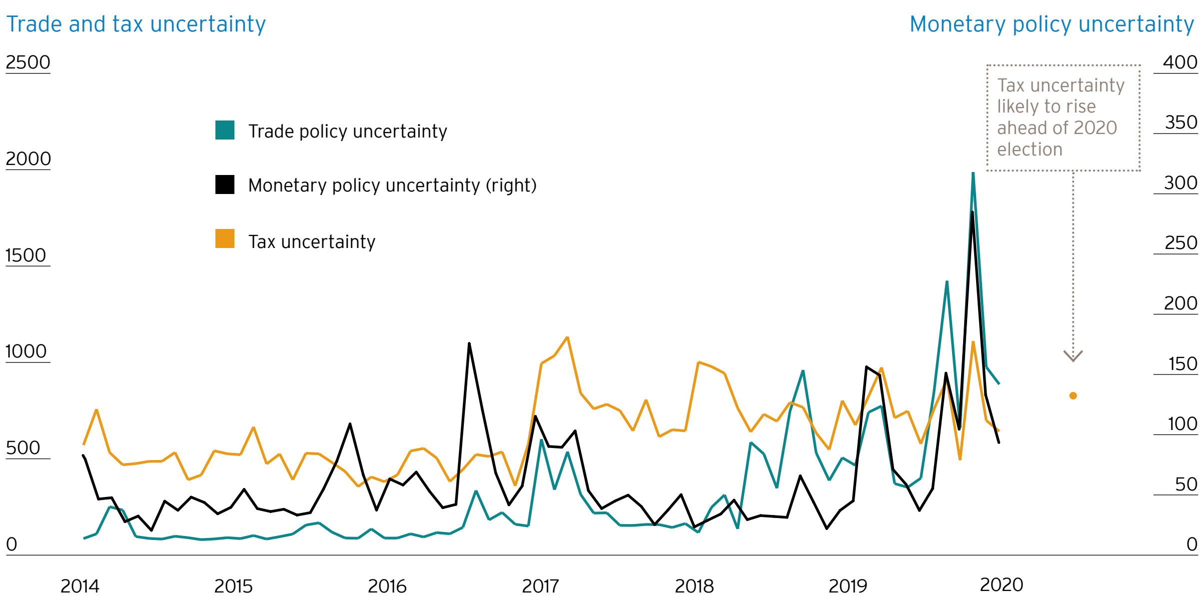
What we would expect under a populist-left unified US government is an initially strong level of tax regime uncertainty. This would weaken investment spending, adding to uncertainties largely remaining in the trade sector – **figure 2**. Once again, we would expect the largest impact closer to the November 2020 election or the period thereafter.

FIGURE 1. US CORPORATE TAX RECEIPTS AND EQUITY BUYBACKS



Source: Haver, 25 Nov 2019. S&P 500 share repurchases.

FIGURE 2. US POLICY UNCERTAINTY



Source: Haver Analytics, as of 25 Nov 2019.

Limited headroom for developed economies

Politically driven policies represent just one determining factor for the medium-term outlook. In 2018, President Trump managed to boost US growth to 2.9%, the strongest pace of the present expansion. The benefits of tax cuts and regulatory restraint fed through into business confidence and investment spending before the impact of his trade war set in. Across the developed world, resource constraints will limit the absolute pace of economic growth in the next five years to somewhat below that of the last five years.

As **figure 3** shows, labor demand has grown faster than labor supply across developed market economies in the past ten years, driving unemployment rates to various record lows. This, of course, comes after a period of widespread unemployment during the Great Recession. Growth of the population and redeploying those displaced in 2008-09 provided an unusually large supply of workers.

The drop in unemployment has not caused a comparable rise in inflation and we do not expect it to do so. The level of employment is not unsustainable in our view. Technological change always displaces some workers and generates new 'slack' in the system. Growth in working age populations is slow, but still positive. However, barring an unpredictable and rather unlikely 'productivity miracle,' the lack of cyclical 'slack' after ten years of growth in developed markets economies is significant enough to slow the pace of their growth by at least 0.5% per annum in the coming five years compared to the last.

For the next five years, we would estimate a developed markets (DM) real GDP growth rate close to 1.5% or below, and a nominal GDP growth rate just above 3%. Whether this unfolds by way of a boom-and-bust cycle – or merely a 'long whimper' – is an open question.

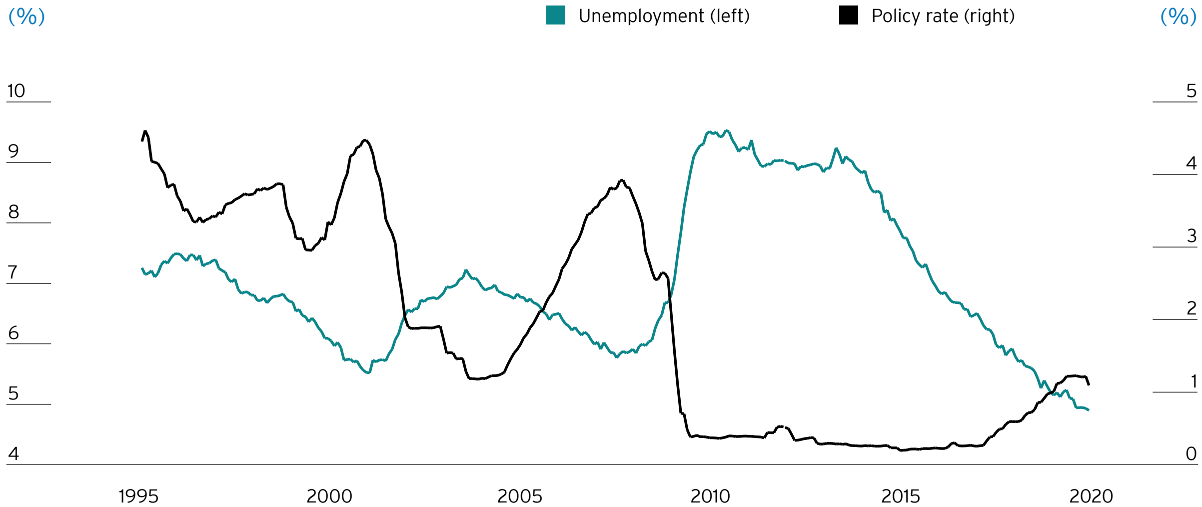
In comparison to DMs, emerging market (EM) labor market slack is a smaller issue relative to overall growth rates. The latter are driven by development dynamics – 'catching up' toward DM productivity levels – or failing to do so. With DM exchange rates strong – particularly the US dollar – and emerging markets inflation no higher than for DM inflation, this is a driver of our assumption for stronger EM returns over a ten-year window. The historically large valuation discount of EM equities and bonds is another large driver – **The long-term outlook for asset classes**.

As noted, we do not know whether the five-year road ahead for developed markets is as straight as the crow flies or as twisted as a maze. DM economies will impact EM economies and vice versa. But looking at the entire five-year period ahead, our expectations for net gains in DM assets are lower than realized returns over the last five years, with a greater share of future returns driven by current income and reinvested income rather than price appreciation – **figure 4**. This view fits with our core investment strategy for a world where 25% of the world's investment grade bonds – or 50% excluding the US – have fallen to negative yielding levels.

Malcolm Spittler and Joe Fiorica contributed to this article.

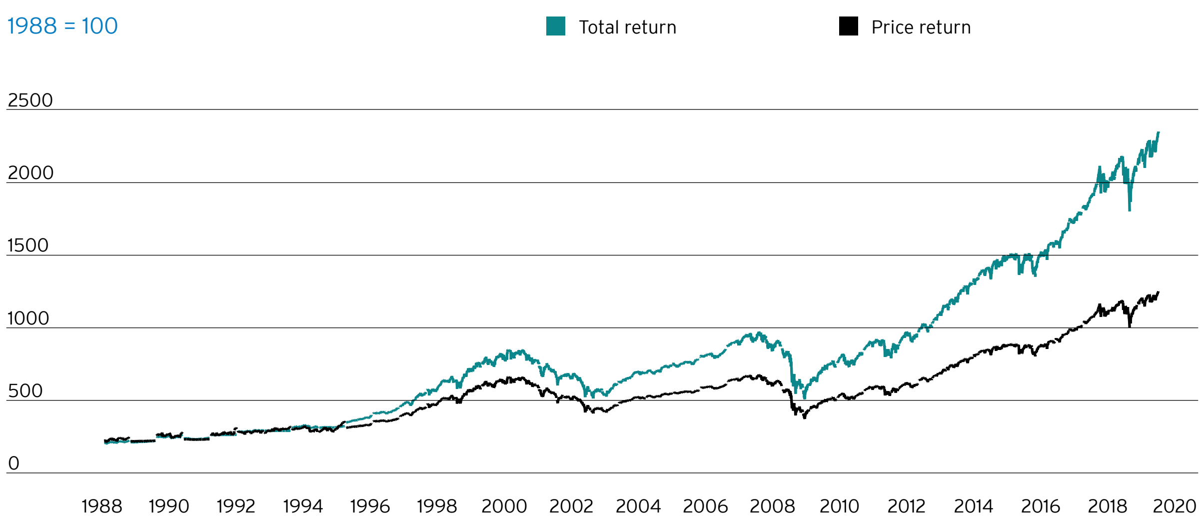
The forecasts above are as of 25 Nov 2019 and are provided for information purposes only. The investor should not base a decision to enter into a trade solely on the basis of the forecasts. Actual results may vary from the forecast rates provided herein. Forecast rates should not be construed as providing any assurance or guarantee as to future rates.

FIGURE 3. UNEMPLOYMENT AND NOMINAL POLICY INTEREST RATES US, EU, UK AND JAPAN COMBINED



Source: Haver, through 31 Oct 2019.

FIGURE 4. WHY DIVIDEND REINVESTMENT MATTERS



Source: Haver, as of 25 Nov 2019. Chart shows S&P 500 returns with and without dividend reinvestment. Past performance is no guarantee of future returns. Real results may vary. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. See Glossary for index definitions.

1.5 The long-term outlook for asset classes

GREGORY VAN INWEGEN, GLOBAL HEAD OF QUANTITATIVE RESEARCH AND ASSET ALLOCATION, CITI INVESTMENT MANAGEMENT

Our strategic asset allocation expects low returns from certain asset classes over a ten-year horizon and flashes a warning sign for certain fixed income investment categories.

Determining your strategic asset allocation – an appropriate mix of different global asset classes to hold in your portfolio – is the most important decision made by an investor. Over the long term, it will shape both your returns and the amount of risk you take.

So, how should you go about it? Citi Private Bank believes that the answer depends largely on the outlook for asset class returns over the next decade.

Our own strategic asset allocation methodology – Adaptive Valuation Strategies (AVS)[1] – forecasts returns for asset classes over a ten-year horizon. We call these asset class forecasts 'strategic return estimates' or SREs. AVS calculates SREs based on the current valuation of different asset classes. Over time, low current valuations have tended to be followed by high returns and, as you might expect, high valuations by low returns. Other things being equal, AVS then recommends larger allocations to asset classes with higher SREs and smaller allocations to those with lower SREs.

1 To read about more about our methodology, see Adaptive Valuation Strategies - A New Approach to Strategic Asset Allocation: 2019 Annual Update https://www.privatebank.citibank.com/home/fresh-insight/adaptive-valuation-strategies.html

So, what does AVS currently say about the outlook for returns between now and 2029? The most striking message concerns fixed income – **figure 1**. The SRE for Developed Investment Grade Fixed Income – bonds from advanced economies like the US and Europe – is just 2%. That is well below the long-term average return of 5.6%. High Yield Fixed Income – lower quality debt from advanced economies – is forecast to return an annualized 3.4%. Again, this is only roughly half the historic average of 6.7%. The SRE for Emerging Fixed Income, meanwhile, is 4.7%. The decline in fixed income SREs over the last year reflects the record low interest rate environment, which has also seen the SRE for US Cash drop to 1.8%. We discuss the far-reaching implications of these low prospective returns in **Realigning income portfolios**.

The outlook for equities is more mixed. The SRE for Global Developed Equity – which includes the US, Europe, and Japan – is 5.1%, which is also less than half the long-term average realized return for this asset class. This reflects today's comparatively high valuations in light of such low rates, the late stage of the economic cycle, and the prospects of a future recession during the ten-year forecast period and the subsequent recovery. By contrast, Global Emerging Equity – shares from developing economies like China and Brazil – is forecast to produce annualized returns of 10.9%, as various emerging markets continue their current recovery. The difference in SREs for developed and emerging markets speaks to the need for portfolios to be diversified and our expectations that market cycles will be asynchronous, and more regional than global.

For investors willing to sacrifice some liquidity, certain private market asset classes offer potentially higher returns. Private Equity's annualized SRE is 12.7% and Real Estate's is 9.8%. Meanwhile, Hedge Funds – which can play an important role as a portfolio hedge during cyclical downturns – are estimated to return 5.3%.

Given this broad range of SREs, some investors inevitably ask us why they should not build portfolios exclusively from the asset classes where potential returns are highest. Citi Private Bank would never advocate such an approach. While our methodology does recommend greater allocations to asset classes and regions with higher SREs, there are still potential diversification benefits from having some exposure to asset classes with historically low SREs. We continue to advocate globally diversified multi-asset class portfolios for safeguarding wealth in 2020 and beyond.

Paisan Limratanamongkol, Andy Zhu, Gene Desello, Xin He and Wenjing Wu of the Citi Private Bank Asset Allocation team also contributed to this article.

FIGURE 6. STRATEGIC RETURN ESTIMATES

GLOBAL DEVELOPED EQUITY	5.1%
GLOBAL EMERGING EQUITY	10.9%
GLOBAL DEVELOPED INVESTMENT GRADE FIXED INCOME	2.1%
GLOBAL HIGH YIELD FIXED INCOME	3.4%
GLOBAL EMERGING FIXED INCOME	4.7%
US CASH	1.8%
HEDGE FUNDS	5.3%
PRIVATE EQUITY	12.7%
REAL ESTATE	9.8%
COMMODITIES	1.6%

Source: Citi Private Bank Asset Allocation team, preliminary estimates as of 31 Oct 2019. Strategic Return Estimates are Citi Private Bank's forecast of annualized returns for specific asset classes over a ten-year time horizon. Strategic return estimates in US dollars; All estimates are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Strategic Return Estimates are no guarantee of future performance. For further information, please consult Adaptive Valuation Strategies 2020, due for publication in Feb 2020.

2 Realigning income portfolios

CONTENTS

2.1 Escaping the negative yield trap

STEVEN WIETING, CHIEF INVESTMENT STRATEGIST AND CHIEF ECONOMIST

Very low and negative bond yields pose an unprecedented challenge for investors. The time to realign your income seeking portfolio is now.

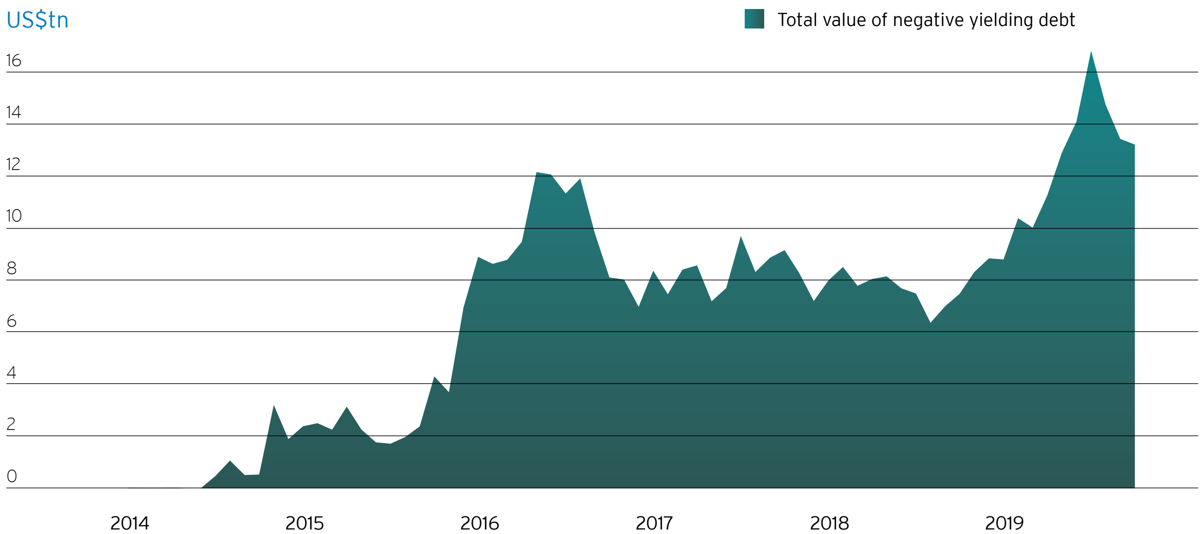
KEY MESSAGES

- Fixed income yields hit record lows in 2019 and economic conditions will keep them low
- Further monetary easing from central banks is likely to keep rates down
- Opportunities for income will include certain equities, capital markets strategies, and alternative managers
- Certain bonds still offer relatively attractive yields
- Low rates can enable cheap borrowing to invest in higher yielding assets

Historically, income from bonds has been vital to core portfolios. Reinvesting bond income has provided a major source of long-term total returns. A regular flow of bond income has also served to preserve capital by stabilizing core portfolio returns over time, particularly during periods of market stress. Bond income has also provided key liquidity for other purposes within core portfolios and beyond.

As we head into 2020, fixed income markets worldwide are suffering from an intense shortage of yield. Another strong year of price performance has driven yields on many bonds to fresh record lows. Globally, yields have fallen to about 1.6%. Excluding US bonds, this declines to just 0.6%. In many markets, yields have actually turned negative. In other words, buyers of such bonds are actually paying for the

FIGURE 1. GLOBAL NEGATIVE YIELDING DEBT SECURITIES



Source: Haver as of 20 Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

privilege of lending their money. We estimate that some $12tn of debt worldwide trades on negative yields as of 1 December 2019 – **figure 1**.

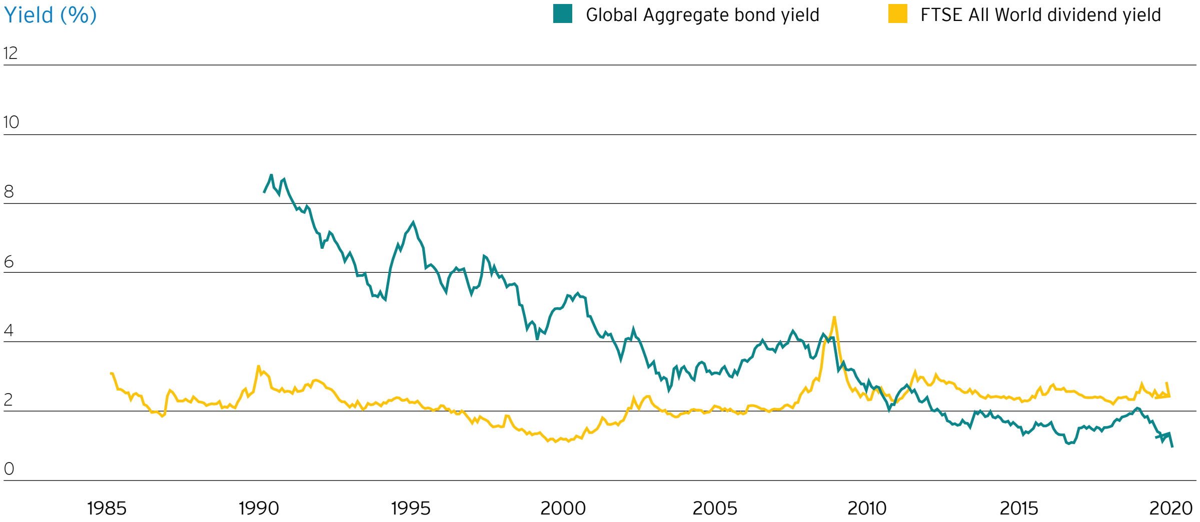
The picture looks even bleaker once we consider inflation. We estimate that real bond yields – that is, after inflation – have now turned negative in every single developed country. Moreover, there seems little immediate prospect of any lasting respite. Granted, long-term rates have rallied from their record lows of 2019. However, central banks globally have embarked upon a new monetary easing cycle. Additional quantitative easing may well keep certain yields – particularly on short-duration securities - very low. In a future recession, many of today's remaining positive yielding investment grade bonds – such as the US 10-year Treasury – may see their yields also approach zero.

Escape the negative yield trap: Realign your portfolio!

Citi Private Bank believes that income seeking portfolios need to escape the negative yield trap by looking beyond bonds. A major element of our recommendation relies more upon equities for income. The dividend yield on global equities has exceeded the yield on global bonds for several years – **figure 2**. Owing to the strong rally in bond prices over the last year, the gap between the two has widened further in favor of equities. Immediately prior to the financial crisis, bonds yielded 2% more than equities. Going back further, the gap was even greater. In our view, the current profound reversal in the yield landscape demands a shift in your approach.

A shift in portfolios is not a recommendation to move wholesale from fixed income to equities. Instead, we recommend you combine both asset classes in your portfolio to improve your income

FIGURE 2. DIVIDEND YIELDS ABOVE BOND YIELDS GLOBALLY



Source: Haver as of 13 Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary. Global Aggregate bond yield from Bloomberg Barclays Global Aggregate Index. See Glossary for definitions.

and total return potential. If you currently invest entirely in fixed income, this means shifting part of your holdings into certain dividend yielding equities. If you're already invested in equities and bonds, this means reallocating away from negative and very low yielding bonds and towards certain dividend equities, hybrids, and select fixed income markets based on your risk tolerance. We also highlight yield seeking capital markets strategies, as well as certain alternative investments, on the understanding that they may increase your portfolio's risk and illiquidity profile.

You may be thinking, "Isn't replacing bonds with equities just plain risky?" After all, equities' volatility has historically been four times greater than that of bonds, even over full-year periods. Particularly if you've only invested in bonds for the past decade, this may sound unsettling. Based on our analysis, the worst calendar year return over the past century from a portfolio made up of 30% US equities and 70% long-duration bonds would have been a 25.7% loss. That's almost identical to the 25.6% worst loss for a bonds-only portfolio. On the upside, however, the '30/70' portfolio produced a median annual return of 7% versus 4.8% for the bonds-only portfolio. Today, long-duration bond yields stand at less than half their historic average.[1] This means that it is more likely than not that the total return from the blended portfolio we now recommend could potentially exceed that of a comparable bond-only portfolio.

Of course, this recommendation rests on an allocation to a specific set of equity income strategies. As we will show, some of these strategies have historically proven less risky than equities overall. At the same time, bonds with very low or negative yields will not provide quite the same stabilizing influence in portfolios that they did when their yields were higher.

In the articles that follow, we set out some of the main opportunities that we see for realigning your income portfolio in today's yield-starved landscape. We explain which dividend-based strategy we think offers attractive combinations of potential return and relative safety – see **Stocks for bond people: Go for growers**. We explore a capital markets strategy that seeks to generate a fixed income stream from equity volatility for qualified clients - see **Earn income waiting for a bear market**. And we examine various possibilities for borrowing at a lower rate[2] to enable investing in higher yielding assets – see **Borrow cheaply and seek income**. Importantly, we also highlight certain categories of bonds that still offer reasonable yield potential – see **Where the bonds still have yield**.

The appropriate combination of opportunities for your portfolio will depend on your personal circumstances. However, while the specific approach we recommend will vary from client to client, we have one piece of advice that applies to everyone: **the time to realign your income seeking portfolio is now**. With central banks back to easing yet again, it makes sense to try to lock in higher rates on certain investments. Let us work with you to help escape the negative yield trap.

1 Bonds are affected by a number of risks, including fluctuations in interest rates, credit risk and prepayment risk. In general, as prevailing interest rates rise, fixed income securities prices will fall. Bonds face credit risk if a decline in an issuer's credit rating, or creditworthiness, causes a bond's price to decline. High yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. Finally, bonds can be subject to prepayment risk. When interest rates fall, an issuer may choose to borrow money at a lower interest rate, while paying off its previously issued bonds. As a consequence, underlying bonds will lose the interest payments from the investment and will be forced to reinvest in a market where prevailing interest rates are lower than when the initial investment was made.
2 All credit is subject to approval

2.2 Stocks for bond people: Go for growers

WIETSE NIJENHUIS, GLOBAL HEAD OF EQUITY STRATEGY

Equities with a long history of consistent dividend growth can provide diversification from zero and negative yielding bonds in your portfolio.

KEY MESSAGES

- ‘Dividend growers’ - equities that have long and consistent records of growing dividend payments – are especially valuable to portfolios now
- Global and US dividend growers have outperformed the broader equity indices in recent decades
- They perform well in periods of modest growth, such as we expect in 2020
- We believe dividend growers can replace certain bonds in your portfolio

For income seeking portfolios, we see a compelling case for replacing certain low and negative yielding bonds with dividend paying equities. We advocate a specific dividend strategy that focuses on dividend growth, rather than simply upon high current yield. Here's why:

Reaching for current yield can be dangerous. One reason for this is that high dividend yield strategies often include companies that are in danger of cutting their dividend payments. They also typically include many more highly indebted companies. In today's advanced economic cycle conditions, we prefer to avoid these risks. Instead, we identify what we see as a better class of dividend paying equities that we call 'dividend growers' – see note below **figure 3**.

Dividend growers are companies that have consistently grown their dividend payments over time. Companies that emphasize dividend growth as a goal are courting investors who want a total return based upon cash payments and earnings growth. As these companies' dividend payments represent a sustainable proportion of their profits, they are not maximizing payouts or taking on unsustainable levels of debt to enable them. Consistent dividend growth is obviously an attractive feature for income seeking investors. Companies that deliver it are likelier to have growing businesses and be financially robust. In the US, for example, we find that dividend growers have a higher average credit rating than the average company in the S&P 500. Companies with quality balance sheets and sustainable business models are appealing in today's advanced-cycle environment.

The performance of dividend growers over time has been strong. Both in the US and globally, such firms have outperformed broader equity benchmarks since 2001 – **figure 3**. To put it another way, $1m invested in global dividend growers in 2001 would have become $3.81m by 2019, compared to $2.6m for global equities and $3.1m for global high yielders. (Of course, past performance is no guarantee of future returns. Real results may vary.)

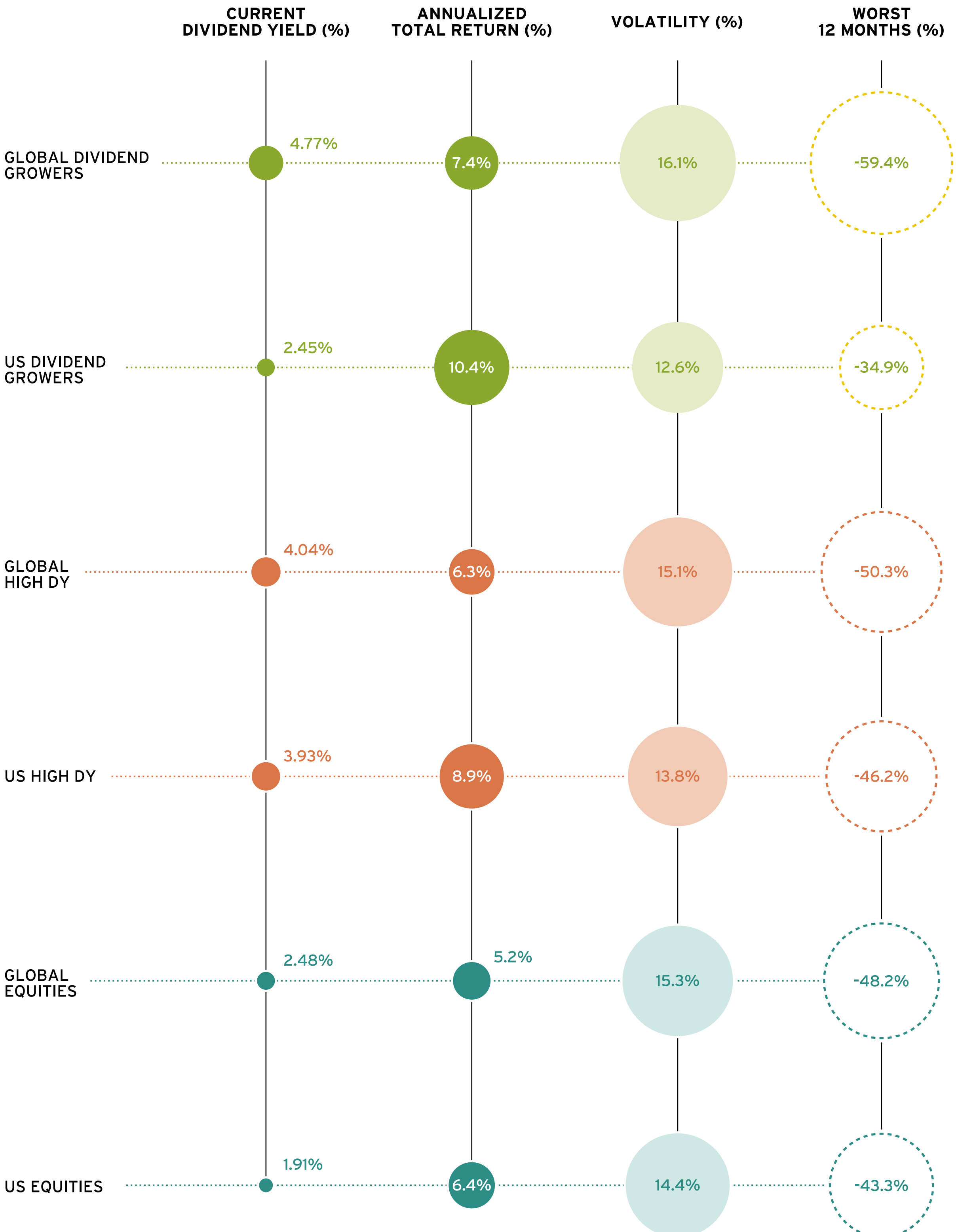
In the US – but not everywhere else – dividend growers have also proved less risky in various ways. Such equities as a group have been less volatile than the broader US stock market. Going back to 1990, they have suffered smaller annual losses during years when the broader market saw negative returns. Rather than focusing upon the US or any other national or regional market, though, our preferred approach is to invest in dividend growers globally. Portfolios that are highly concentrated in particular regions are more vulnerable to the turbulence that often occurs in the advanced stages of the business cycle and thereafter.

Despite their strong record over time, dividend growers have experienced periods of underperformance. There have even been times when dividend growers fell while equities in general rose. Bouts of dividend grower underperformance have tended to occur during strongly bullish phases for equities overall. Examples include the late 1990s tech boom, and more recently, 2015 and 2017. Our view is that, while we believe equities have upside potential in 2020, we do not expect strongly bullish conditions.

So, how might you allocate to dividend growers in your portfolio? We see a wide range of possibilities. The appropriate options for you will depend upon your particular objectives. Broad-based exposure can be achieved by a passive strategy that targets a dividend growth benchmark. That said, we favor strategies from active managers, whose stock selection ability could prove valuable in an advanced economic cycle environment and beyond. Customized portfolios of dividend grower equities from our own discretionary managers can also reflect your other priorities, such as ethical concerns. Meanwhile, capital markets strategies can help you target specific income outcomes in relation to dividend growers and other equities.

In the advanced stages of a long economic expansion, the value of dividend growers as a diversifier for fixed income portfolios and as part of an overall diversified investment strategy should not be ignored.

FIGURE 3. DIVIDEND GROWERS' RECORD



Source: Bloomberg and Haver as of 5 Nov 2019. Data from Jan 2001-Nov 2019. Global dividend growers are defined as the S&P Global Dividend Aristocrats Index; US dividend growers are defined as the S&P 500 Dividend Aristocrats Index. Global high dividend yield defined as the ACW High Dividend Index; Global equities defined as MSCI AC World Index; US equities defined as the S&P 500 Index. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary. See Glossary for definitions.

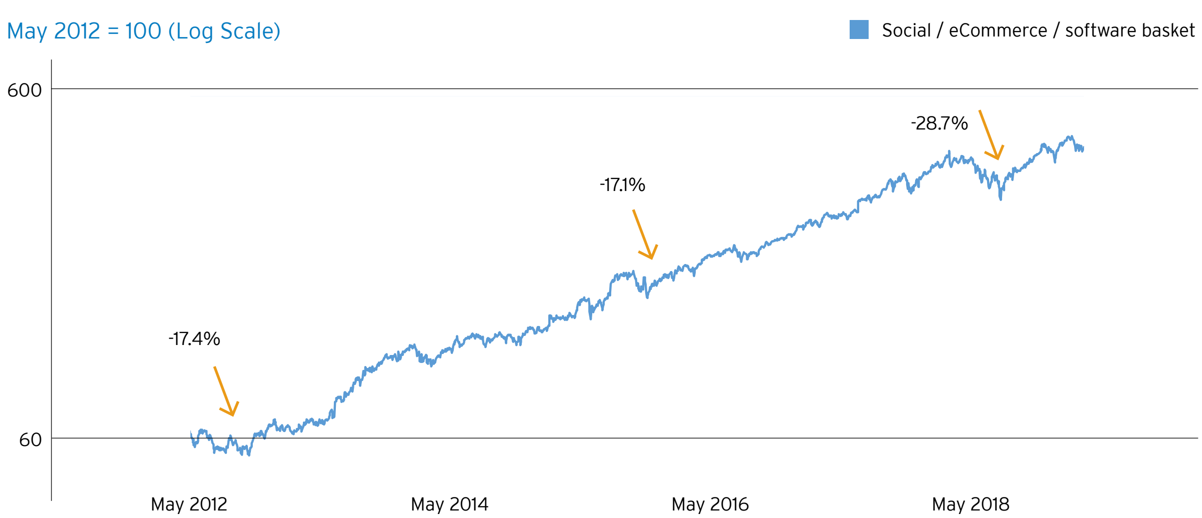
2.3 Earn income waiting for a bear market

IAIN ARMITAGE, GLOBAL HEAD OF CAPITAL MARKETS

Over recent decades, dividend grower equities have outperformed equities as a whole. However, equities in sectors focused on cutting-edge technologies have also seen some strong gains. Companies in these areas have somewhat distinct features to dividend growers. Because their businesses have strong organic growth potential, such firms tend to reinvest their cashflows in their operations, rather than paying them out as dividends. Their share prices are also typically more volatile. However, that volatility can provide the means to help earn a yield via a capital markets strategy. The volatility that one investor may seek to hedge away can be turned into a fixed income stream for another.

To learn more about the specifics of this strategy, please talk to your relationship team.

FIGURE 4. BUYING TECH GIANTS AFTER BIG FALLS



Source: Haver as of 4 Sep 2019. Composite shown is an equally weighted basket of the largest US software, e-commerce, and social media equities. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

2.4 Where the bonds still have yield

KRIS XIPPOLITOS, GLOBAL HEAD OF FIXED INCOME STRATEGY

Despite an acute shortage of yield across global fixed income markets, there is still yield potential in certain parts of the bond market.

KEY MESSAGES

Seek out our favored fixed income assets that we believe have sustainable positive yields:

- US Treasuries and US investment grade corporates
- Longer-term municipal bonds
- High yield bonds and bank loans
- European preferred stocks
- External emerging market debt

Investors should not be complacent when it comes to their fixed income portfolios. Owning very low and negative yielding debt has hidden risks and, in the economic environment we expect, will not diversify portfolios as they have in the past. But while we believe that income seeking core portfolios should look beyond bonds, that does not mean we want investors to shun the asset class. Even in today's world of low and negative yielding bonds, there are a range of possibilities for seeking yield from fixed income assets.

These possibilities are reflected in our Global Investment Committee's (GIC) tactical positioning – see **Avoiding the madness of crowds**. The GIC is deeply underweight negative yielding bonds in local markets. At the same time, we recommend large overweights in high quality US dollar fixed income. For example, US Treasuries and US investment grade corporates offer some of the better yield opportunities in the world.

Given the slow growth and politically volatile environment we are now in, Citi Private Bank favors extending duration beyond cash in high quality bonds. Although policy rates seem to be on hold for now, risks remain which could drive them lower. Therefore, we believe that now is the time to lock in higher yields by investing in longer-maturity bonds. Our preferred market for duration extension is US investment grade (IG) corporate bonds, where yield curves are relatively less flat. At the same time, investors

are rewarded with wider spreads in longer maturities. For North American investors, longer-term municipal bonds still offer the best value, where taxable-equivalent yields well exceed those found in taxable corporates.

Another potential opportunity lies in better quality high yield (HY) bank loans. The 'all-in' yields – LIBOR plus a spread – for BB/B- rated sub-investment grade loans of around 6% looks comparatively attractive to other markets. Although HY loans tend to underperform HY bonds during periods of increasing risk appetite, loans typically experience half the price volatility – **figure 1**. Lower quality HY bonds do look somewhat cheaper. However, we would avoid CCC-rated debt – issued by vulnerable borrowers – as risks in this area are largely idiosyncratic, volatile, and likely to rise over time.

Overall, global dividend yields are above global bond yields. Preferred stocks – a hybrid of fixed income and equity – offer higher coupons and lower beta than common equity. Since the beginning of 2019, yield declines have supported double-digit gains in US bank preferred equities. Although preferreds have a positive correlation to equities, performance has a historical beta to the S&P 500 of only one-fifth of that of US bank equities. Similar to the US, European preferreds have generated outsized returns. While valuations in US preferreds have become expensive, European bank preferreds – denominated in US dollars – still offer value. Yields around 5% are low by historical standards, but this equates to a spread pick-up of nearly 300 basis points (bp), or 75bp wider than BB-rated US high yield bonds.

Investors might also consider external emerging market (EM) debt. As developed market (DM) yields drop, the attractiveness of EM bonds increases. Average global EM US dollar aggregate benchmark yields at 5% are 360bp higher than DM yields of 1.4% and 440bp higher than non-US dollar DM yields. Latin America has the highest regional yield of around 8.5%, but also comes with higher volatility. By contrast, average Asia EM US dollar yields are closer to 3.5%, but offer more price stability. We stress the importance of global diversification when investing in EM, as there tend to be more idiosyncratic risks, as the recent case of Argentina emphasized. At the same time, those idiosyncratic episodes allow EM to offer attractive long-term risk-adjusted returns.

A further possibility we see lies in seeking to enhance yield by borrowing in low or negative yielding currencies to finance investments in higher yielding assets, which we explore in **Borrow cheaply and seek income**.

FIGURE 1. US HIGH YIELD BANK LOANS HAVE HIGHER 'ALL-IN' YIELDS

Source: Bloomberg Barclays, Bloomberg and The Yield Book as of 18 Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

2.5 Borrow cheaply and seek income

DAN O'DONNELL, GLOBAL HEAD OF CITI INVESTMENT MANAGEMENT ALTERNATIVES
KEN PENG, HEAD - ASIA INVESTMENT STRATEGY
JEFFREY SACKS, HEAD - EUROPE INVESTMENT STRATEGY
KRIS XIPPOLITOS, HEAD - GLOBAL FIXED INCOME STRATEGY

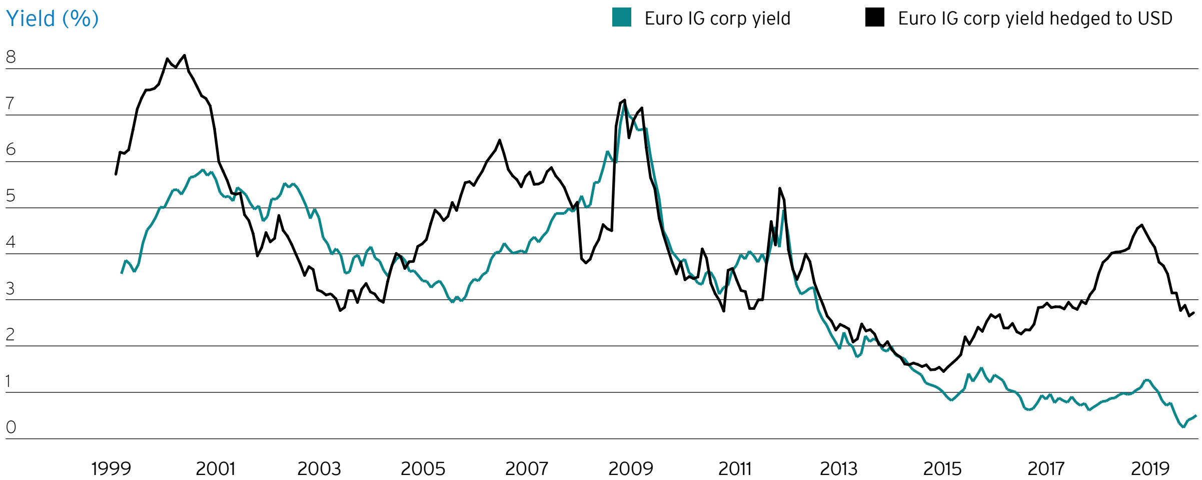
What should investors do when yields are low or negative? Such an environment creates opportunities to borrow cheaply and invest in higher yielding assets. There are many opportunities, including alternative asset classes.

KEY MESSAGES

We see a variety of ways in which investors can pursue 'positive carry' – the difference between low or even negative borrowing costs and higher portfolio returns. They include:

- US dollar hedged Euro credit
- Asian government and investment grade corporate debt in US dollars
- Asian high yield credit in US dollars
- Opportunistic private corporate credit managers
- Real estate secured credit

FIGURE 1. HIGHER YIELD PREMIA VIA CURRENCY HEDGING



Source: Haver, as of 20 Nov 2019 Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

For bondholders, the low interest rate environment undoubtedly poses a major challenge. But while global yields are low, ways to generate high levels of income still exist. For borrowers, low yields mean low borrowing costs. As such, it is possible to borrow at low rates in order to invest the proceeds in assets that can potentially generate a materially higher yield. Wide differentials between US and Eurozone rates also create opportunities in certain currency hedging strategies that seek positive carry.

Invest in US dollar hedged Euro credit

The average Eurozone investment grade (IG) corporate bond yield is 0.5%. When adjusting for the difference in market duration, Euro IG index yields are just one-tenth of those on US dollar corporates. Such low absolute yields are clearly not appealing to income-orientated investors. Most investors also do not typically treat their bond portfolios like equities, seeking capital gains as yields fall. As a result, our Global Investment Committee is deeply underweight low and negative yielding markets, including many in Europe – see **Our positioning** in **Avoiding the madness of crowds**.

Despite this, we still see possibilities for seeking yield in European corporate debt. This boils down to the difference in interest rates between the US and the Eurozone. The wide gap between positive US rates and negative Eurozone rates enables certain hedged strategies that target yield pick-up, but with limited currency risk.

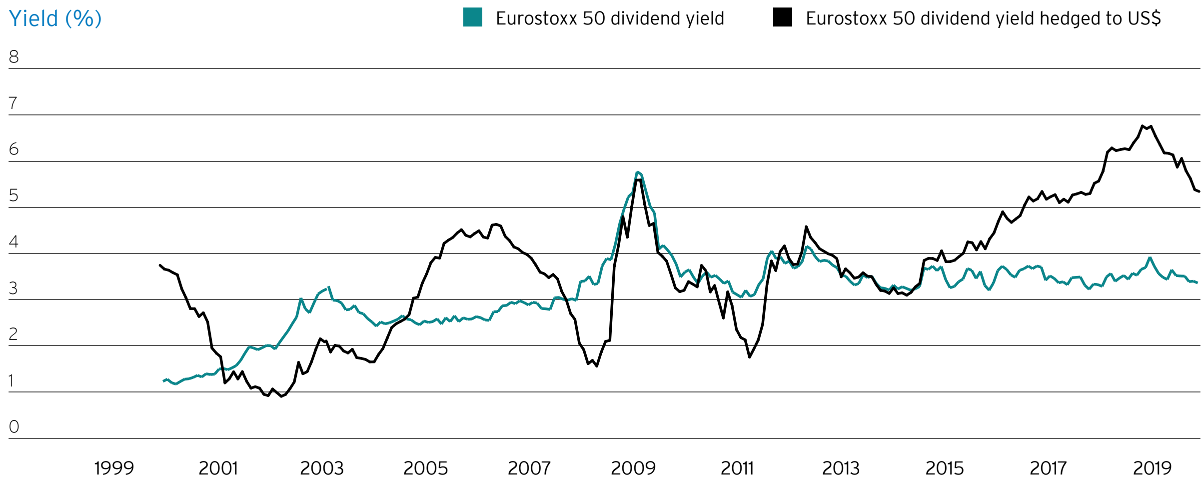
For example, some hedging strategies allow an investor to lock in an exchange rate today for a currency transaction on a future date. Typically, these strategies serve to hedge foreign currency payments against exchange rate volatility. Qualified investors today can utilize such strategies potentially to enhance Euro corporate bond yields and hedge their currency exposure.

Other asset exchange ideas

Owning individual European equities or bonds hedged into US dollars offers an unusually high yield premium compared to the past - **figures 1** and **2**. While derivative strategies can be complex by nature, fund managers may offer a simpler way to take advantage.

In some instances, certain mutual funds come in different share classes, denominated in different

FIGURE 2. DIVIDEND YIELD ENHANCEMENT VIA CURRENCY HEDGING



Source: Haver, as of 20 Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

currencies. This can provide investors with an option to capture the return on the underlying investment, without the additional impact from movements in exchange rates. So, investing in a euro mutual fund via a US dollar share class could produce additional yield.

Exploit negative Eurozone interest rates

For Eurozone borrowers, bank financing does not always reflect negative rates. However, certain hedging strategies allow investors to take advantage. For example, a loan in another currency[1] (i.e., US dollars) supported by a hedge, enables an investor to benefit from negative Euribor. Proceeds could then be used to invest in higher yielding assets.

Pursue Asian yield pick-up potential

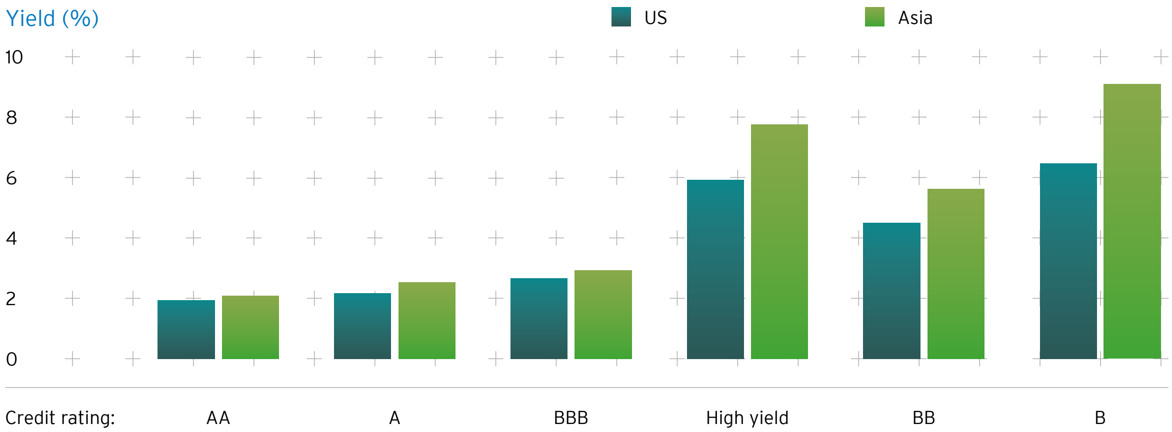
US dollar denominated bonds issued by Asian firms and government entities offer a good potential source of carry for fixed income investors. For investment grade (IG), the average yields are about 3%, which is between 10 and 40 basis points (bp) higher than US corporate yields with similar rating and duration. For Asian dollar high yield (HY) credit, the carry potential is much greater. Average yields are about 8%, or 200bp above those of equivalent US corporate HY yields – **figure 3**. This is despite strong returns in 2019 so far. As of 7 October, Asian IG and HY bonds had both delivered returns of around 11%, slightly exceeding their US counterparts.

Aside from attractive yields, we see other fundamental reasons why US dollar Asian IG and HY bonds could continue to do well. First, supply may tighten somewhat in 2020. Net issuance of dollar corporate bonds in the region hit a record of $77.2bn in just the first nine months of 2019. These funds help companies repay maturing bonds in 2020 and reduce the need for additional issuance, thereby curbing refinancing risk. Monetary easing in various countries in Asia ex-Japan may continue, which could also boost their relative appeal. We also expect the default rate in China – a concern for many investors in recent years – to stay under control, as policy easing offsets liquidity and growth risks.

Among the areas of dollar denominated Asian fixed income we favor are state-owned sectors, such as various Chinese and Indonesian names. We continue to prefer medium to long duration IG as well as short duration HY within a diversified fixed

1 All loans are subject to credit approval.

FIGURE 3. GREATER YIELD PICK-UP POTENTIAL IN ASIAN HIGH YIELD



Source: Bloomberg Barclays, Bloomberg and The Yield Book. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

income portfolio. By contrast, we see Chinese real estate, Indian financials, and Korean industrials as rather riskier. Local currency bonds – mainly sovereigns and quasi-sovereigns – may also offer significant carry potential. The drawbacks, however, include currency fluctuations and expensive hedges. Indonesia, India, Malaysia, and the Philippines have the highest real sovereign yields as well as scope for local interest rates to fall further. But the risk of currency volatility remains high as trade and geopolitical risks loom in 2020. Hedging the local currency risk is expensive given higher cost of borrowing the local currencies.

2.6 Seek carry from illiquid managers

DAN O'DONNELL, GLOBAL HEAD OF CITI INVESTMENT MANAGEMENT ALTERNATIVES

Some of the biggest beneficiaries of the low and lower interest rate environment since the 2008 financial crisis have been alternative managers in private equity and real estate. Their businesses and assets have benefited by being able to borrow readily and cheaply in order to finance their acquisitions. We expect these conditions to persist for several years to come.

In private equity and real estate, Citi Private Bank identifies various experienced investment managers who borrow in order to buy credit assets or properties and who subsequently make distributions of income to their investors over time. Admittedly, such distributions are not the same as the yield from bonds. That is because they may only be paid intermittently, so as to give the manager more flexibility to use those funds to pursue other investment opportunities. Also, the distribution potential comes at a cost of illiquidity, since private equity and real estate investments cannot be readily sold prior to the end of their scheduled lifetimes.

The pool of potential alternative investment opportunities has grown in recent years. Since the global financial crisis, there has been a large increase in the amount of non-investment grade debt. The total size of the US BBB-rated public loan market has increased from $730bn

pre-crisis to $3tn today. This has created a large inventory of credit assets, some of which might get caught up in future market stress. In the domain of private loans, middle-market lending since 2009 has swelled from $40bn to $900bn today, yet still enjoys a spread of over 100 basis points (bp) over the large syndicated loan market.[2] The increase in debt issuance has also been accompanied by looser underwriting standards, fewer lender protections, and greater loan loss risk, so manager quality is a key component when pursuing the opportunities that follow.

Opportunistic private corporate credit managers

Certain private equity managers pursue opportunistic credit strategies across public and private assets to take advantage of gaps created by the standardization in traditional markets. Many of the credit securities they invest in have relatively attractive yields because they target opportunities that do not fit within traditional liquid credit strategies. One key part of these managers' strategies involves buying stressed assets during difficult times. During market turmoil, many managers of liquid credit funds find themselves forced into selling assets. That is because they are required to maintain a certain level of credit quality in their portfolios or because they have to sell assets to meet investor redemption demands. By contrast, the private managers we favor do not face the same constraints. As such, they can often purchase these distressed assets opportunistically at depressed prices from forced sellers, with the potential for higher returns. These strategies will typically generate some yield, but prioritize strategic flexibility over cash yield.

Real estate secured credit

In real estate, we continue to focus on strategies that can generate attractive current yields relative to fixed income strategies. For example, we favor managers that target junior real estate debt secured by core real estate assets. These strategies generally underwrite unitranche loans – hybrid loan structures that combine senior debt and subordinated debt into one loan – and syndicate the senior portions to create an attractive yield profile, while still remaining secured with loan-to-value levels below 70%. These strategies aim to seek yields of between 9% and 10% for investors once fully deployed. We believe the yield pick-up compensates investors for the increase in risk and illiquidity.

A low interest rate environment is beneficial to the broad private equity and real estate markets. Core allocations with low liquidity needs can be invested in either private equity and real estate credit strategies that balance risk and reward by investing higher in the capital structure, benefiting from income and potential structural protection, while maintaining optionality to take advantage of distressed markets. The lack of liquidity in private markets may provide opportunity for those willing and able to assume illiquidity risk.

2 S&P Global Market Intelligence

3 Unstoppable trends

CONTENTS

3.1 What makes a trend unstoppable and why you should care

STEVEN WIETING, CHIEF INVESTMENT STRATEGIST AND CHIEF ECONOMIST

Unstoppable trends are transforming how we live and do business, creating long-term opportunities for your portfolio. We highlight three more of these trends, while reemphasizing those we identified last year.

KEY MESSAGES

- Unstoppable trends are powerful multi-year forces that are shaping the world around us
- We have identified trends that are investible, allowing portfolios potentially to benefit for years to come
- Our latest unstoppable trends are cybersecurity, fintech, and the future of energy
- We reiterate the importance of the rise of Asia, increasing longevity, and digital disruption

Powerful long-term forces are revolutionizing the ways in which we live and do business globally. These forces have implications for almost every industry, and they represent fundamental challenges to the status quo. They include technological advances, demographic developments and new behaviors. Many of them have been building up gradually for many years, but are now at a tipping point and are likely to gather momentum. As well as shaping our everyday lives and transforming the economy, they have major implications for investors' portfolios. We call these forces 'unstoppable trends.'

In **Outlook 2019** – published last December – we identified three unstoppable trends. **The rise of Asia** addressed the steady shift in global economic power from west to east, driven by the region's urbanization, growth of the middle class, and advancements in homegrown technologies. **Increasing longevity** explored how the aging of the world's population will impact future growth and consumption patterns. **Digital disruption** looked at how digital innovation is revolutionizing companies and industries, shaking up long established ways of doing business. Not only will we explain how they have performed over the last year, but also why we believe they will be sustained for the long term.

By their very nature, unstoppable trends are multi-year phenomena. Because they are both long-term and powerful, these trends can endure through an economic cycle. For this reason, we believe that having long-term portfolio exposure to the likely beneficiaries of unstoppable trends may offer resilient growth potential. In the same way, we stress the importance of avoiding excessive portfolio exposure to businesses and sectors most likely to be impacted negatively by unstoppable trends.

For 2020, we present three additional unstoppable trends:

Cybersecurity: Safeguarding the data revolution sets out the pressing need to protect the rapidly growing amount of digital information that people and companies are creating all the time.

Fintech: Disrupting financial services examines how technological innovators are breaking into the mainstream of an industry that has traditionally been insulated from new competition.

The future of energy highlights how we expect advancing technologies to drive global adoption of alternative energy while fossil fuels gradually fade into their twilight.

Getting appropriate investment exposure to these wide-ranging trends presents more of a challenge to investors than identifying the trends themselves. For each of them, therefore, we identify areas that we find attractive. These span a variety of public and private asset classes globally, and from straightforward to sophisticated strategies. Overall, we believe that a selective approach offers the most effective way of targeting our favored areas. In the section that follows, we explain why we think you ought to have exposure to them.

Reiterating our unstoppable trends

Just as our unstoppable trends are multi-year phenomena, we see them as long-term investment propositions. That said, however, they can also naturally make a near-term contribution, as they did in 2019. **Figure 1** shows how various indices and groups of equities linked to the unstoppable trends highlighted last year have since performed.

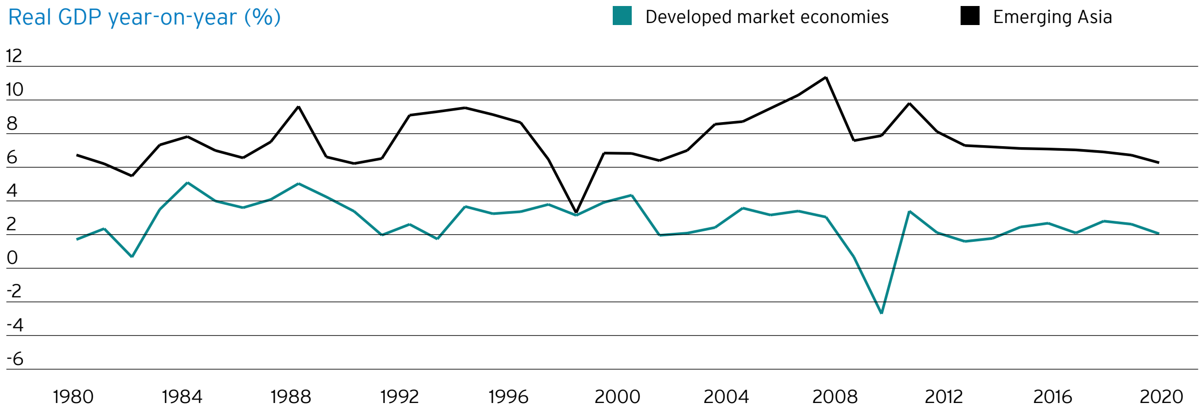
FIGURE 1. HOW OUR UNSTOPPABLE TRENDS DID IN 2019

Rise of Asia	China CSI 300: +29.3%, MSCI EM Asia: +13.9%, S&P 500: +25.0%
Increasing longevity	MSCI Global Healthcare: +14.5%
Digital disruption	FAANG equities +(10 leading IT firms[1]): +26.1%

Past performance is no guarantee of future returns. Real results may vary. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. This is neither a recommendation to buy nor sell equities of the companies mentioned. See Glossary for Index definitions .

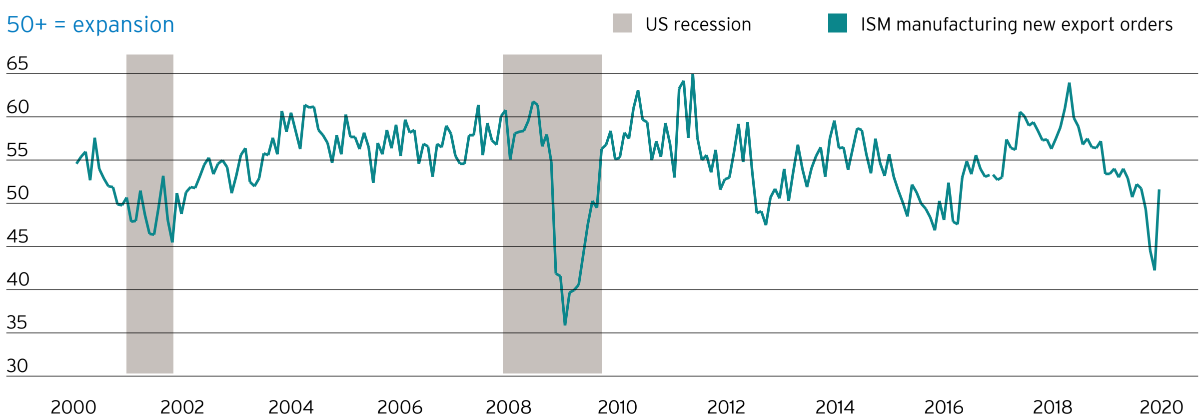
1 Equal weighted-members: E-Commerce: Amazon, Alibaba, Social Media: Facebook, Twitter, Search: Google, Baidu, Content: Netflix, Equipment: Apple, NVDIA, Tesla

FIGURE 2. EM ASIA'S FASTER GROWTH



Source: Haver as of 20 Nov 2019.

FIGURE 3. TRADE GROWTH WITHIN ASIA BOUNCES BACK



Source: Haver as of 20 Nov 2019

The rise of Asia

When reflecting upon 2019, the US-led trade war and the political struggle in Hong Kong will inevitably come first to investors' minds. But these challenges did not prevent this bloc of 3.7bn people from experiencing real GDP growth in excess of 6% in 2019 – **figure 2**. As we highlighted last year, EM Asia's combination of high savings and investment growth and a rising population is unmatched by any other region.

Inequality within and between countries presents a challenge for the region's stability, just as it does in all others. However, fast rising incomes and technological development remain lasting drivers of underlying growth. This is apparent in the region's growth data, even as regional trade with the US saw its biggest drop since 2009 – **figure 3**. Growth of the emerging Asian middle class consumer remains a powerful opportunity for global firms.

A pressure point in US-China relations is the rising potential for Chinese firms to dominate the rollout of communications technology and standards, particularly 5G - see **Digital disruption** and **The challenges of de-globalization and populism**. Huawei and ZTE were among the leaders in filing and procuring US patents for such technology just before US steps to place limitations on these firms.[2] The US did so on various grounds, including broad issues of national security, and corporate interactions with Iran.

While Hong Kong's equity market rose marginally in 2019, it has underperformed that of mainland China by 25% since protests began in May 2019. This highlights why international investors need both exposure to and diversification within the region, including to the rest of Greater China, India, the ASEAN countries[3] and others. Accounting for nearly half the world's population and more than a third of global GDP already, the region makes up less than one-fifth of the equity market capitalization of the US within global equity benchmarks. This low share is a result of both international investors' lack of exposure to the region's firms and their lower valuations.

Skepticism over the rise of Asia persists, as reflected in widespread underweighting of the region worldwide. We see potential Asian opportunities both near term and further out – see Regional asset class previews: Asia.

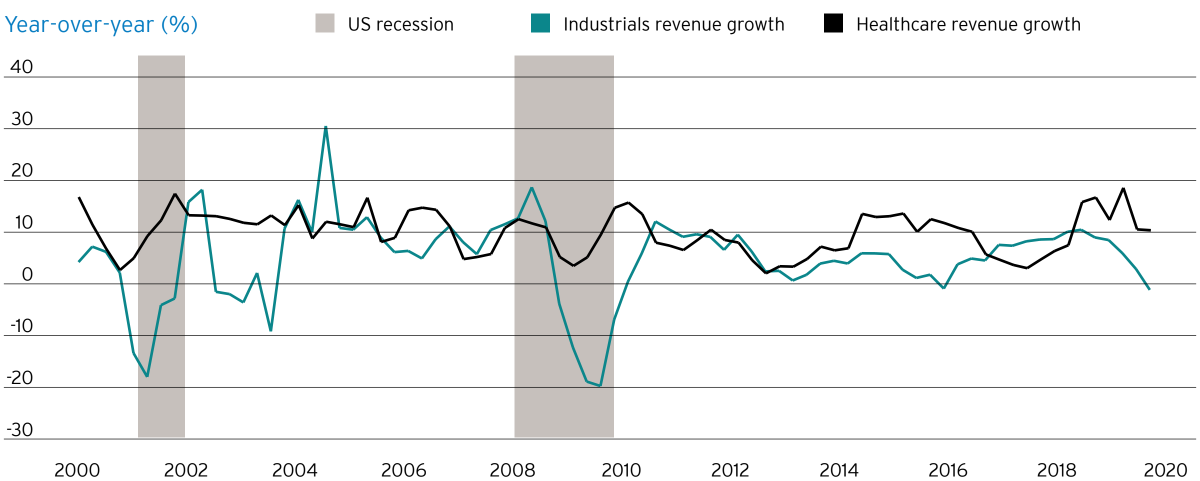
Increasing longevity

The waxing and waning of political concerns continue to dominate the healthcare sector's short-term relative performance. In the US, the healthcare sector outperformed by 10.9% during 2018's market decline. But during 2019's broad rebound, it has lagged behind the S&P 500 by 15%. Globally, where we have a greater preference for healthcare shares, the sector has lagged behind by a smaller 6.6% this year as confidence in cyclical industries bounced back.

We prefer strategies focusing on healthcare technology and under-penetrated emerging markets. Nonetheless, even in the US, we see the healthcare sector providing more stable, consistent growth than cyclical industries – **figure 4** – but without having higher valuations. This growth is underpinned partly by a growing older population that is increasing spending on what are considered medical necessities. As **figure 5** shows, the sector also provided greater immediate income than the more highly valued utility sector and is expected to continue doing so going forward – see also **The future of energy**.

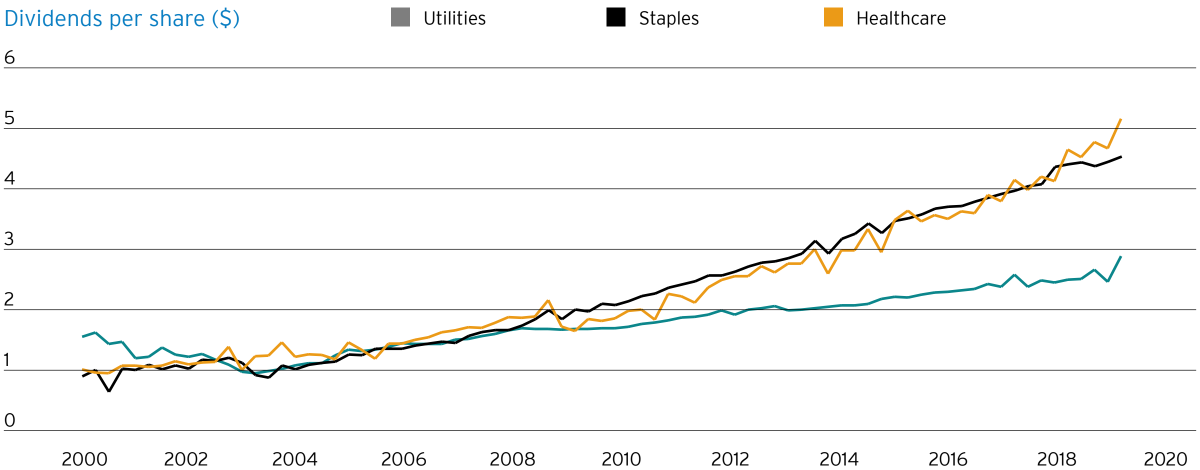
We reiterate the case for selective healthcare exposure based on the unstoppable trend of increasing longevity. The sector's current income potential adds to its overall appeal.

FIGURE 4. S&P INDUSTRIALS VS HEALTHCARE



Source: Haver Analytics, as of Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

FIGURE 5. DIVIDEND PAYMENTS: S&P HEALTHCARE, STAPLES, UTILITIES



Source: Haver Analytics through 11 Nov 2019. Chart shows S&P Healthcare, Staples, Utilities. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

Digital disruption

The internet connectivity revolution has many drivers, but the proliferation of connected devices and ever faster data transfer over networks have been critical. We believe the pace of digital connectivity may be about to accelerate once more, this time thanks to the deployment of 5G wireless networks.

Fifth generation (5G) wireless networks are expected to enter service in 2020 and become widespread over the next five years. 5G networks could be a hundred times faster, substantially more reliable, consume less energy, and have much greater capacity than today's 4G LTE and 3G networks. As such, many of our existing digital activities could become speedier and more valuable. Clearer voice calls, faster searches, and smoother streaming are the most obvious. But the real potential of 5G lies in enabling functions that are either difficult or impossible with existing networks.

The 5G combination of high speed and low downtime should allow many more industrial, urban, and household functions to be reliably connected and automated. These include self-driving vehicles, almost entirely automated factories where thousands of machines and processes communicate wirelessly with each other, and surgery performed on humans by a robot controlled by a surgeon from a remote location.

A race is taking place to see who will provide the winning 5G standards, or perhaps there will be two standards, one for the 'East' and one for the 'West.' Whichever the case, the real winners will likely be the best application providers for consumer and business broadband content.

As well as artificial intelligence, blockchain, and robotics, we are attracted to 5G exposure on a multi-year horizon.

2 This is neither a recommendation to buy nor sell equities of the companies mentioned.
3 Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Laos, Myanmar, Cambodia and Vietnam.

3.2 Cybersecurity: Safeguarding the data revolution

WIETSE NIJENHUIS, GLOBAL HEAD OF EQUITY STRATEGY

With the digital revolution set to intensify, protecting data from cybercriminals is critical and becoming more so.

KEY MESSAGES

- Breaches of data can do enormous practical, financial, and reputational harm, with losses to business of $1.5tn in 2019
- We have high confidence that data security spending will remain high and accelerate
- We favor companies that are exposed to endpoint and cloud security

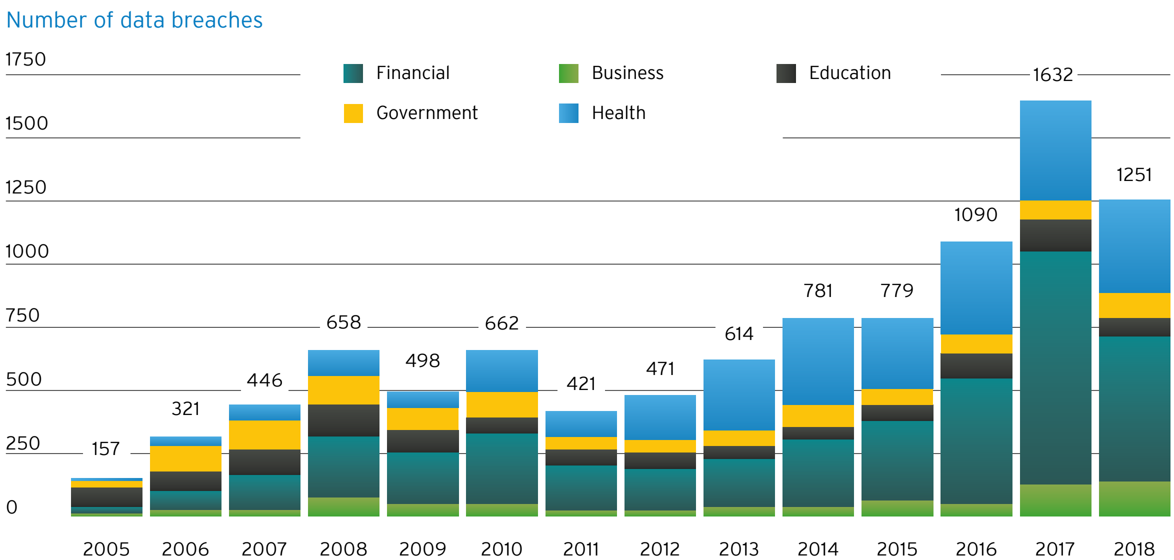
We are living through a data revolution. A rapidly growing proportion of information about our lives and business is now being created and stored digitally. This includes analogue information and information that was previously impractical to gather. Every day, we generate and share vast amounts of personal information. Obvious examples include posts on social media, credit card transactions, content streaming, as well as cloud-storing our calendars, photos, and shopping lists. Our car tells companies where we have been and where we are likely to go. Even more striking is the willingness of people to share intimate details of their lives, by sending DNA samples to medical and genealogical companies to be analyzed, stored, and compared to those of other users. And while we may not always be aware of it, our device keystrokes, bodily motions, and even heartbeats are often being captured digitally, too.

This data revolution is set to accelerate. It is estimated that 90% of all the data ever created came into existence in the last two years alone. With half of the world's population still without access to the internet and with new data intensive technologies emerging all the time, the proliferation of data is certain to continue. The advent of 5G cellular technology will result in billions of machines, microchips, and sensors becoming connected to the internet. Even basic day-to-day items such as clothing and household appliances could soon come with built-in connectivity. At the same time, we expect an increasing amount of the new data to be stored and processed in 'cloud-based' computers. All of this data will become increasingly influential in the decisions that we take about our own lives, but also the decisions that businesses and governments take about us. As a result, data is arguably the most valuable commodity in the world.

Data can be used for good and evil, and with and without our permission. As such, companies and individuals have the need to protect, secure, and monitor the use of their data all the time. This is in light of a growing number of ever more sophisticated criminal activities known as cybercrime. Actions known as cyberattacks are malicious and deliberate security breaches of individuals' or an organization's information systems, designed to steal or manipulate data with the intention of then using it fraudulently. Cybercrime also increasingly involves the deliberate destruction or distortion of data, often causing as much if not more disruption to businesses than theft.

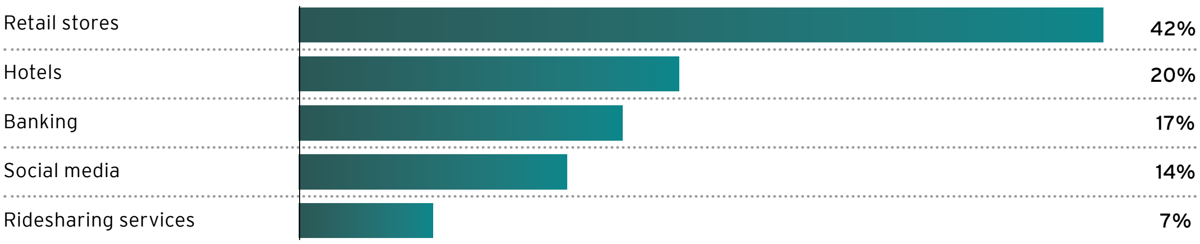
Cyberattacks are increasing globally in number and sophistication. In the US alone, there has been a sharp increase in data breaches from 779 in 2015 to 1,251 in 2018 – **figure 1**.

FIGURE 1. US DATA BREACHES ON THE RISE



Source: Identity Theft Resource Center as of 18 Jun 2019.

FIGURE 2. WHO WOULD YOU MOST LIKELY SHOP WITH AGAIN AFTER A DATA BREACH?



Source: Varonis Systems as of 2019

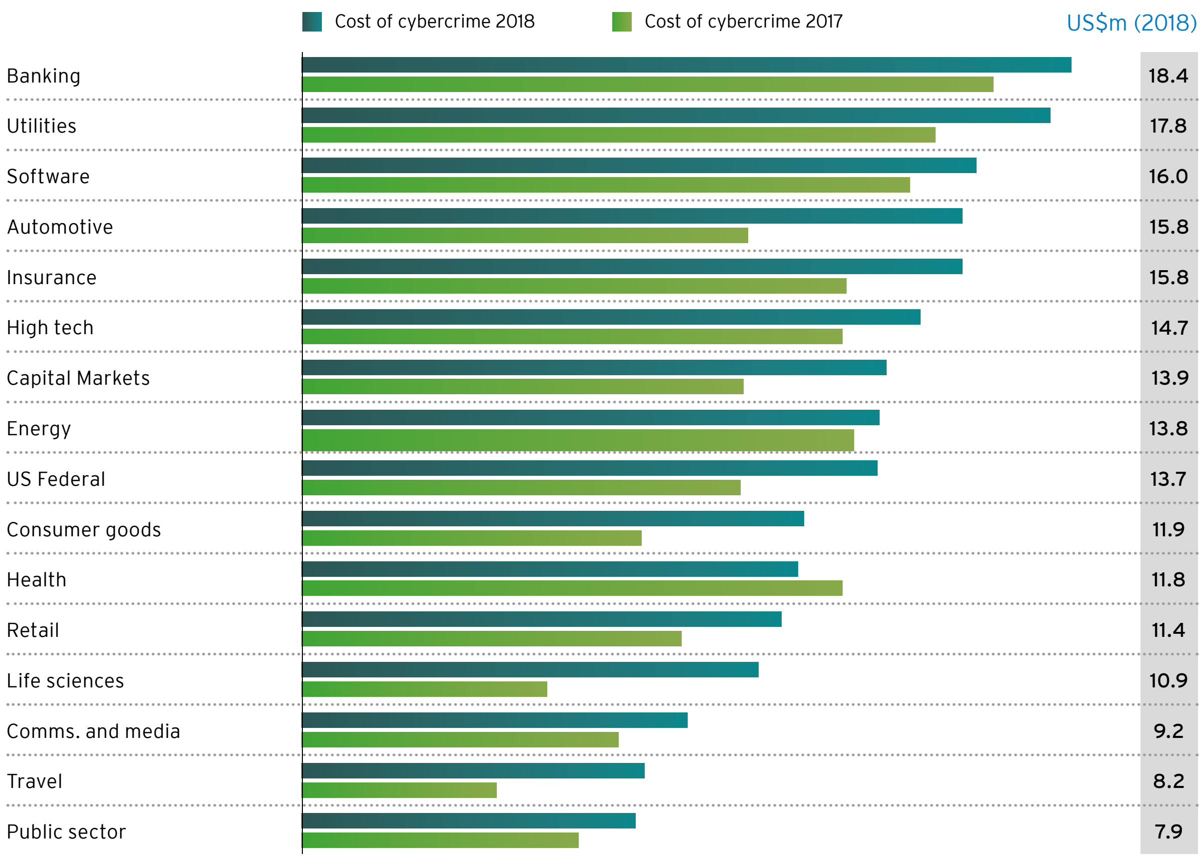
The total financial cost to the global economy of data breaches has been estimated at $1.5tn per year. Some sources believe this could rise to $6tn by 2021. Businesses are the most prominent targets of such attacks. According to the World Economic Forum, cyberattacks and data fraud are two of the top five risks that company chief executive officers expect to face in 2019. [1] For modern businesses to thrive, they must therefore safeguard their customers' data and their trust. Accordingly, the expertise, time, and money needed to defend against and resolve cybercrime are also rising. Investment and spending on cybersecurity is estimated to be running around $124bn a year in 2019, according to research firm Gartner, up from $114bn in 2018 and $102bn in 2017.[2]

A 2019 survey of 1,000 people in the US conducted by internet security firm Varonis Systems found that consumers are much less likely to continue using businesses that have experienced a data breach. Trust erosion was greatest for new industries such as social media and ridesharing companies rather than for more traditional industries such as retail stores – **figure 2**. Virtually every industry is therefore at risk, rather than just more obvious cases like technology and financial services – **figure 3**.

Besides the need to maintain consumers' trust, there are intensifying legal requirements for companies and other organizations to safeguard data. Custodians of personal and other third-party data will be held increasingly accountable for protecting this information. Europe is leading the way so far, with the introduction of the General Data Protection Regulations (GDPR) in May 2018. This legal framework sets strict guidelines for the collection and processing of personal information from individuals living inside the European Union. Ernst & Young estimated in 2018 that the world's five hundred largest companies spent close to $8bn in the run-up to GDPR, while ongoing costs include expenditures on technology, lawyers, compliance staff and consultants. Data privacy regulation in the US is also changing, with the authorities placing the onus on companies to

1 World Economic Forum Global Risks Report 2019, www3.weforum.org/docs/WEF_Global_Risks_Report_2019.pdf
2 Gartner, Forecast: Information Security, Worldwide, 2016-2022, 2Q18 Update, as of August 2018

FIGURE 3. NO INDUSTRY IS IMMUNE FROM CYBER THREATS



Source: Accenture as of 2019. Average annual cybercrime costs per organization by industry (US$ million)

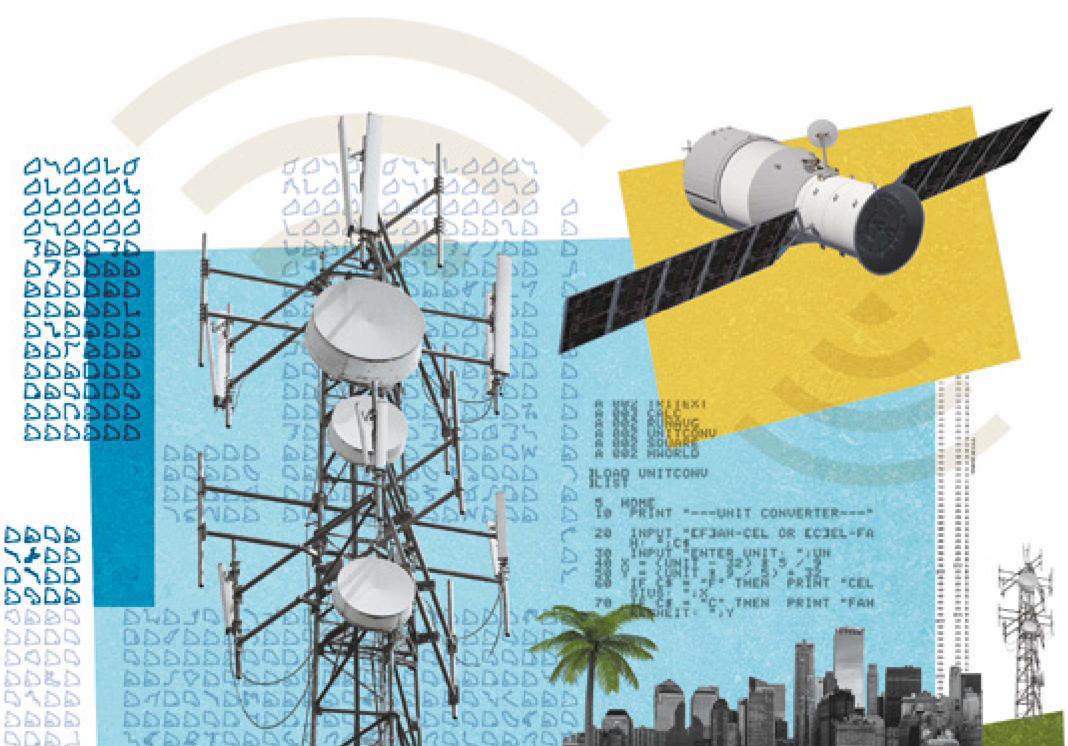
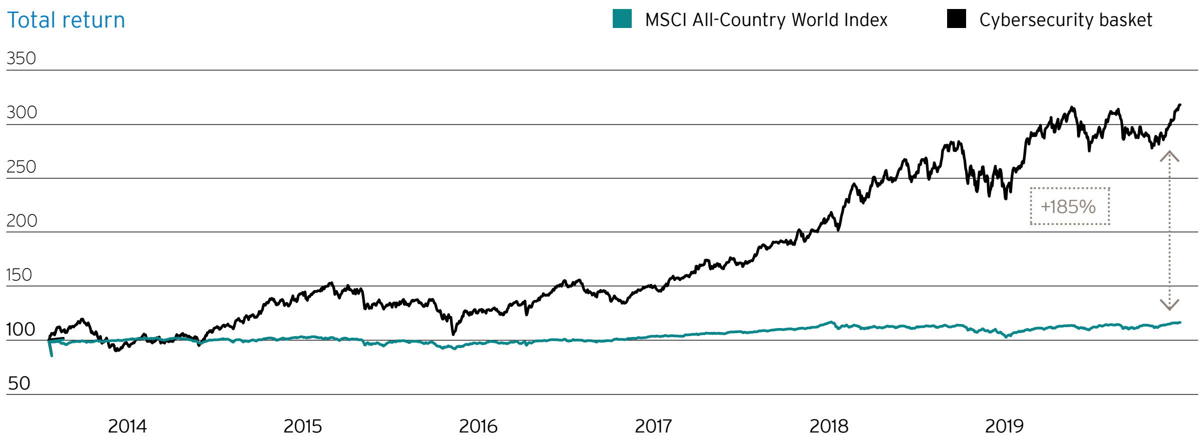


FIGURE 4. DATA PROTECTION'S ROBUST PERFORMANCE



Sources: Citi Private Bank and Bloomberg, as of Jun 2019. *The chart shows the performance of a basket of Cybersecurity stocks on an equal weighted basis. The stocks included are Palo Alto Networks, Splunk, Check Point Software Technologies, Okta, Fortinet, Symantec, Zscaler, Proofpoint, Trend Micro, Aisino, Avast, Qualys, FireEye, Mimecast, Sophos Group, Rapid7, Varonis Systems, NextDC, Sailpoint Technologies, ForeScout Technologies, SecureWorks, NCC Group and Ahnlab. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results, and future results may not meet our expectations due to a variety of economic, market and other factors. Real results may vary. For illustrative purposes only. This is neither a solicition to buy nor a recommendation to sell any of the aforementioned securities.

manage the risks around customer data.

Given the ongoing proliferation of data we expect and the need to defend against the mounting threats to it, we see cybersecurity as an unstoppable trend. Spending on internet security is expected to grow at 9% a year between 2018 and 2022. Even if overall IT budgets shrink, companies are still likely to prioritize security, given stricter compliance requirements and the ongoing shift to cloud storage. The rollout of 5G networks presents another catalyst for increased internet security investment.

Companies providing internet security products have performed strongly in recent years. For example, the equally weighted basket of cybersecurity stocks shown in **figure 4** has outperformed global equities by 185% since 2014. And we believe that the outlook for the sector remains bright, albeit not all areas exhibit the same long-term prospects. Our approach therefore screens for companies that are more exposed to growth areas such as cloud security and next generation endpoint security, rather than slowing growth areas such as anti-virus and firewall software. This cybersecurity sector could be used to help strengthen your portfolio, as well as potentially safeguarding your data.

3.3 Fintech: Disrupting financial services

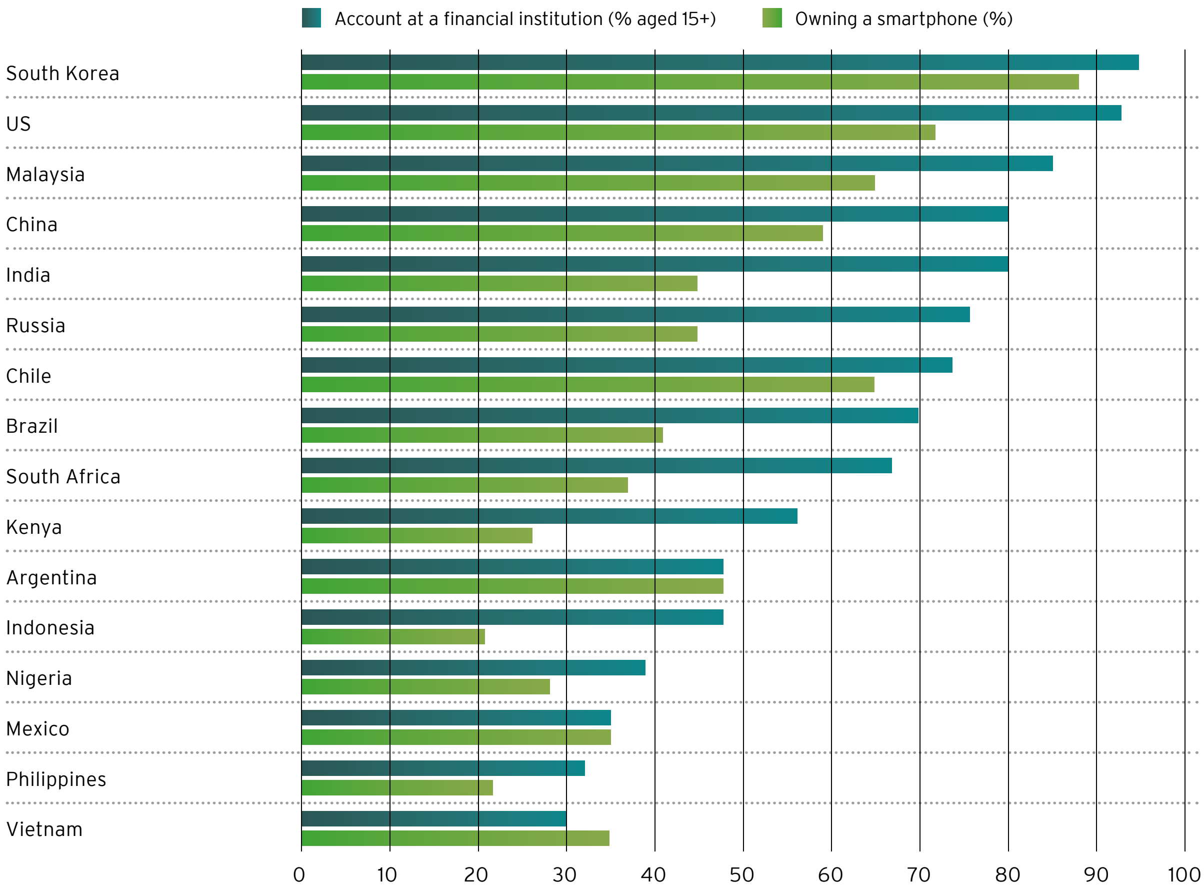
WIETSE NIJENHUIS, GLOBAL HEAD OF EQUITY STRATEGY

The financial services industry is facing sustained disruption. We advise building portfolio exposure to some of the innovators, while avoiding potential victims.

KEY MESSAGES

- For the first time, financial services are facing genuine and sustained disruption from fintech
- Payments firms are among the most attractive for investment within fintech

FIGURE 1. MANY IN EMERGING MARKETS ARE GOING STRAIGHT TO MOBILE BANKING



Source: Pew Research Center, World Bank Financial Inclusion Index, Smartphone penetration measured by the Pew Research Center survey conducted in 40 nations among 45,435 respondents as of 2017.

Perhaps for the first time, financial services are facing genuine and sustained disruption. A number of key developments have made the industry more susceptible to disruption today than it was around the millennium. These include shifting demographics and greater availability of funding, especially from well-resourced investors like sovereign wealth funds and venture capitalists. 'Millennials' – the generation born between the early 1980s and 2000s – now make up a larger proportion of the population. Having grown up with digital technology, millennials are much more open to non-traditional banking services. What's more, governmental and regulatory support for innovation has increased. The proliferation of internet connectivity via smartphones is also opening up access to banking to people who never had traditional bank accounts – **figure 1**. While the World Bank estimates that 1.7bn adults globally are still without access to financial services, this number is falling rapidly.

Given these powerful demographic and technological drivers, certain financial technology - or 'fintech' – companies have now managed to break into the financial services mainstream. So far, they may have only captured a small share of the consumer banking market. However, we see considerable scope for disruptors to grab a much larger share.

The tipping point

Many aspects of banking have barely changed for centuries. In medieval Italy, the Medici family gathered data concerning their customers and then applied their judgement to decide whether or not to extend credit to them. In essence, today's banks do very much the same thing. One reason for this continuity is that the financial services industry has been relatively well insulated from disruptive technological forces that might otherwise have shaken up many of its business practices as well as the size and structure of its workforce. Likewise, high barriers to entry have helped prevent new competitors from breaking into the industry.

There are still many barriers today. They include capital adequacy requirements, licensing, and heavy compliance costs. In the decades leading up to the global financial crisis, such barriers served to keep banks' average returns on equity high. The advent of the internet and the dotcom boom around the turn of the millennium did provide a test of financial services' resilience to technological disruption. But the industry emerged unscathed from that initial encounter, with new entrants into the sector during that period few and far between. This is no longer the case, however. We believe that sufficient investment and independent challengers have now entered this space to create a tipping point as we enter the 2020s. In countries that lack the Western world's regulatory and governmental barriers, entire new financial ecosystems have been built with such speed and success that the term 'bank' may have little meaning to many local consumers. Across China and Africa, payments are predominantly digital. And we are now seeing those same technologies entering the developed market mainstream. Given the ongoing funding going into fintech, the great scope for disruption in traditional financial services, and the momentum achieved so far, Citi Private Bank believes fintech represents an unstoppable trend.

Disruptors and the disrupted

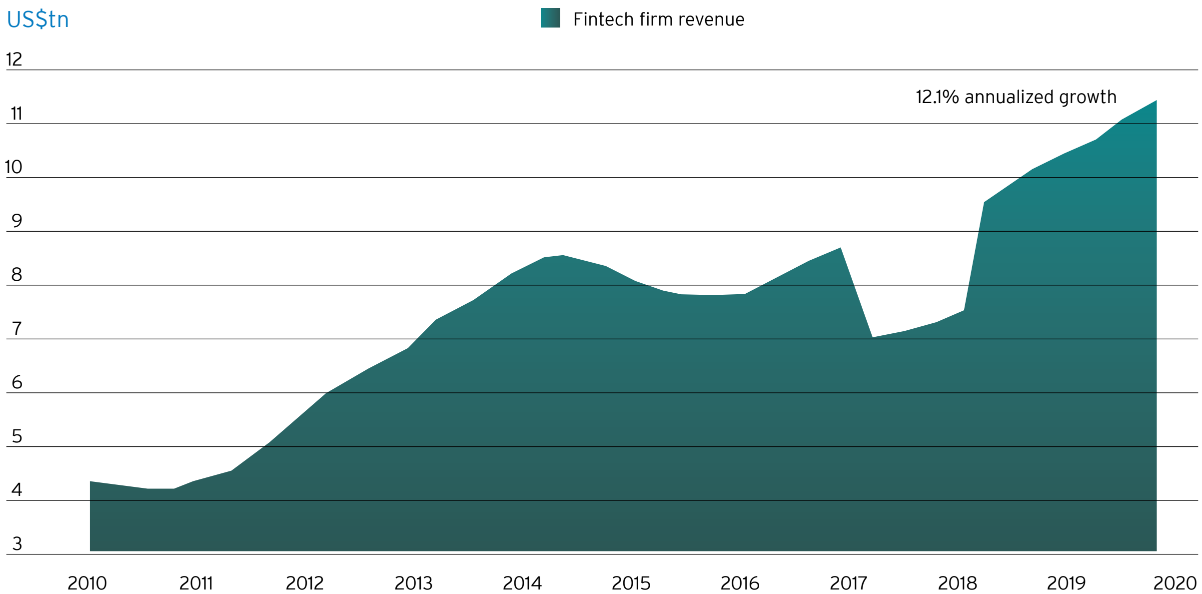
Fintech disruptors come in many shapes and sizes. They include online payment platforms, digital lenders, micro-loan providers in developing countries, mobile-only stock trading apps, regulatory and compliance software makers, and cryptocurrency providers. Whereas many traditional financial services groups offer a broad range of products and services, many fintech disruptors focus upon a single niche, such as a particular segment of business loans.

Those at greatest risk from the fintech disruptors are traditional financial services providers. The threat they face comes not only from fintech startups, but also from established internet retailers and giant tech companies. New technologies could sweep away the need for many customer-facing staff in banks and call centers, as well as many back office personnel such as payment processors and compliance officers. Workforce reductions could in turn lead to savings on the premises currently needed to accommodate them, including physical bank branches, call centers, and back office space.

This process is already well underway. As customers increasingly shift their banking online, Nordic and Dutch banks have already cut total branches by around 50% from recent peak levels. Savings might also be made as a result of innovative automation in areas such as regulatory compliance, where banks have had to spend billions of dollars since the global financial crisis in response to intensifying regulations.

That said, the relationship between fintech and traditional incumbents is not always that of predator and prey. Many fintech firms actually seek partnerships with incumbents. After all, each has what the other wants: the new entrants need customers and data, while incumbents require innovative technologies and cultural change.

FIGURE 2. FINTECH FIRM REVENUE



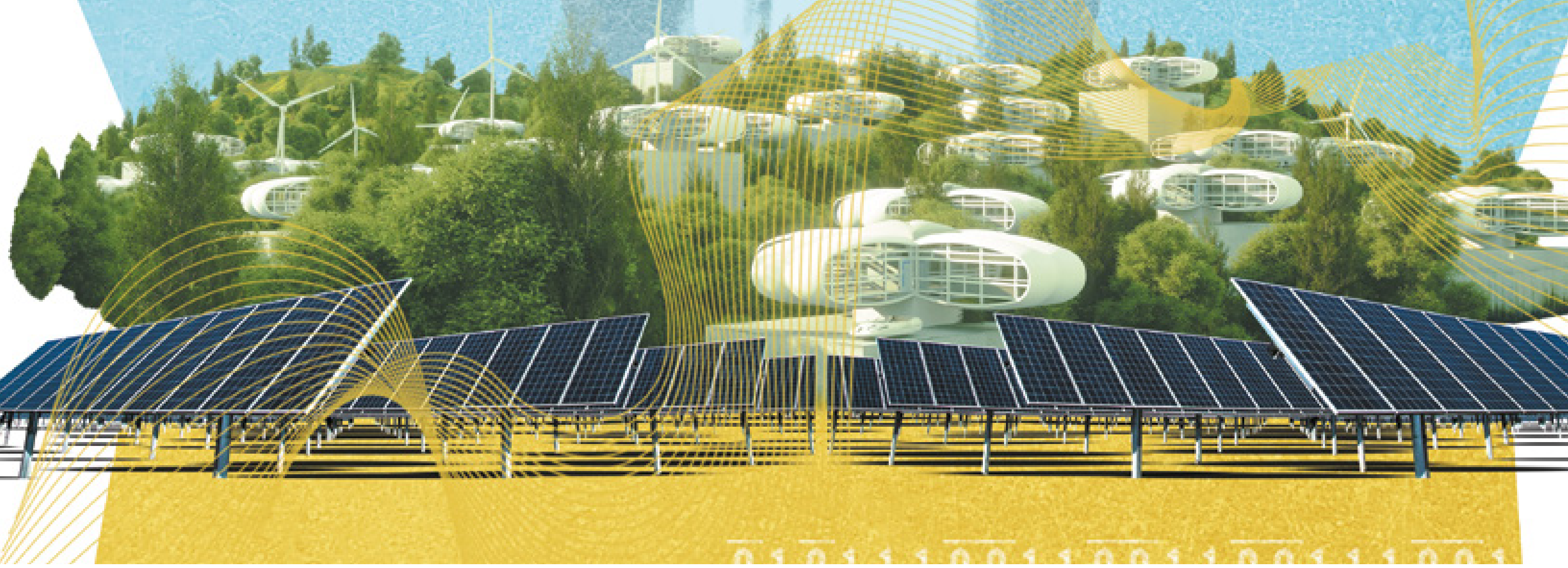
Source: Factset and Citi Research as of 11 Nov 2019. Fintech revenue is aggregated from global firms identified by Citi Research as deriving more than 50% of revenues from products or services related to financial innovation.

Portfolios should log on to fintech

To date, fintech companies have largely plugged gaps in the market. For example, they have focused upon new activities such as peer-to-peer lending or improving customer experience at the moment of sale. For incumbents, therefore, this has been more of a case of opportunities foregone, rather than actual profits lost. However, this does not mean that incumbents can sleep easy. It is important to remember that disruption typically progresses through stages. Initially, disruptors eat into industry growth by targeting new market segments, while coexisting with the incumbents. Having achieved a certain scale and established their reputation, they eventually start competing head-to-head for the incumbent's core business revenues.

Over the last decade, fintech firm revenues have grown at an annualized rate of 12.1% - see **figure 2**. By comparison, S&P 500 companies overall have seen revenue growth of 4.2%. It is our expectation that fintech will continue to experience strong growth now that this industry has reached a tipping point. We think this growth can drive stock prices as well as the valuations of privately held fintech players. Fintech firms come in many shapes and sizes, from fairly recent start-ups to giant tech companies who are moving into financial services. We see the most attractive potential in the payments space. At the same time, we are closely monitoring traditional providers' response to fintech. Our aim is to reduce or avoid exposure to the most susceptible. Further and wider ranging fintech disruption is coming. Investors should log on to this unstoppable trend sooner rather than later.

1 This not a recommendation to buy or sell a securities. It is for illustrative purposes only.



3.4 The future of energy

STEVEN WIETING, CHIEF INVESTMENT STRATEGIST AND CHIEF ECONOMIST
MALCOLM SPITTLER, GLOBAL INVESTMENT STRATEGIST

The Earth receives more energy from the sun in a single hour than humanity consumes from all energy sources in a year. Advances in technology will drive global adoption of solar energy and battery storage while fossil fuels gradually fade into their twilight.

KEY MESSAGES

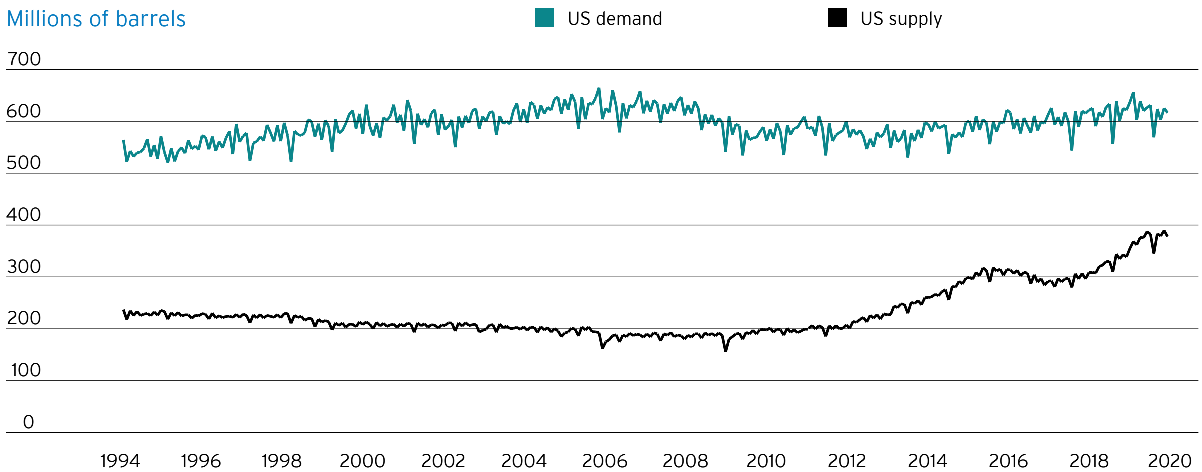
- Rising US oil supplies have depressed the global petroleum price, but technology is accelerating the deep underperformance of the oil & gas sectors.[1] Even without any environmental preference for cleaner sources, the economics of alternative energy production, whether solar, hydro or wind, will displace fossil fuels.
- Global solar energy costs are now below the cost of coal per kilowatt of electricity produced. Improving battery technology has meant rapid growth rates for electric cars and hybrids. This will increasingly cut into the growth rate of gasoline and diesel fuel consumption.
- The weakening utilization of oil appears to be following the historical precedent of the gradual phase out of earlier energy sources. Though this will take decades, it suggests a falling perpetuity value for fossil fuel energy sources. It does not, however, preclude 'trading bounces' for the unloved sector from time to time.
- The Trump administration has rolled back numerous fossil fuel regulations, yet US energy sector equities have strongly underperformed. Some US Democratic contenders threaten to ban much US oil production if elected in 2020. This would, ironically, save the conventional oil sector and boost the commodity for a time.

1 All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

Back in our Outlook and Mid-Year Outlook reports of 2013, we wrote about the new American energy revolution. After decades of US crude oil production declines, so-called 'frackers' managed to push US oil output 55% higher in just three years by the end of 2014. They pushed on further until a production peak in 2015. After the global oil price cracked under the new supplies, with oil falling as much as 75% in price, US production recovered and jumped 115% from its 2012 level – **figure 1**.

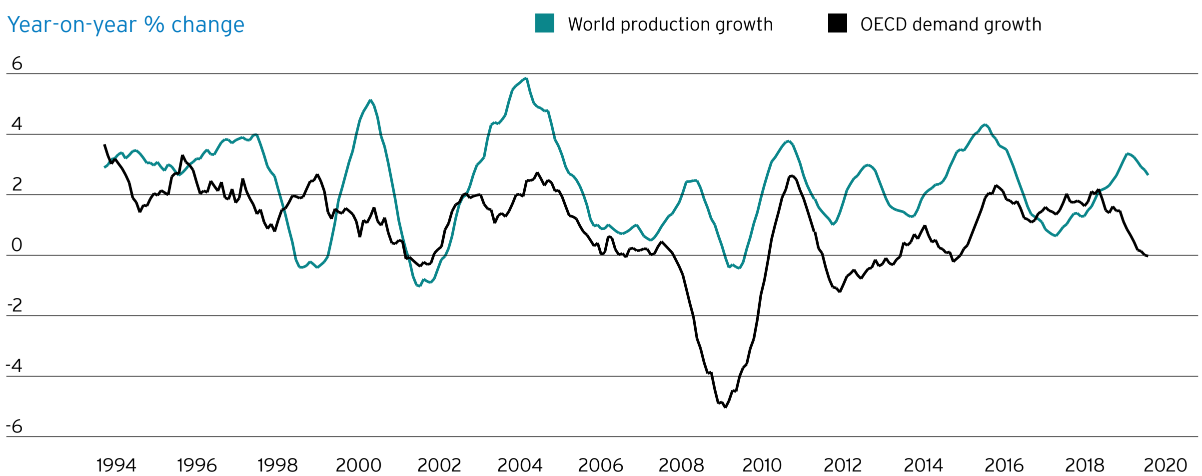
In spite of production cuts and global supply disruption over the past year, there is still relatively little mystery why the global crude oil price remains below $65 per barrel, less than half 2008's historic peak price. US sanctions have forced Iran's oil production down to the lowest level since 1989. After years of decline, Venezuela's oil production is down 75%. Yet the growth in global oil – and in many cases in gas – supplies is eclipsing the growth rate of demand - **figure 2**.

FIGURE 1. US CRUDE OIL PRODUCTION SURGES



Source: Haver Analytics through 1 Nov 2019

FIGURE 2. WORLD OIL SUPPLY RISES, WHILE DEVELOPED WORLD DEMAND FALLS



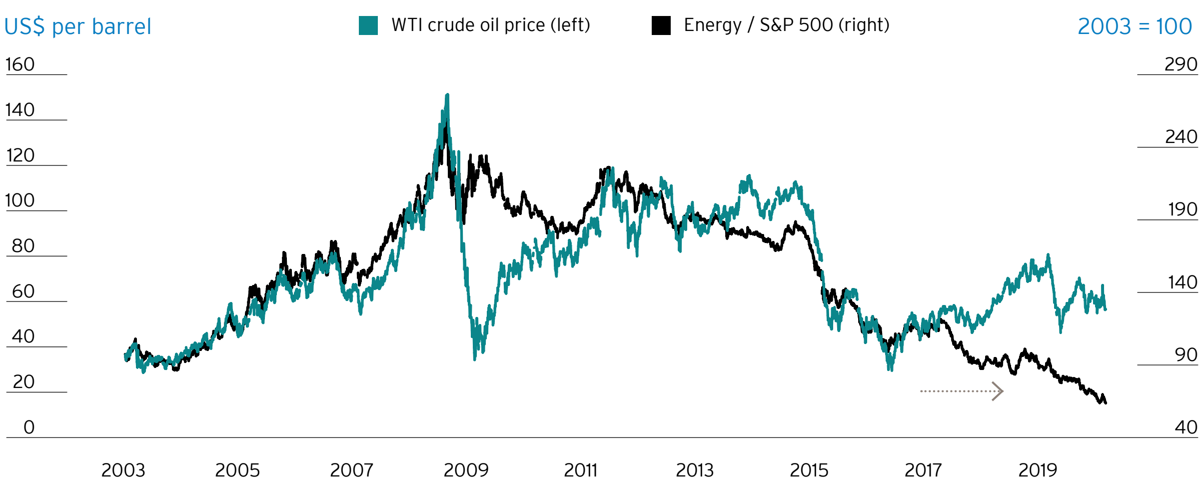
Source: Haver Analytics through 1 Nov 2019

However, crude oil extraction technology and surging supply is just one part of the story. With the gradual transition away from fossil fuels, energy equities are significantly underperforming the oil price, falling to the lowest market capitalization share of the S&P 500 since 2000 – **figure 3**. That is in spite of low oil prices and notable efforts to support the industry. The latter include crude oil production cuts by OPEC in the past two years and President Trump's efforts to repeal subsidies for renewable energy sources.

After years of being safe from the transformation of the energy sector, petroleum is finally at risk. Despite a record-breaking 126% increase in US oil production over the last ten years that has transformed the global oil markets, an investor who avoided oil over those same years would have outperformed the broader S&P 500 Index by more than 6% – **figure 4**.

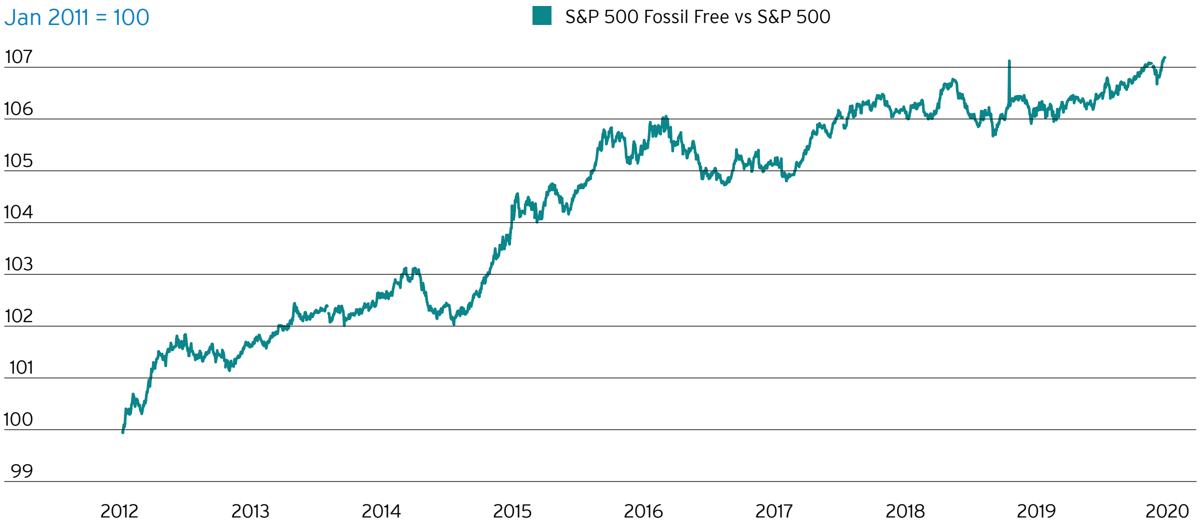
An analogy for the fate of oil may be the US coal industry. Year after year, coal production has declined and profits have collapsed. The last coal company was demoted from the S&P 500 in 2016. Coal companies in the broader S&P 1500 have shown an annualized decline of 23.5% per year for the last ten years. In other words, a hundred dollars invested in coal in 2009 would now be worth just under $7, even including dividends – **figure 5**. This is despite President Trump announcing a goal of saving the US coal industry and slashing environmental restrictions – see **Changes in US environmental regulations by the Trump administration to date**. US coal production has slumped amid disuse. The same fate awaits coal industries globally over time. Despite a strong consumption growth rate in a handful of countries – India in particular – coal demand is flattening worldwide.

FIGURE 3. ENERGY EQUITIES HAVE UNDERPERFORMED



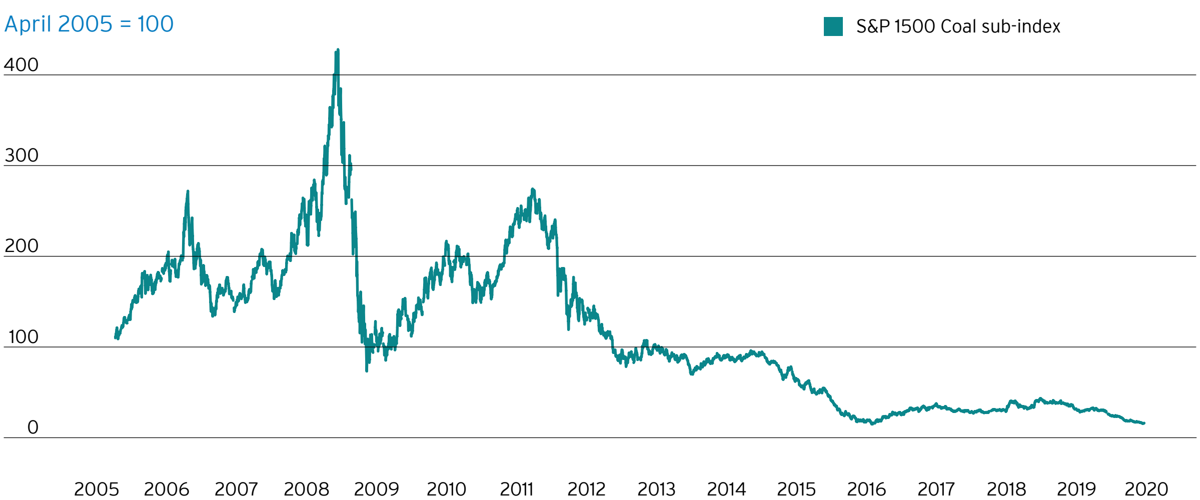
Source: Bloomberg, Haver Analytics through 1 Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

FIGURE 4. FOSSIL FREE INVESTMENTS HAVE OUTPERFORMED



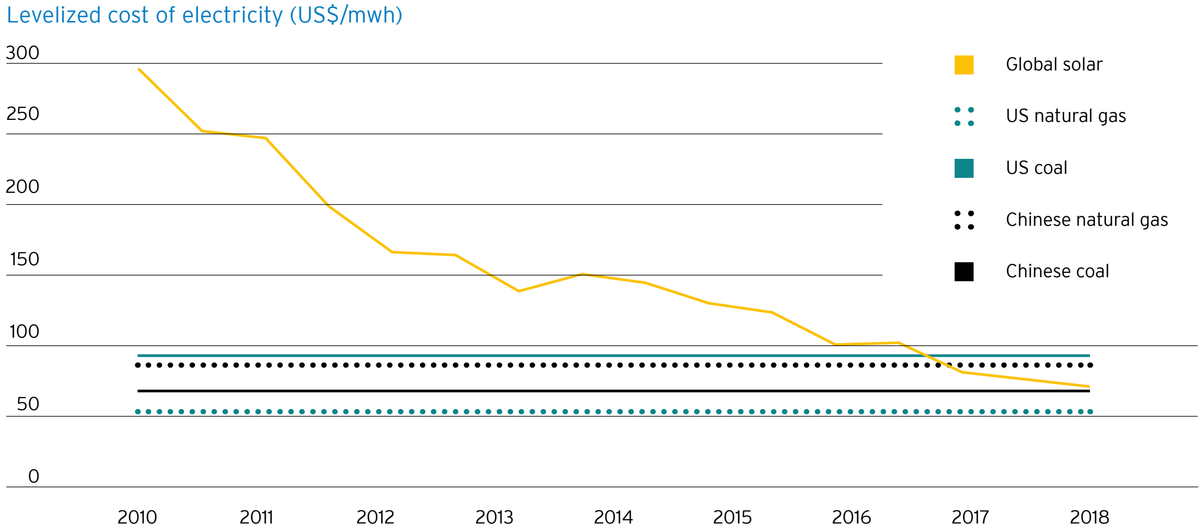
Source: Haver Analytics through 1 Nov 2019. Chart shows S&P Fossil Fuel Free Index Relative to the S&P 500 Index. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary. See Glossary for definition.

FIGURE 5. US COAL EQUITIES' LONG DECLINE



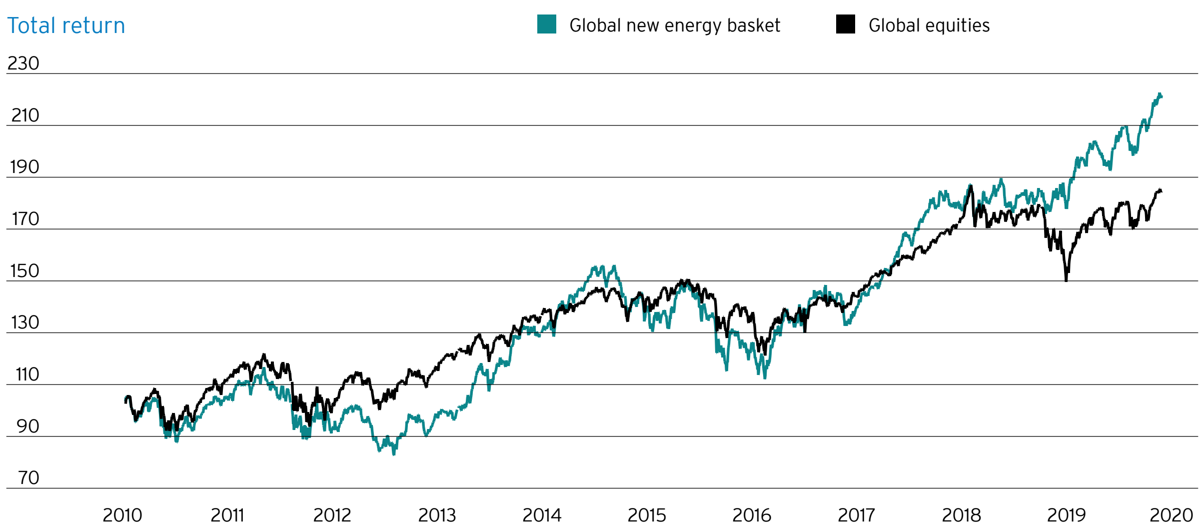
Source: Haver Analytics through 1 Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

FIGURE 6. FALLING COSTS TO PRODUCE SOLAR ELECTRICITY



Source: Bloomberg as of October 2019.

FIGURE 7. ALTERNATIVE ENERGY'S OUTPERFORMANCE



Source: Haver, as of 25 Nov 2019. Global equities represented by MSCI All Countries World Index. Shares in Citi Research theme baskets for Solar, Wind, Hydro, Energy Storage, Energy efficiency, and Smart Grids, as highlighted in Citi GPS Energy 2030: Financing A Greener Future, 2018. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

The price of new solar capacity has fallen below that of coal – **figure 6**. This sort of progress has been accompanied by alternative energy equity price outperformance globally – **figure 7**. This contrasts with traditional energy's underperformance in recent years. In other words, even without any environmental preference for cleaner sources, the market has disproportionately favored new solar, hydro, and wind solutions to the more expensive fossil fuels.

Importantly for crude oil demand, increasingly effective batteries at ever lower prices now enable electric and electric hybrid vehicles to begin displacing traditional fossil fuels in transportation. Even without expansion or renewal of price subsidies for electric vehicles in the US, it is highly likely that at least at the margin there will be pressure on petroleum-based vehicles and by extension petroleum itself in the years ahead. In fact, twelve nations[2] have already set dates in law for when the last gas fueled cars are to be sold. China, meanwhile, has announced a ban without setting a date. In Norway, where hybrid or electric vehicles already comprise more than half of sales, the ban on traditional gas vehicles begins in 2025 for new sales.

This does not mean oil for transportation fuels will be suddenly and wholly displaced. For oil, a finely balanced, sensitive commodity, displacing just 1.5% of demand - all else constant – would mean sending a typical year's increase in world supplies into inventories. Very small changes in supply or demand have a large impact on this volatile commodity's price.

To understand how bad it might get for oil, US petroleum production has more than doubled in the last ten years. However, an investor who avoided the sector entirely would have outperformed someone who invested in the broader market including energy – **figure 4**. In addition to trends currently in force, the petroleum sector faces unknown risks due to regulation of carbon. The latter seems likely to outlast any political regime on a global view.

2 Costa Rica, Denmark, France, Iceland, Ireland, Israel, Netherlands, Norway, United Kingdom, Sri Lanka, and Sweden.

Litigation against energy companies and utilities represent a further risk. The unfavorable treatment of PG&E – a Californian utility – may prove the first truly large-scale climate change corporate casualty. It was driven out of the S&P 500 Index and into bankruptcy owing to liabilities related to a string of catastrophic wildfires in California that were exacerbated by changing temperature and rainfall patterns.

More dangerously perhaps, there is the US precedent for holding corporations responsible for damages done long ago. A template could be the lawsuits against the tobacco industry at the beginning of the twenty-first century, which resulted in large awards of damages. It is not unthinkable, therefore, that some localities may force petroleum companies to pay sizeable settlements for general environmental damage previously done rather than for specific incidents, as suggested by New York State's current suit against Exxon – **figure 8**.

In addition to changing market conditions and legal challenges, consumer opinion is shifting on climate change. In a worldwide poll, fully 68% of consumers in the median country consider climate change a major threat, and only 9% consider it not a threat at all, according to a study by the Pew Research Center. As alternative energy sources become more affordable, many consumers who were previously hesitant to reduce their use of petroleum and other fossil fuels will find it less costly to alter their behavior. At Citi Private Bank, we also increasingly encounter clients wanting to reduce their portfolio exposure to fossil fuel producers and other carbon emitters.

We do not seek to imply that the day of the last oil well is near. Nor even do we necessarily believe that we have reached peak fossil fuel production. As we wrote in Quadrant in November 2019, the shorter-term prospects for the sector look stronger after their deep

FIGURE 8. S&P 500 AND EXXON MOBIL'S SHARE PRICE

Source: Haver as of 25 Nov 2019. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

underperformance. Our analysis suggests, however, that we are at or very near to a tipping point, and that fossil fuels and the companies associated with them may be on the wane.

A historical precedent for the slow drag this process might produce upon a portfolio comes from the early days of the petroleum industry itself. Petroleum as lighting fuel in the form of kerosene was discovered in 1859. But it took more than forty years for the whale oil industry to phase out and ultimately perish – **figure 9**. And yet during those decades, investors in whale ships saw their assets losing value year after year, so would have been far better served divesting in year one than in year forty.

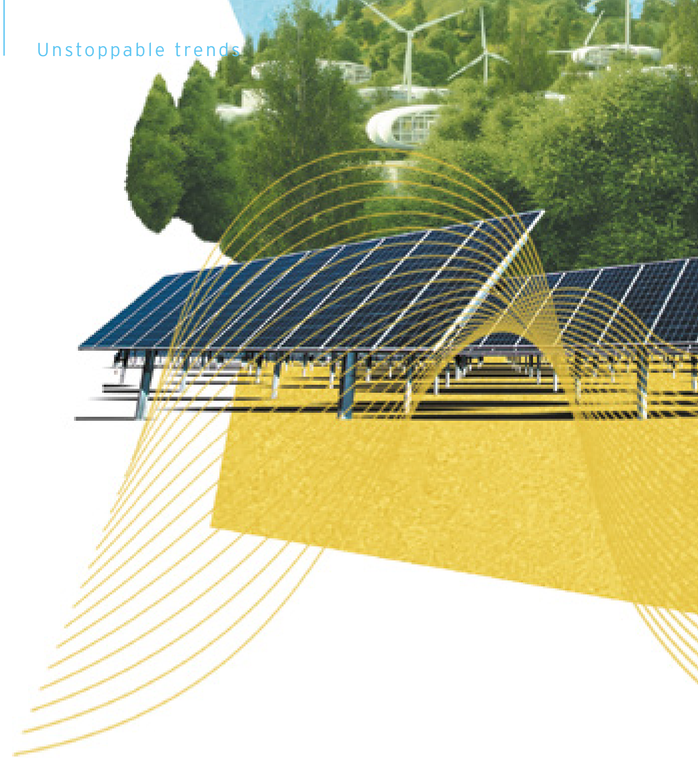
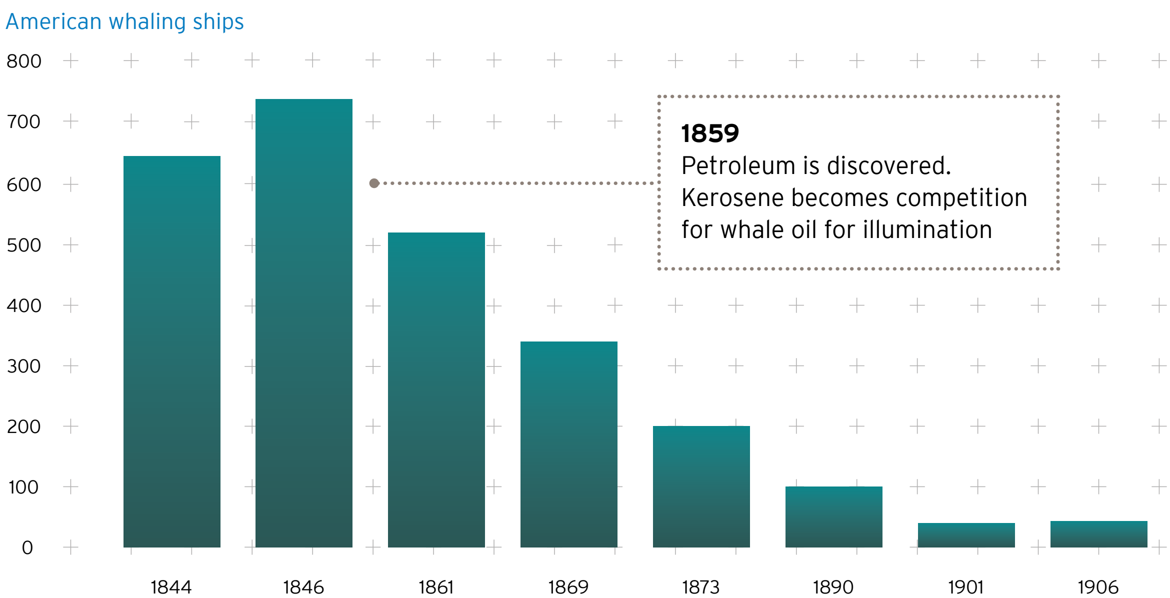


FIGURE 9. ACTIVE NUMBER OF AMERICAN WHALING SHIPS



Source: W. Tower, 1907. A History of the American Whale Fisher. Philadelphia, The University of Philadelphia.

A political paradox?

One of the best case scenarios at least for non-US based traditional oil companies may come from a surprising source. Three out of the top five Democratic contenders have promised to ban fracking if they are elected President in November 2020.[3] If truly enacted, this might put an end to the US shale oil boom and offer the prospect of higher price and investment returns for traditional well operators, such as they enjoyed in the 1990s and early 2000s. Such a price boost would likely only be temporary, however. In fact, it would probably accelerate the transition to a post-petroleum economy by making traditional internal combustion vehicles less competitive.

More simply, the energy sector's deep underperformance has already encouraged investors to underweight the sector, many in fear of the lawsuits Exxon and others may face. When such fears get overblown relative to current profits and dividends, counter-trend share price rebounds can be quite strong. Our sense is a trading 'bounce' is coming for major oil producers in 2020. However, such an outcome would merely be a short-term reprieve.

Prepare for the future of energy

By nature, we are skeptics of long-term economic forecast extrapolations, but the trends we have identified are accelerating. The price of energy production from non-carbon sources has fallen so far that it seems inevitable that sustainable substitutes for fossil fuels will gain 'critical mass.' Concerns about CO_2 and other emissions are likely to outlast any politician's tenure. While there are skeptics and pessimists on both sides, the remarkable human capacity for adaptation will ultimately prevail, in our view.

As noted, many socially-driven investors have asked us to modify portfolios to eliminate ownership or funding for carbon. This appears to have driven some of the deep underperformance of the sector relative to energy commodities. Even more fundamentally, technological disruption – pervasive in so many other industries – appears to be accelerating across the energy sector.

Debate about the moral imperative to address climate change was intense in 2019. Technology once again seems likely to play the most critical role in addressing such imperatives, with powerful impacts upon investment portfolios. We'd note that the Earth receives more energy from the sun in a single hour than humanity consumes from all energy sources in a year. With much competitive experimentation ahead, we think solar energy and its applications in particular look to be the ascendant technologies, while fossil fuels gradually fade into their twilight.

3 Candidate Warren, Sanders and Harris have all called for outright Fracking bans, while Biden and Buttigieg have called for increase regulation – Politico, as of 11 Sep 2019)

FIGURE 10. CHANGES IN US ENVIRONMENTAL REGULATIONS BY THE TRUMP ADMINISTRATION TO DATE

● COMPLETED ● IN PROCESS ● STUCK IN LEGAL BATTLE

FREEZE CAFE STANDARDS
SOLAR TECH TARIFFS ON CHINA
CANCELED OIL AND GAS COMPANY REPORTING METHANE EMISSIONS
ORDERED EPA TO REVIEW OBAMA ERA CLEAN POWER PLAN
ROLLBACK OF WATERS OF THE UNITED STATES RULE
REPEALED RULE REQUIRING STATES TRACK TAILPIPE EMISSIONS OF FEDERAL HIGHWAYS
REPEALED RULE THAT INCLUDED 'SOCIAL COST' OF CARBON EMISSIONS
WITHDREW GUIDANCE THAT FEDERAL AGENCIES INCLUDE GREEN HOUSE GASSES IN IMPACT ANALYSIS
STOP REQUIRING COMPANIES TO INSTALL METHANE LEAK DETECTION EQUIPMENT IN WELLS, PIPELINES AND REFINERIES
ELIMINATE REQUIREMENT THAT NEW COAL PLANTS CAPTURE CARBON EMISSIONS
AMEND RULES THAT GOVERN HOW REFINERIES MONITOR POLLUTION IN SURROUNDING COMMUNITIES
NEW EMISSIONS STANDARDS ON POWER PLANTS
LIMIT INDIVIDUALS'ABILITY TO CHALLENGE POPULATION PERMITS
CUT SIZE OF TWO NATIONAL MONUMENTS TO ALLOW FOR MORE DRILLING
RESCINDED WATER POLLUTION REGULATIONS ON FEDERAL AND INDIAN LAND
SCRAPPED A PROPOSED RULE THAT MINES PROVE THEY CAN PAY FOR CLEAN UP OF POLLUTION
SCRAPPED A PROPOSED RULE THAT GULF RIGS PROVE THEY CAN PAY FOR RIG REMOVAL WHEN FINISHED
APPROVED CONSTRUCTION OF CONTROVERSIAL DAKOTA ACCESS PIPELINE
PERMITTED THE USE OF SEISMIC AIR GUNS FOR GAS AND OIL EXPLORATION IN THE ATLANTIC OCEAN
LOOSENED OFFSHORE DRILLING REGULATIONS THAT FOLLOWED DEEPWATER HORIZONS SPILL
COMPLETED PRELIMINARY REVIEWS TO ALLOW DRILLING IN THE ARCTIC NATIONAL PRESERVE
LIFTED A FREEZE ON NEW COAL MINING LEASES ON PUBLIC LAND
REPEALED AN OBAMA ERA RULE ON ROYALTIES PAID TO THE GOVERNMENT FOR OIL, GAS AND COAL LEASES
REVOKED AN OBAMA ERA ORDER PROMOTING ENVIRONMENTAL RESILIENCE IN THE BERING SEA
ELIMINATED PLANNING SYSTEM DESIGNED TO MINIMIZE HARM FROM OIL AND GAS ACTIVITY ON SENSITIVE LANDSCAPES
OPENEND NINE MILLION ACRES OF LAND TO OIL & GAS DRILLING BY WEAKENING PROTECTIONS OF THE SAGE GROUSE
REVERSED A RULE REQUIRING BRAKING SYSTEM UPGRADES FOR 'HIGH HAZARD' TRAINS HAULING FLAMMABLE LIQUIDS
REVOKED RULE PRVENTING COAL COMPANIES FROM DUMPING MINING DEBRIS IN STREAMS
WEAKENED REGULATION OF THE DISPOSAL & STORAGE OF COAL ASH WASTE FROM POWER PLANTS

CUT SOLAR SUBSIDIES
ELECTRIC VEHICLE TAX CREDIT END
WITHDRAWING FROM PARIS CLIMATE ACCORD
PROPOSED STREAMLINING APPROVAL PROCESS FOR OIL AND GAS DRILLING IN FEDERAL FORESTS
ORDERED REVIEW OF REGULATIONS ON OIL & GAS DRILLING IN NATIONAL PARKS WHERE MINERAL RIGHTS ARE PRIVATELY HELD
ORDERED REVIEW OF REGULATIONS ON FLOATING OIL & GAS EXPLORATION IN THE ARCTIC
REVIEW OF LIMITS ON COAL DUST IN MINES
DELAYED IMPLEMENTATION OF LIMITS ON TOXIC DISCHARGE FROM POWER PLANTS INTO WATERWAYS
RE-EVALUATING SECTION OF THE CLEAN WATER ACT THAT ALLOWS STATES TO CONTEST FEDERAL PROJECTS, INCLUDING PIPELINES
PROPOSED WITHDRAWING EFFICIENCY STANDARDS FOR RESIDENTIAL FURNACES AND COMMERCIAL WATER HEATERS

CHALLENGE CALIFORNIA'S RIGHT TO SEPARATE FUEL ECONOMY STANDARDS
LAWSUIT TO REMOVE MERCURY EMISSIONS RESTRICTIONS ON COAL PLANTS
APPROVED KEYSTONE XL PIPELINE
GRANTED A 'PRESIDENTIAL PERMIT' FOR KEYSTONE XL PIPELINE

Source: New York Times, as of 10 Nov 2019

4 Intellectual capital

CONTENTS

4.1 Why an investment philosophy matters more than ever

DAVID BAILIN, CHIEF INVESTMENT OFFICER

Following certain timeless principles has helped some families remain among the world's wealthiest for generations. In today's unsettled environment, our Investment Philosophy can offer vital consistency.

KEY MESSAGES

- Citi Private Bank's Investment Philosophy informs our approach to helping families maintain, grow and wisely manage their assets
- We advise building complementary core and opportunistic portfolios
- Your globally diversified core portfolio should be fully invested over time and regularly rebalanced
- Your opportunistic portfolio seeks to enhance your overall risk-adjusted returns

Introduction

Watching the news has become frightening. Pundits speak of an imminent recession. Global politics is fraught with populist strife. The rules-based international order of the post-World War II era is being tested. Economies around the world are living through an unprecedented experiment in monetary policy. And the management of assets in a world awash with capital and devoid of interest income is making investing for the future much harder. All of these factors pose great challenges to us as investors. In Outlook 2020, we therefore offer you guideposts for the coming year and beyond, helping you to focus on what we think really matters in the global economy and markets.

The strategies and themes that we set out in Outlook 2020 are an integral part of Citi Private Bank's advice to you. However, our views and recommendations are also the product of something bigger and even more fundamental. Our Investment Philosophy is a set of principles that ultimately inform our approach to managing your wealth. These principles are neither abstract nor complicated. However, they often go ignored by investors, whose wealth then suffers over time.

After more than ten years of rising markets, some investors feel tempted to wait on the sidelines, hoping for an entry point better than today. These market timers are actually making their portfolios more vulnerable, not less so. Other investors have taken on unintended credit or illiquidity risk in bond markets for which they are not being properly compensated. Our Investment Philosophy therefore helps you cut through the noise and stay the course throughout market cycles.

In the sections that follow, we set out the long established principles that together make up our philosophy, and offer compelling evidence about how and why they work. Our long experience of serving the world's wealthiest families has demonstrated the power of these principles. We believe that they are at their most effective when combined.

Our Investment Philosophy

Citi Private Bank is dedicated to helping the world's wealthiest individuals, families, and their family offices protect and grow wealth, thereby sustaining a legacy for future generations. Our Investment Philosophy therefore reflects certain principles that have enabled some families to remain among the world's wealthiest for generations:

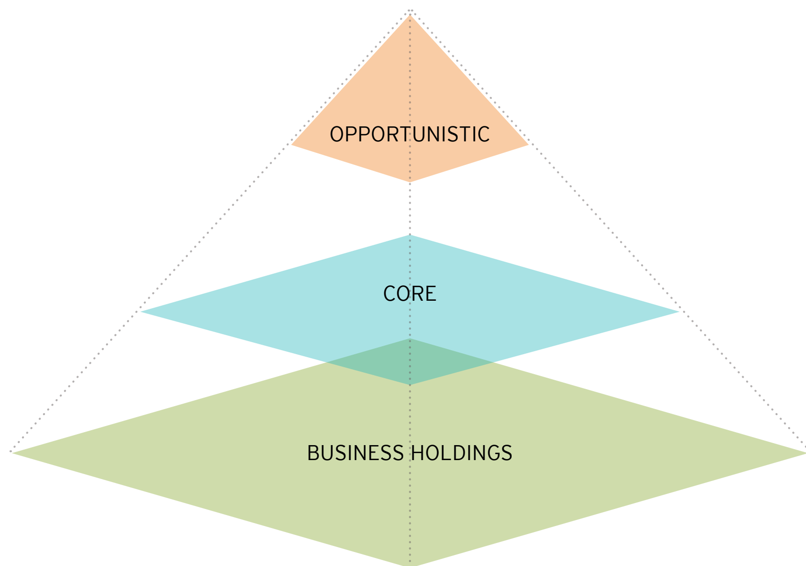
- Most of your assets, apart from your business holdings, should be invested in a core portfolio, which follows the principles of global multi-asset class diversification. Portfolios concentrated in few countries or asset classes are riskier and perform worse over time.
- Your globally diversified core portfolio should be fully invested for the long-term and be regularly adjusted to keep it in line with your customized investment plan. By contrast, market timing and cash hoarding are a fool's game.
- Opportunistic investing can complement your core portfolio's performance, based on your risk tolerance. Without discipline, however, opportunistic investing can hinder results.

Our Investment Philosophy rests upon our commitment to serve as your long-term guide for the design and implementation of your family's investment plan, as well as a partner in your family's business activities.

Establish complementary portfolios to enhance risk-adjusted returns

The centerpiece of our advice to you is to establish complementary core and opportunistic investment portfolios. The purpose of having two complementary portfolios is potentially to optimize returns and help minimize risk. It also allows for better investment discipline, as maintaining a long-term core portfolio is easier when investors maintain a parallel opportunistic one.

FIGURE 1. CORE AND OPPORTUNISTIC PORTFOLIOS WITHIN YOUR OVERALL WEALTH



Source: Global Investment Lab, Citi Private Bank, as of 5 Nov 2019

Your core portfolio should hold most of your wealth other than your business assets – **figure 1**. It seeks to maintain and grow your wealth by staying fully invested in global markets over time. It also helps to diversify your investment risks and mitigate risks from concentrated holdings and business exposures you may have.

Core portfolio investments should be diversified across asset classes, geographies, industries, and investment styles – see **Harness the power of global diversification** below. These investments' performance will be easily measurable in relation to relevant benchmarks. They should be held for the long-term and be regularly rebalanced to keep them in line with the customized plan we create for you.

Your opportunistic portfolio should hold the rest of your non-business assets, less a meaningful liquidity reserve. It seeks to enhance your overall returns, mitigate your risks, or indeed both, often via different types of opportunities to those pursued in your core portfolio.

Opportunistic portfolio investments are frequently more concentrated rather than diversified, focusing upon particular areas of your knowledge and interests, as well as other high-conviction ideas. They can be short-term or long-term, may arise irregularly, and require swift reaction. Their performance may be harder to measure against benchmarks. These investments may also increase the risk profile of your portfolio.

One way to use an opportunistic portfolio is to overweight high conviction themes like those outlined in **Realigning income portfolios** and **Unstoppable Trends**. Another is to create hedged positions based on markets that may be excessively over- or under-valued.

Our approach also recognizes the desire and ability of many wealthy families to pursue investments beyond their core portfolios, but also recognizes that many families do not distinguish between core and opportunistic investments. Citi Private Bank therefore enables you to pursue both core and opportunistic investments in a disciplined and complementary way.

Our core/opportunistic approach may enhance your risk-adjusted return potential, helping you protect and grow your wealth over time.

Harness the power of global diversification

We believe that your core investment portfolio should always follow the principles of global diversification in a highly disciplined way.

Global diversification[1] involves allocating your investment wealth to a broad, but thoughtful selection of different asset classes – including equities, fixed income, real estate and other alternative investments – from different countries and regions of the world, and across different industry sectors and style factors.

Our long experience of serving the world's wealthiest families reinforces our belief that global diversification has been one of the most effective forms of risk mitigation. It has helped prominent families to perpetuate their wealth for generations despite economic depressions, severe episodes of inflation and deflation, wars, revolutions, and technological disruption.

Global diversification's main benefit comes from having exposure to multiple sources of return and risk. Various countries' business and financial market cycles are often at earlier or later stages. Industry sectors – such as pharmaceuticals, technology, and utilities – and style factors – such as value, growth, and momentum – also tend to display stronger performance at different times. By carefully combining exposure to all of these, you can seek enhanced portfolio returns while mitigating overall risk.

Figure 3 shows this in action. Over the last seven decades, a global allocation would have produced an annualized return before fees of 10.5% at an asset class level. By contrast, an allocation consisting only of equities and fixed income from the best-performing market – the US – would have returned 9.3%. Not only would the global allocation have produced a higher return, but would also have been less risky in terms of volatility.

Most of the client portfolios that we review initially are not globally diversified and are often subject to concentrated, single-country risk. A misconception that greater familiarity with their home country or region may enable superior investment selection or incur less risk may be one reason for this. Another is that genuine global diversification is easy to achieve.

Global diversification is integral to our thinking and to the opportunities Citi Private Bank brings you. Our asset allocation methodology – which we use to create your customized long-term investment plan – addresses ten broad asset classes from around the world. We then work with you to implement your plan within your core portfolio by giving you access to investments from across the world.

We believe that harnessing the power of global multi-asset class diversification can help grow your wealth and assist in protecting against risk over time better than any other single approach. It's one reason why your relationship with Citi is so valuable – there are few advisers that understand the global economy as well as we do.

Market timing doesn't work: Stay fully invested and rebalance regularly

We believe that your core investment portfolio should remain fully invested for the long term, with regular rebalancing.

Fully investing your core portfolio involves implementing the customized plan we create for you at the earliest opportunity, and then keeping that core portfolio fully invested over time. Disciplined portfolio rebalancing involves regularly taking profits on assets and asset classes that have gone up and reallocating to those that have higher expected returns. This helps to keep your portfolio in line with your long-term investment plan. Over time, we have seen that client portfolios that follow the plan achieve higher risk-adjusted returns than those that do not follow the plan. And it is one reason why having a banker and investment counsellor is so valuable – How many clients have the time and discipline to rebalance when markets are zooming up or down?

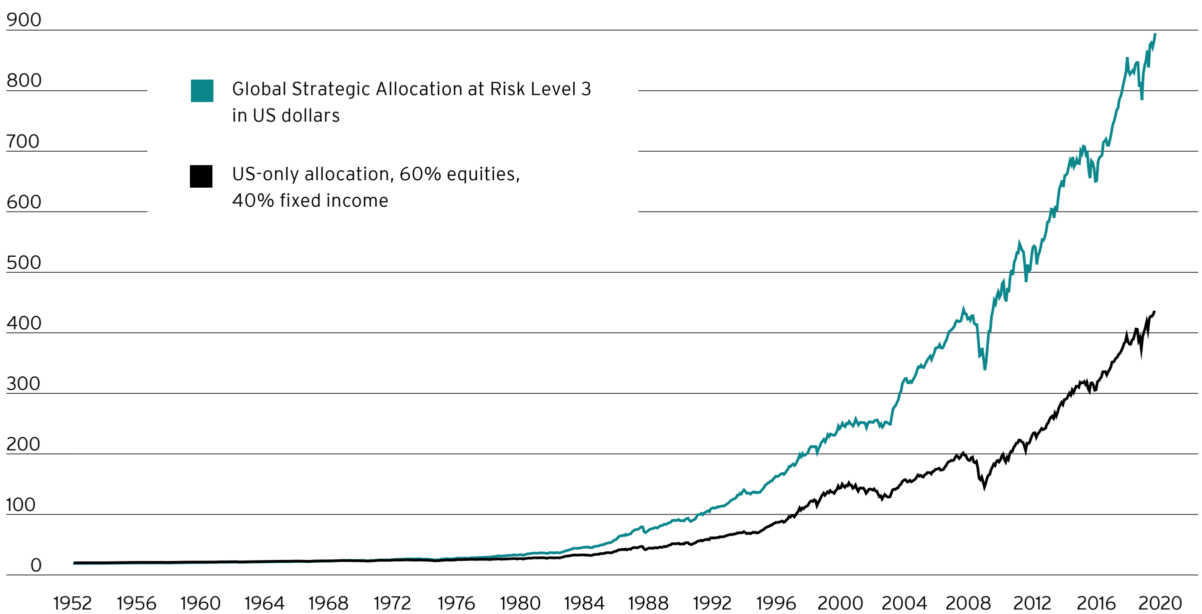
Staying fully invested enables your portfolio to earn compound returns. By rigorously reinvesting dividends, interest, and capital gains from your investments to make additional investments, and repeating this process every year, your investment wealth can grow more over the long-term.

In contrast, we strongly advise against trying to time the markets. We do not believe there is any effective method for switching your core portfolio between cash and risky assets to catch uptrends and avoid downtrends. The overwhelming evidence is that market timing typically ends up missing the sharp gains that often follow major downtrends, as well as foregoing the benefits of compound returns over time. This typically leads to lower portfolio returns and greater riskiness.

Figure 4 compares one market timing strategy with buying and holding the S&P 500 Index. Switching from holding the market into cash after every 20% fall in the index and then buying back in after every 20% recovery would have

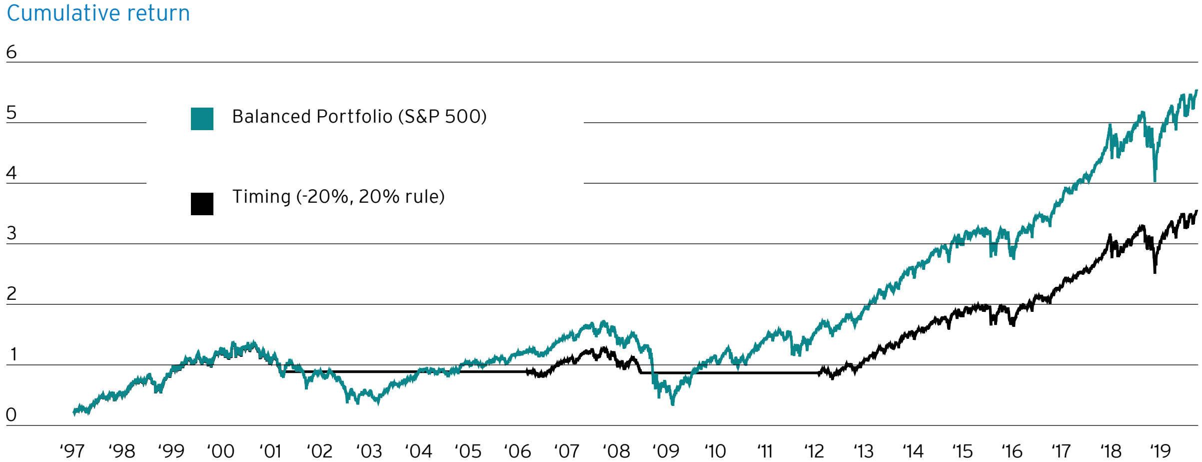
FIGURE 3. GLOBAL DIVERSIFICATION'S POWERFUL WEALTH EFFECTS

Growth of US$1m over time



Source: Global Asset Allocation team, Citi Private Bank, as of 1 Oct 2019. The Global US Dollar allocation represents a AVS Risk Level 3, including allocations to equities, fixed income, commodities, cash and hedge funds. Risk levels are an indication of clients' appetite for risk. Risk Level 3 – Seeks modest capital appreciation and, secondly capital preservation. These returns were calculated at an asset class level using indices and do not reflect fees, which would have reduced the performance shown. Past performance is no guarantee of future returns. Real results may vary.

FIGURE 4. MARKET TIMING STRATEGY VS BUY AND HOLD



Source: Bloomberg. Citi Private Bank Global Asset Allocation team, as of 18 Nov 2019. Study addresses the period from Jan 1997 to Oct 2019. This market timing strategy involves a switch out of the market after each 20% fall from a recent high, and subsequent repurchase after a 20% rally. Past performance is not indicative of future returns, actual results may vary.

produced a return of 200% over the twenty years shown. By contrast, simply buying and holding the index would have produced a 330% return.

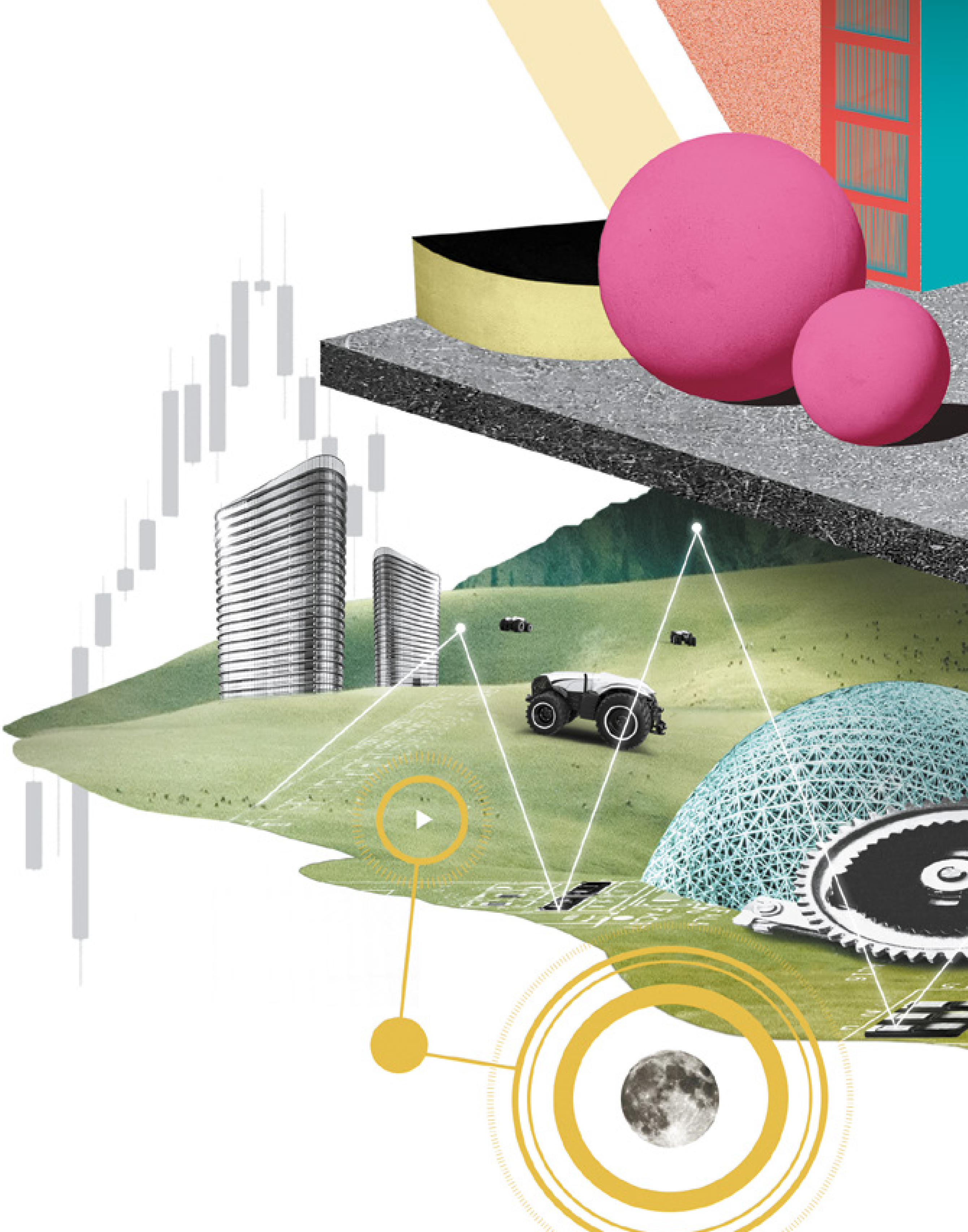
Of course, keeping core portfolios fully invested during late-cycle conditions like today's – or during major market downtrends – can be psychologically challenging. In an effort to mitigate the effects of falling markets, we often recommend that your portfolio shift towards more defensive and higher quality holdings around times of potential market peaks, while remaining fully invested. We also typically advise taking advantage of lower valuations after market declines by buying more of certain assets. Our Global Investment Committee reallocated in such fashion after the sharp decline of December 2018.

Although we strongly advise against market timing within your core portfolio, we believe an opportunistic portfolio can be an appropriate place for making moves in volatile or dislocated markets, among other activities. We recommend maintaining interest-earning liquid and high-yielding non-cash holdings within an opportunistic portfolio, which you can use to buy risky assets during market dislocations, to participate in new strategies, or for when unexpected private investment opportunities arise.

Keeping your core portfolio fully invested and rebalancing it regularly may help you achieve superior returns over the long term.

Putting our Investment Philosophy into practice

While politics, the economy, and financial markets seem to be in an endless state of flux, the principles that make up our philosophy are fixed and timeless. They therefore provide a solid foundation for helping to protect and grow your wealth. Just as important as having such a philosophy, however, is putting it into practice. Many investors pay lip service to various key principles, but then fail to apply them. Citi Private Bank's investment processes are therefore designed to help you implement our philosophy systematically in your portfolio. In the article that follows, we demonstrate **How we do what we do**.

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4.2 How we do what we do

DAVID BAILIN, CHIEF INVESTMENT OFFICER

The principles of our Investment Philosophy have helped certain wealthy families to protect and grow their wealth over generations. Our investment process implements these principles in your portfolio.

KEY MESSAGES

- Sophisticated families should have a customized plan for their core portfolios
- These core portfolios should be stocked with cost-effective and performance-driven implementation opportunities
- Our disciplined approach to opportunistic investing enables you to seek enhanced risk-adjusted returns in an adjacent portfolio, allowing the core to remain fully invested
- The first step to determining if you are following our principles is to request your personalized Outlook Watchlist report

Introduction

Our Investment Philosophy inspires and informs everything that we do when managing your portfolio. Its long-established principles have helped certain families to remain among the world's wealthiest for generations. However, it is their implementation in portfolios that drives client benefits. Citi Private Bank's investment process puts principles into action.

Our investment process therefore enables you to establish complementary core and opportunistic portfolios. It presents you with actionable opportunities to achieve global multi-asset class diversification. It helps you stay fully invested throughout market cycles and avoid the devastating consequences of market timing. Our process does all of this by emphasizing a customized service, including access to sophisticated insights, opportunities, and resources that are typically reserved for institutional investors. Here is how what we do what do.

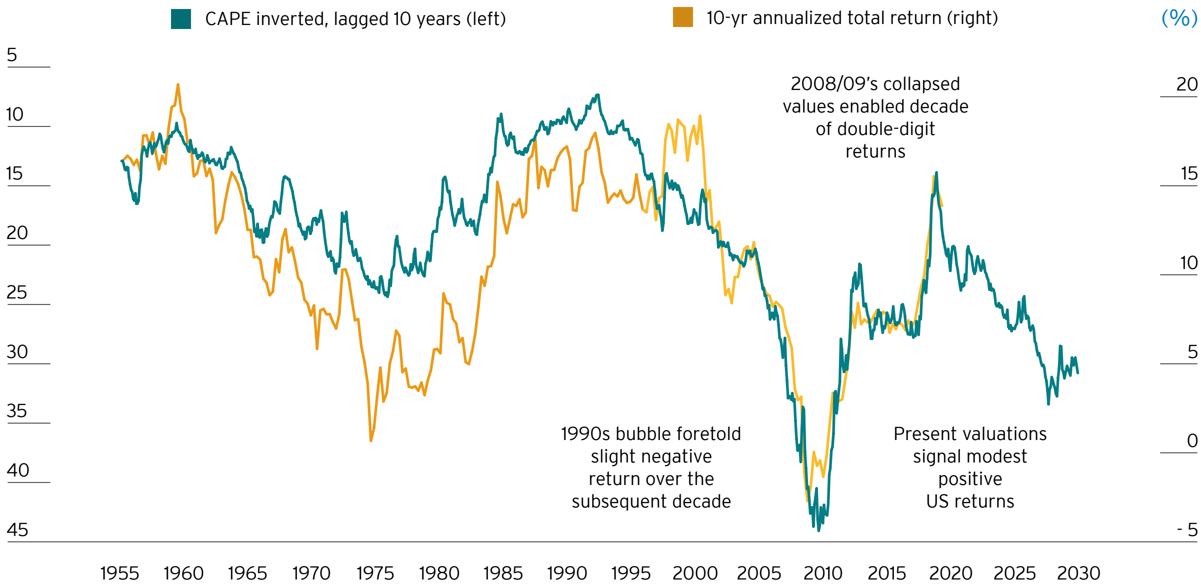
Creating your globally diversified plan

Behind every great core portfolio is a carefully constructed plan. Our process begins by working with you to understand your return goals, risk tolerance, and other criteria. Based on this unique data, your team customizes a plan to pursue your goals, using our own proprietary methodology. The plan or 'strategic asset allocation' that we create in this way provides the long-term roadmap for your core portfolio. It determines the appropriate mix of asset classes from around the world specifically for you.

The inner wheel of **figure 1** shows a recent example of such a plan. It contains equities and fixed income, hedge funds, private equity, and real estate, with the potential to add cash and commodities. It is globally diversified, with exposure to almost fifty countries around the world in the equity allocation alone. The recommended allocation amount to each asset class is also displayed. Within the asset classes displayed, we then advocate emphasizing particular themes – for examples, see **Realigning income portfolios** and **Unstoppable trends**.

The plan we create for you highlights what we believe is the optimal course for pursuing your investment goals in your core portfolio.

FIGURE 2. VALUATIONS FORECAST LONG-TERM RETURNS



Source: Haver Analytics through 6 May 2019. Chart shows the cyclically-adjusted price to earnings valuation (CAPE) for the S&P 500 Index today shifted ten years forwards as well as subsequent total annualized returns. The return is a rolling ten-year average. Past performance is no guarantee of future returns. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. See Glossary for definitions.

Seeking enhanced risk-adjusted returns

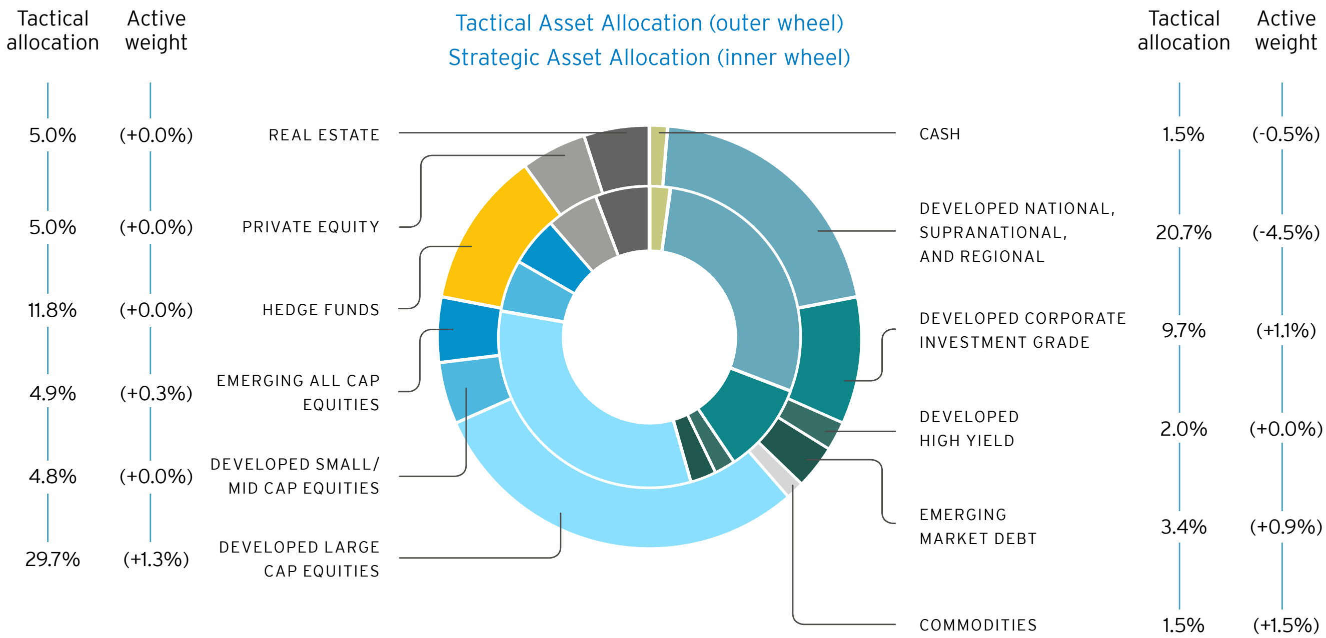
We determine the plan for your core portfolio in a differentiated way. Our proprietary strategic asset allocation methodology – Adaptive Valuation Strategies (AVS) – estimates future asset class returns based on current valuations. Analysis covering many decades shows that low current valuations are typically followed by high returns and high valuations by low returns. **Figure 2** shows this in action for equities. AVS then typically allocates more to lowly valued asset classes and less to those highly valued ones. To see our current valuation-based estimates of annualized returns for ten asset classes over the coming decade, see **The long-term outlook for asset classes**.

Many other asset allocation methodologies assume that future returns will resemble past averages. They implicitly assume positive events are as likely as negative ones at any given time. This ignores realities such as the lower probability of continuing corporate earnings growth in advanced economic cycle conditions like those of today. AVS's valuation-based approach seeks to avoid such unrealistic assumptions.

Having determined what we believe to be the optimal way for you to allocate your core portfolio, we then suggest regular tactical adjustments to that long-term plan. Our Global Investment Committee (GIC) recommends that you underweight and overweight certain asset classes based on the outlook for the next twelve to eighteen months. Their current tactical recommendations are shown in the outer wheel of **figure 1**.

Our strategic and tactical recommendations seek to enhance your long-term risk-adjusted returns, based on your investment objectives and risk profile.

FIGURE 1. GLOBAL MULTI-ASSET CLASS DIVERSIFICATION IN ACTION



NOTE: **Active weight** is the difference between tactical (outer wheel) and strategic (inner wheel) allocations.

Source: Global Asset Allocation team, Citi Private Bank. Global USD allocation with Hedge Funds and 10% illiquids (PE & RE): Risk Level 3 - Tactical Allocations. Figures in brackets are GIC active allocations as of 20 Nov 2019. All allocations are subject to change at discretion of the GIC of Citi Private Bank. Risk Level 3 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. Risk Level 3 may be appropriate for investors willing to subject their portfolio to additional risk for potential growth in addition to a level of income reflective of his/her stated risk tolerance.

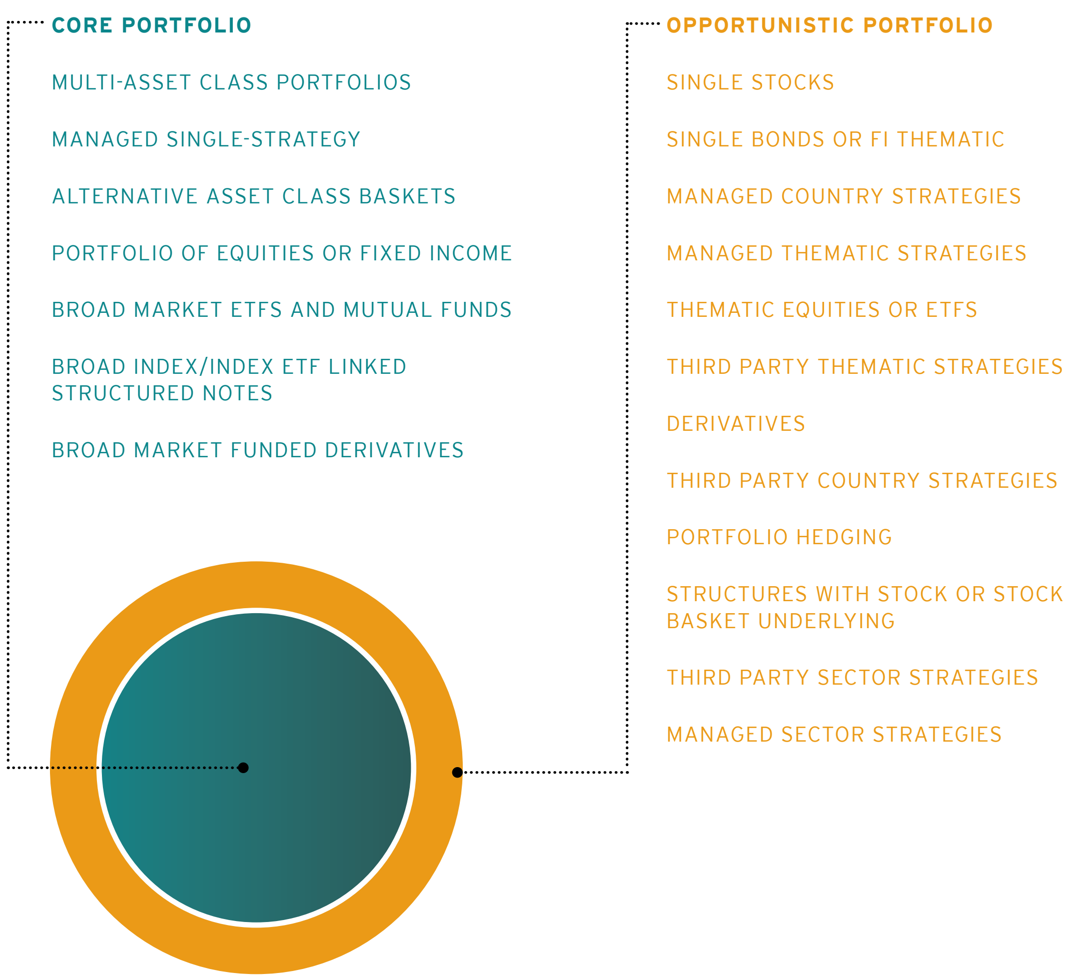
Populating your core portfolio

To help you implement your allocation in your core portfolio, we offer you access to a wide array of investments from around the world via an open-architecture platform that does not rely on funds managed by Citi – see the inner segment of **figure 3**. These include individual securities, as well as active and passive strategies from researched third-party asset managers across the marketplace. To source these opportunities, our dedicated research teams scrutinize distinctive managers across both traditional and alternative asset classes - see **Connecting you to select alternative investments**.

Citi Private Bank's internal portfolio managers oversee individual equity and fixed income portfolios, which can be constructed to your specific requirements. For qualified clients, we also recommend that your core portfolio builds asset class exposure via capital markets strategies, which can help you select specific outcomes, including increased upside participation, capital protection, income generation, and combinations thereof – see **Earn income waiting for a bear market**.

We bring you managed investments, individual securities, and capital markets strategies to help to realize your plan in your core portfolio.

FIGURE 3. CORE AND OPPORTUNISTIC PORTFOLIO INVESTMENTS



Source: Global Investment Lab, Citi Private Bank, as of 15 Nov 2019

Helping you to stay the course

Having customized a plan for you, we can implement it in your core portfolio at the earliest opportunity and then help you remain fully invested for the long-term. In our periodic reviews with you, we urge regular rebalancing to keep your core portfolio in line with shifts in the plan. We believe the case for doing so is clear.

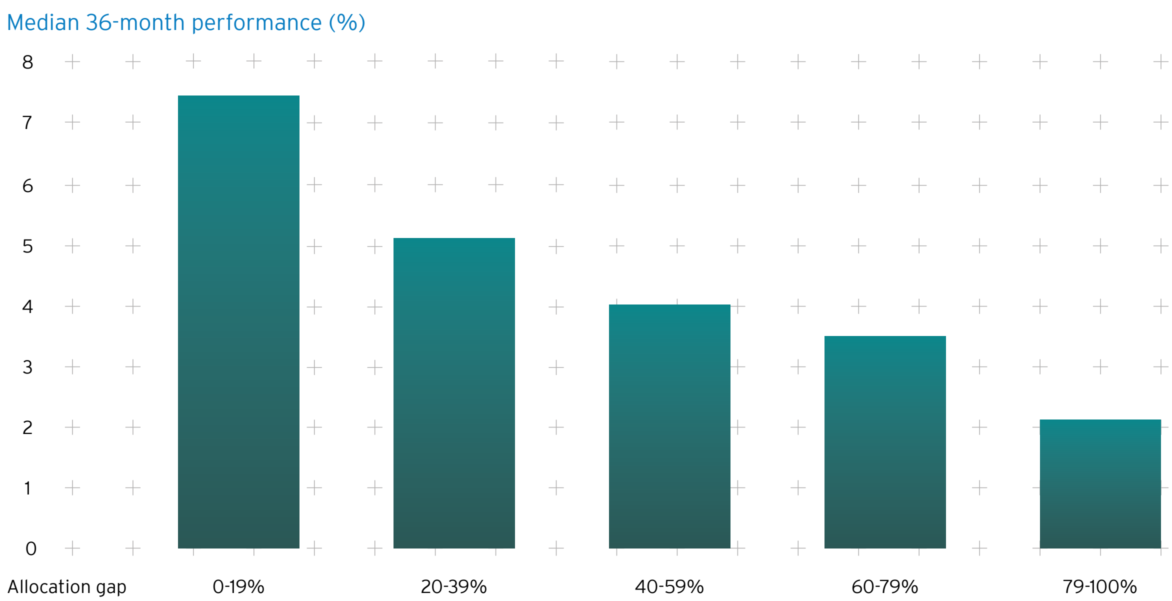
Our analysis of some 3,000 client portfolios over the three years to September 2019 finds that the portfolios that have most closely followed the globally diversified AVS asset allocations we recommend have generally outperformed those that have not – **figure 4**. On average, the less the divergence between our recommended allocation and the client portfolio, the higher the performance.

Rebalancing in action

Citi Private Bank's discretionary managers play a vital role in rebalancing many clients' core portfolios systematically over time. By late 2018, for example, US and global equities had suffered peak-to-trough declines of roughly 20%, causing equity allocations to drift below target levels. Our discretionary managers thus rebalanced holdings by adding more equities. In early 2019, they also implemented the tactical recommendation of our Global Investment Committee (GIC) to use our entire tactical cash holdings to add to beaten-down equity and credit holdings.

Keeping your portfolio fully invested and regularly rebalanced is embedded in everything we do, from our regular review process to our discretionary managers' approach.

FIGURE 4. THE IMPORTANCE OF FOLLOWING THE PLAN



Source: Citi Private Bank Global Investment Lab, as of 30 Sep 2019. Divergence from our recommended allocation is represented here by allocation gaps. Allocation gaps measure the degree to which clients' portfolios follow our recommended allocations at all risk levels and levels of liquidity. The lower the gap percentages, the more aligned the portfolios with our recommended allocations. A reading of 0% indicates virtually full alignment with our recommendation. This information is drawn from Citi Private Bank's proprietary data covering 3,000 continuing client portfolios whose reference currency is US dollars. Past performance is no guarantee of future returns. Real results may vary.

Guiding your opportunistic portfolio

An effective opportunistic portfolio can help enhance your overall risk-adjusted returns. But while not bound by the same rules as your core portfolio, we still encourage a disciplined approach. We first determine the appropriate size of your opportunistic portfolio. The higher your risk level, the more of your investment wealth can be committed to opportunistic investments – **figure 5**. Our Global Investment Lab can then perform a comprehensive analysis of your core portfolio and business holdings in order to diagnose your risk exposures. In light of this, we can recommend opportunistic investments that could help enhance your current exposures.

Drawing on intelligence from Citi Private Bank's global network, the opportunistic investments we suggest take many forms. As well as your existing exposures, they also reflect any special interests or expertise you may have. Examples include taking advantage of mis-pricings caused by dislocations in public markets, participating in new issues for qualified clients, as well as periodic private equity and venture capital scenarios – see the outer ring of **figure 3** and **Unstoppable trends**. As you wait for attractive opportunities to arise, we will offer you cash management strategies to help make your opportunistic liquidity reserves work hard.

Our systematic approach to opportunistic investing can help you pursue alpha to complement your core portfolio.

Partnering with your family office

A growing number of our clients rely upon a family office to oversee their investment needs. Our dedicated team therefore works in close partnership with your family office, be it newly created or large and long-established. We customize an integrated strategy for each family office, reflecting not only investment needs, but also lending, liquidity, wealth planning, technology, and philanthropic requirements. For eligible clients, we can provide institutional-level services, ideas, pricing, and execution. Serving families with members, businesses, and foundations across multiple jurisdictions is a particular area of strength for us.

Our investment process integrates seamlessly with that of your family office and other advisors.

Structuring your wealth intelligently

Global multi-asset class diversification, staying invested, and pursuing opportunistic investments can all assist with sustaining your wealth for the long-term. Just as important, however, is how your wealth is structured. Appropriate structures can accommodate not only financial investments, but also homes, businesses, treasured collections, yachts and aircraft. They can help to minimize taxation, protect against legal challenges and sovereign risk, and ensure your wishes are followed during your lifetime and beyond. Citi

FIGURE 5. SIZING YOUR OPPORTUNISTIC PORTFOLIO

		Core	Opportunistic
LOWER RISK	Level 1	At least 95%	Up to 5%
	Level 2	At least 92.5%	Up to 7.5%
	Level 3	At least 85%	Up to 15%
	Level 4	At least 82.5%	Up to 17.5%
HIGHER RISK	Level 5	At least 80%	Up to 20%

Source: Private Bank Global Asset Allocation Team, as of 19 Nov 2019. Risk levels are an indication of clients' appetite for risk, where Risk Level 1 is the lowest and Risk Level 5 the highest. Risk Level 1 is designed for clients whose priorities are capital preservation and liquidity management; Risk Level 2 seeks capital preservation and income generation; Risk Level 3 seeks modest capital appreciation and capital preservation; Risk Level 4 seeks moderate volatility and long-term growth; Risk Level 5 seeks maximum long-term growth of capital.

FOCUS:

Connecting you to select alternative investments

Allocating to alternative asset classes – private equity, real estate, and hedge funds – can potentially benefit both your core and opportunistic portfolios. For example, adding these asset classes to a core allocation could help enhance returns and diversify your portfolio's risks. They may also offer attractive set-ups for opportunistic investing for those looking to increase their risk profile.

Through Citi Investment Management Alternatives, our experienced and innovative team originates relevant and timely investment opportunities across these asset classes. It does so by way of research, driven by important investment themes.

To identify investment themes, the CIM Alternatives team draws upon the work of Citi Private Bank's Global Investment Committee – see **Realigning income portfolios** and **Unstoppable trends**. The team examines influential long-term forces across the economy, markets, politics, regulation, and more. Specifically, it looks for investible secular trends, market aberrations that might be exploited, and potential pitfalls to be avoided.

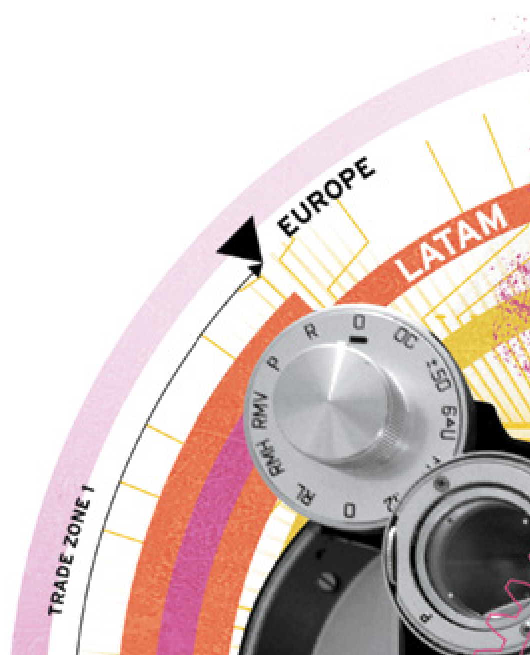
Based on its findings, the team performs quantitative and qualitative research into strategies from experienced managers across the marketplace. It then works alongside those managers who pass the rigorous selection criteria to offer bespoke investment vehicles to clients. As well as potential holdings for core portfolios, the team highlights timely possibilities for opportunistic portfolios.

Trust's Wealth Planners therefore work with you and with your tax and legal advisors to develop a plan for your entire wealth that seeks to sustain your legacy for generations to come.

We create structures that help you safeguard your family and assets for the long term.

Put our principles into practice in your portfolio

Have you established complementary core and opportunistic portfolios? Are they adhering to the principles set out in our Investment Philosophy? Are you pursuing opportunistic investments systematically? To answer these and other vital questions, please ask us for your personalized Outlook Watchlist report. This will compare your actual core portfolio to the plan we recommend for you. If necessary, we can then advise how you can bring it into line with the plan, as well as identify complementary opportunistic investments. Let us implement our principles in your portfolio.



5 Regional asset class previews

CONTENTS

5.1 Asia: Continuing recovery on easing trade tensions

KEN PENG, HEAD - ASIA INVESTMENT STRATEGY
KRIS XIPPOLITOS, HEAD - GLOBAL FIXED INCOME STRATEGY

Improving trade relationships and a shift from monetary to fiscal easing could boost regional growth and markets in 2020.

KEY MESSAGES

- We believe Asian growth will continue despite headwinds: Expect 5%-5.5% in 2020, with possible upside
- We expect increasing equity inflows across Asia as 2020 unfolds
- Certain Asian equity markets offer strong dividend income opportunities
- Local Asia bond yields may decline further as monetary policy loosens more

OUR FAVORED ASIAN MARKETS

EQUITIES EPS GROWTH FORECAST [1]	
SINGAPORE	2.8%
JAPAN	5.5%
CHINA	11.8%

SECTORS EPS GROWTH FORECAST	
CONSUMER DISCRETIONARY	19.7%
TELECOM	21.7%
IT	27.4%

FIXED INCOME YIELD [2]	
LOCAL MALAYSIAN SOV	3.4%
LOCAL INDONESIAN SOV	7.1%
US DOLLAR HIGH YIELD BONDS	7.3%

Sources: 1 - Factset consensus estimates, as of 22 Nov 2019; 2 - The Yield Book, as of 26 Nov 2019. Past performance is no guarantee of future returns. Real results may vary. Indices are unmanaged. An investor cannot invest directly in an index. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events

Overview

Economic growth in Asian emerging market (EM) economies slowed from 5.9% in 2018 to an estimated 5.3% in 2019, the lowest rate since 1997. The key driver of this slowdown was China. However, Singapore, Hong Kong, Korea, India, and Thailand saw an even bigger slowdown. US-China and Japan-Korea trade tensions were the main factors behind this, which hit the smaller and most open economies harder. We continue to believe the US administration will want to de-escalate rather than re-escalate trade tensions ahead of the 2020 presidential election.

Monetary easing from the Fed and Asian central banks helped avert a deeper downturn in 2019 and sparked some revival late in the year. In 2020, fiscal policy will likely be the more important influence. Governments including those of China, India, Indonesia, and Japan have announced significant investment and fiscal stimulus programs.

We thus expect Asian growth to hold up around 5.3% in 2020, while risks are likely to the upside of that forecast.

Equities

After a 16% drop in 2018, Asia ex-Japan equities reclaimed nearly half of their losses in 2019, despite trade and other geopolitical turbulence. Since we expect a more constructive macroeconomic environment in 2020, global investor flows into the region are likely to be more positive. Traditionally favored companies in e-commerce, social media, wine, healthcare, and consumer may well benefit. Value stocks in somewhat out-of-favor industries like financials and industrials could also find some support.

China remains one of our favored equity markets. MSCI China still trades on 11 times expected earnings for 2020, the lowest multiple in Asia - **figure 1**. Chinese earnings per share growth is likely to strengthen to 12% in 2020. The auto industry's profits suffered from tighter financing, stricter environmental regulations, and lapsed subsidies in 2018-19. But inventory destocking is helping auto production and earnings to rebound. Cyclical sectors such as industrials and banks may also get a boost from stronger economic growth.

After years of quantitative easing (QE) that produced little lasting economic benefit, Japan finds itself at a crossroads. The Bank of Japan (BoJ) has been tapering its asset purchases, such that purchases could fall below maturities by mid-2020, thereby tightening liquidity if allowed to fester. As a result, the BoJ may be about to expand its QE program. More importantly, the Japanese government has promised more fiscal stimulus if the economy weakens after the latest consumption tax hike. With the economy perhaps having shrunk in the fourth quarter of 2019, monetary and fiscal policy may soon be deployed.

FIGURE 1. ASIA VALUATIONS

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE	DY (%)	CAPE
	US$bn	20E	21E	20E	21E	19E	19E	19E	10Yr
JAPAN	3577.3	13.9	12.9	5.5	7.6	1.3	8.6	2.4	22.3
ASIA PAC EX JP	5795.4	13.4	11.9	12.5	12.5	1.6	10.3	3.0	17.2
AUSTRALIA	975.7	17.0	16.7	3.8	1.7	2.1	11.7	4.5	20.6
HONG KONG	505.7	14.2	13.1	6.7	8.4	1.1	7.6	3.2	17.3
SINGAPORE	184.3	12.8	12.1	2.8	5.5	1.2	9.4	4.3	14.3
NEW ZEALAND	35.6	27.6	25.2	6.8	9.5	3.3	11.2	2.5	30.7
CHINA	1802.1	11.1	9.8	11.8	13.5	1.6	12.6	2.4	14.6
KOREA	679.2	11.0	8.9	27.2	23.4	0.9	6.6	2.5	12.2
TAIWAN	682.4	15.8	14.1	12.1	12.0	2.0	11.0	3.8	21.7
INDIA	492.0	18.3	15.5	28.6	19.5	2.9	11.8	1.6	28.5
THAILAND	153.2	15.4	13.8	8.1	6.9	1.9	11.2	2.9	17.2
INDONESIA	113.1	15.0	13.6	11.1	10.1	2.5	15.1	2.7	21.3
MALAYSIA	110.5	15.8	14.9	5.6	6.5	1.5	9.1	3.3	15.9
PHILIPPINES	60.0	15.2	13.7	5.7	11.0	1.9	12.0	1.7	24.5

Source: Citi Research, Worldscope, MSCI, Factset, data as of 22 Nov 2019. *Note: The above data are compiled based on companies in MSCI AC World Index. The market capitalization for regions, markets and sectors are free-float adjusted. P/E, EPS Growth, P/B, Dividend Yield and ROE are aggregated from Factset consensus estimate (calendarized to December year end) with current prices. CAPE is calculated by current price divided by ten-year average EPS based on MSCI index-level data. NM = Not Meaningful; NA = Not Available. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

FIGURE 2. OUR FAVORED ASIA EX-JAPAN SECTORS

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US$bn	20E	21E	20E	21E	19E	19E	19E	10Yr
IT	883.3	15.1	11.9	27.4	26.8	1.9	9.9	2.9	24.3
CONSUMER DISC.	730.4	18.2	15.2	19.7	19.0	2.4	11.2	1.4	15.9
TELECOM	201.7	16.8	15.3	21.7	12.3	1.6	7.5	4.1	14.2

Source: Citi Research, Worldscope, MSCI, Factset, data as of 22 Nov 2019. *Note: The above data are compiled based on companies in MSCI AC World Index. The market capitalization for regions, markets and sectors are free-float adjusted. P/E, EPS Growth, P/B, Dividend Yield and ROE are aggregated from Factset consensus estimate (calendarized to December year end) with current prices. CAPE is calculated by current price divided by ten-year average EPS based on MSCI index-level data. NM = Not Meaningful; NA = Not Available. Indices all from MSCI. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

More importantly, certain Asian markets offer interesting dividend opportunities. Japan's 2.4% dividend yield might not appear impressive. But not only is it close to decade highs, this level has historically been consistent with strong equity returns in the following twelve months. Singapore has a 4.3% dividend yield, which also bodes well for returns over the next twelve months.

Fixed income

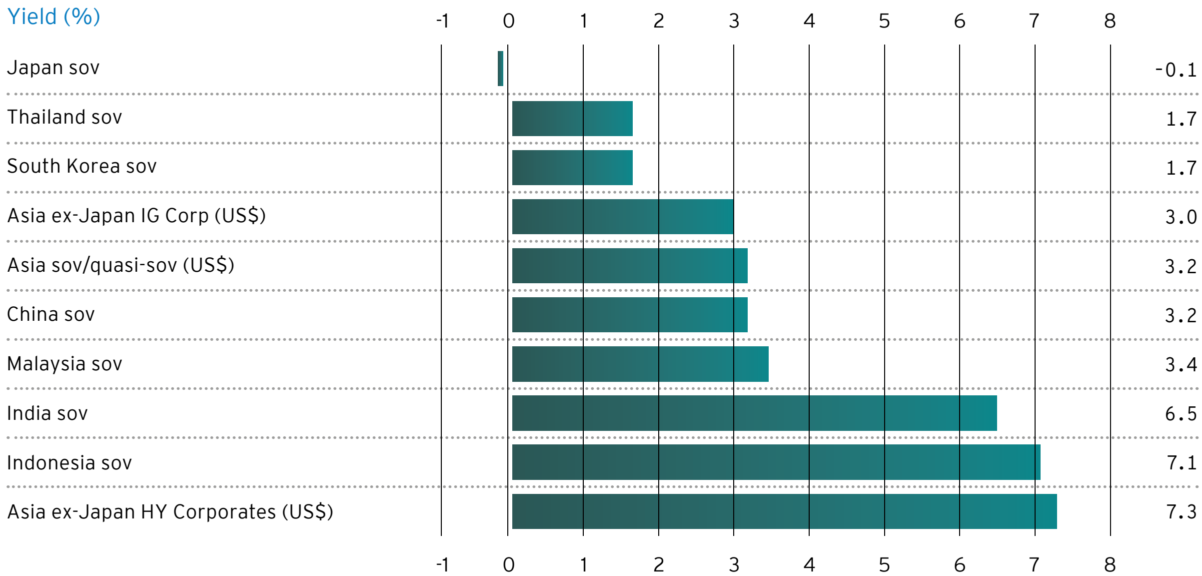
As with most high quality bond markets, Asia US dollar denominated investment grade (IG) corporate debt delivered outsized returns in 2019. Driven by declining US Treasury yields and tighter spreads, Asia IG had produced gains of nearly 11% as of 26 November. Adjusted for differences in duration, Asian IG performed in line with its US counterpart. Likewise, Asia high yield (HY) had produced an extraordinary return of 12%.

In 2020, we expect a firmer growth environment and relatively attractive valuations to provide solid support to Asian corporate bonds. With China making up over half of the US dollar denominated corporate market, risks surrounding international trade and domestic growth may keep spreads relatively more volatile.

In high yield, these risks appear well priced in. Average Chinese HY spreads are around 700 basis points (bp), or 325bp wider than US HY corporate benchmarks. Any de-escalation of trade tensions with the US and any rate cuts could help narrow spreads. If this translates into improvements in GDP growth, the energy and material sectors are likely to benefit.

Local Asia bond yields may have scope to decline, as monetary policy loosens further. However, several central banks may be nearing the end of their easing cycles. We favor Indonesia and Malaysia. By contrast, the sharp drop in Philippine rates leaves some room for disappointment. We maintain our high conviction in local Chinese sovereigns, which are likely be supported by rate cuts. The inclusion of local Chinese sovereigns into global aggregate bond benchmarks should lead to inflows from passive investors.

FIGURE 3. ASIA FIXED INCOME YIELDS



Source: Bloomberg Barclays, Bloomberg and The Yield Book, as of 26 Nov 2019. Past performance is no guarantee of future returns. Real results may vary.

Currencies

Asian currencies – as represented by the Bloomberg-JP Morgan Asia Currency Index – dropped in September 2019 to their lowest level since the global financial crisis. The trade war hit both the Chinese yuan and the Korean won in particular. However, both are recovering strongly after the US and Japan softened the tone of their trade policies. Domestic economic softness, a dovish central bank, and weak Chinese commodity demand also held the Australian dollar back. However, all three currencies could be prime beneficiaries of a stronger growth environment and improving trade relationships in 2020.

As measured by real effective exchange rates (REER), Asian currencies tell a mixed story. On average, current REER readings are about 0.7 standard deviations above their average of the current cycle over the past decade. But that is skewed by Thailand, whose REER is three standard deviations above the mean, which leaves room for disappointment in 2020. India and Taiwan also skewed the average upwards, but by a smaller margin. China's currency was only liberalized after the August 2015 reform, and its current REER value is the furthest below average among Asian EM currencies. Korea and Singapore are also relatively undervalued on a REER basis.

The forecasts above are at 25 Nov 2019 and are provided for information purposes only. The investor should not base a decision to enter into a trade solely on the basis of the forecasts. Actual results may vary from the forecast rates provided herein. Forecast rates should not be construed as providing any assurance or guarantee as to future rates.

5.2 Europe: Selective opportunities amid more volatility

JEFFREY SACKS, HEAD - EUROPE INVESTMENT STRATEGY
KRIS XIPPOLITOS, HEAD - GLOBAL FIXED INCOME STRATEGY

Slightly stronger European earnings could enable further gains in European equities in 2020, after 2019's powerful rally. Meanwhile, fixed income looks generally expensive.

KEY MESSAGES

- Europe ex-UK economic growth likely to stabilize near 1%, with upside risk
- We strongly prefer Europe ex-UK equities to fixed income, based on historically wide yield premiums
- High dividend yield and dividend grower equities should perform above average in this low yield environment
- Given widespread negative yields, we are deeply underweight Eurozone debt

OUR FAVORED EUROPEAN MARKETS

EQUITIES EPS GROWTH FORECAST [1]	
SWITZERLAND	9.4%
GERMANY	10.7%

SECTORS EPS GROWTH FORECAST	
BANKS	6.2%
HEALTHCARE	9.0%

FIXED INCOME YIELD [2]	
UK CORPORATES	2.1%
EUROPEAN CAPITAL SECURITIES	3.2%

Sources: 1 - Factset consensus estimates, as of 22 Nov 2019; 2 - The Yield Book, as of 26 Nov 2019. Past performance is no guarantee of future returns. Real results may vary. Indices are unmanaged. An investor cannot invest directly in an index. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events

We believe that Europe ex-UK economic growth should stabilize and possibly strengthen after a 1% rise in 2019. While fresh monetary stimulus from the European Central Bank (ECB) may not be enough to drive companies' desire to borrow and expand, Christine Lagarde – the new head of the ECB – may add to the pressure for Eurozone economies to pursue more fiscal stimulus, although this may not happen in 2020.

We prefer Europe ex-UK equities to fixed income. The estimated equity risk premium over sovereign bonds is 3.7% and 2.8% over investment grade corporate bonds. These premiums are historically wide and could widen still further in the short-term, as the ECB renews its bond-buying program. Equities already discount a sluggish growth outlook. The ECB's renewed bond buying is likely to drive Europe's already expensive fixed income assets to even more stretched levels, but only in the short term.

The outlook for the UK is improving. The general election scheduled for 12 December 2019 and the Brexit saga create uncertainty. In the election, our base case is that the pro-business Conservative Party will defeat the socialist-led Labour Party. We then expect the new Conservative administration to preside over the UK's orderly withdrawal from the EU on 31 January 2020. A challenging transition period will follow, during which the UK will negotiate its future trade relationship with the EU. The initial confirmation of an orderly exit should provide a much-needed boost to business and investor confidence. We expect 1% UK GDP growth in 2020.

FIGURE 1. EUROPE VALUATIONS

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE	DY (%)	CAPE
	US$bn	20E	21E	20E	21E	19E	19E	19E	10Yr
EUROPE	8,985	14.1	13.1	8.5	7.8	1.8	11.7	3.7	20.1
UNITED KINGDOM	2,313	12.6	11.9	6.6	6.2	1.7	12.6	4.8	16.7
EUROPE EX UK	6,672	14.7	13.5	9.3	8.5	1.9	11.4	3.2	21.7
FRANCE	1,648	14.6	13.5	11.3	7.9	1.7	10.3	3.2	22.7
SWITZERLAND	1,328	17.1	15.8	9.4	8.3	2.8	15.0	3.0	26.2
GERMANY	1,263	13.6	12.2	10.7	11.2	1.6	10.3	3.0	18.6
NETHERLANDS	562	16.6	15.2	9.0	9.7	2.3	12.9	2.7	27.5
SPAIN	404	11.6	11.2	8.2	3.8	1.2	9.3	4.7	13.9
SWEDEN	377	15.0	13.9	1.7	6.0	2.1	15.3	3.7	21.5
ITALY	340	11.1	10.4	5.9	7.1	1.2	10.1	4.4	19.5
DENMARK	256	20.7	18.4	11.4	12.2	3.9	16.9	2.1	32.2
BELGIUM	134	15.8	14.5	-1.2	8.6	1.7	11.1	3.3	22.8
FINLAND	133	16.1	14.6	9.8	10.0	2.1	12.1	3.6	22.2
NORWAY	89	13.2	12.1	20.2	9.4	1.8	11.5	4.7	16.5
IRELAND	82	16.0	14.7	5.9	9.1	1.7	10.3	2.1	42.3

Source: Factset Consensus, MSCI, as of 22 Nov 2019. Note: The above data are compiled based oncompanies in MSCI AC World Index. Free Market Cap(MC) is free float adjusted market capitalization for regions, markets and sectors. P/E (Price/Earnings), EPS growth (Earnings per share), P/B (Price/Book), Dividend yield (DY) and RoE (Return on Equity) are aggregated from Factset consensus estimates. *CAPE stands for Cyclically Adjusted Price to Earnings, and is defined as: Current price/ten-year average EPS. Indices all from MSCI. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Equities

European ex-UK equities look attractive in both relative and absolute terms. They trade on an average multiple of 2020's forecast earnings per share of 14.7, while offering a 3.2% dividend yield – **figure 1**. We expect them to have another positive year of performance, after their 23% rally in 2019. That said, we see more modest total return upside potential and higher volatility in 2020. We also see a greater need for investor selectivity at the country, sector and stock levels.

A key risk to European ex-UK equities is further trade war escalation with the US. However, we think this risk may be contained as the US presidential election draws near. We will also be closely monitoring Italy's key vulnerabilities of high national indebtedness and a weak banking sector, which could be aggravated by falling growth.

Among national markets, we prefer Switzerland and Germany. Strong Swiss business franchises have substantial pricing power, while Germany could benefit from a rebound in industrial activity. Among sectors, we continue to like healthcare, which has strong demographic and technological drivers. We also favor banks, whose cheap valuations fully reflect sluggish loan growth – **figure 2**. Overall, we expect a 9% increase in Europe ex-UK EPS in 2020, with further significant downward revisions unlikely. High dividend yielders and dividend growers could do well as fixed income yields continue to decline.

If an orderly Brexit occurs, it should mitigate the UK's cyclical economic downturn. The boost to consumer confidence and business investment, along with substantial fiscal expansion, should be supportive during the transition phase next year. This would be positive for mid-cap equities, which are more UK-focused. International investors who are underweight the UK are likely first to buy liquid UK blue chips. The average forward earnings multiple of these large caps stocks is an attractive 12.6. Their average dividend yield of 4.7% is the highest in the developed world.

Fixed income

Negative yields are more prevalent in Euro-denominated bonds than anywhere else. With the ECB's negative interest rate policy entering its sixth year, 70% of Euro sovereign bonds now have negative yields, as well as 15% of IG corporates. Overall, the yield of the Eurozone bond market is near zero.

Investing in bonds that will likely lose money is not something we like. Granted, negative yields could move deeper into negative territory, thus producing a positive total return. However, treating bonds like equities is not how we advise building fixed income portfolios. Although central bank policies will likely maintain a low rate environment in 2020, negative yields create greater downside risks. As such, Citi Private Bank's Global Investment Committee remains deeply underweight high quality Eurozone debt.

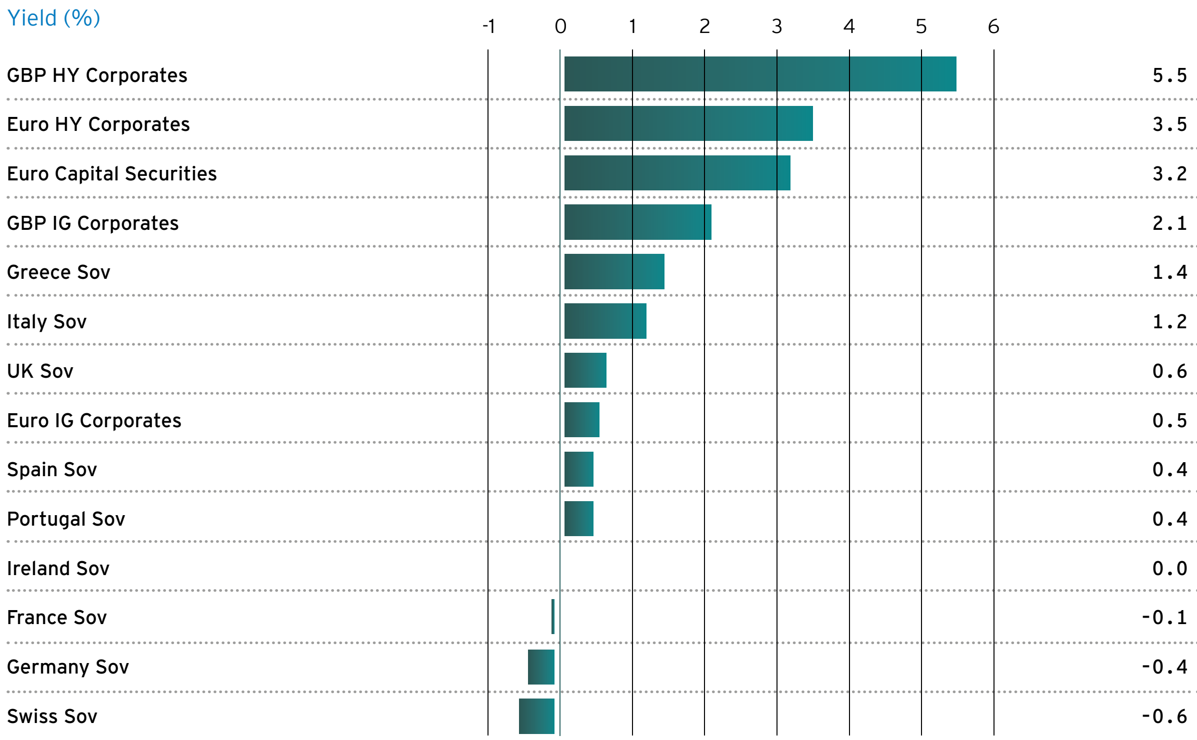
Better opportunities can be found in high yield (HY) euro markets or subordinated capital securities (preferred stocks), where yields are relatively higher, at around 3.5%. European leverage is much lower than what is found in the US. And, the ECB's asset purchase program is likely to keep investor demand for yield elevated.

FIGURE 2. OUR FAVORED EUROPEAN SECTORS

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US$bn	20E	21E	20E	21E	19E	19E	19E	10Yr
EUROPE EX UK	6,672	14.7	13.5	9.3	8.5	1.9	11.4	3.2	21.7
HEALTH CARE	961	16.1	14.7	9.0	9.1	3.3	18.6	2.7	28.8
FINANCIALS	1,145	10.0	9.4	6.2	5.4	0.8	7.9	5.1	13.6
IT	511	20.8	18.0	17.8	15.4	4.1	16.5	1.1	49.5

Source: Factset Consensus, MSCI, as of 22 Nov 2019. Note: The above data are compiled based on companies in MSCI AC World Index. Free Market Cap (MC) is free float adjusted market capitalization for regions, markets and sectors. P/E (Price/Earnings), EPS growth (Earnings per share), P/B (Price/Book), Dividend yield (DY) and RoE (Return on Equity) are aggregated from Factset consensus estimates. *CAPE stands for Cyclically Adjusted Price to Earnings, and is defined as: Current price/ten-year average EPS. Indices all from MSCI. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

FIGURE 3. EUROPE FIXED INCOME YIELDS



Source: Bloomberg Barclays, Bloomberg and The Yield Book, as of 25 Nov 2018. Past performance is no guarantee of future returns. Real results may vary.

In the UK, the lower probability of a 'no deal' Brexit has created an opportunity in both IG and HY sterling-denominated corporates. While less liquid, valuations in the UK are much cheaper than those in the US or Eurozone corporate markets. At the same time, unhedged foreign investors could benefit from possible Sterling strength, potentially enhancing their bond returns.

Currencies

Brexit has dominated moves in Sterling for some time. In late 2019, the British currency has benefited from hedge funds covering their short positions as the likelihood of a Brexit deal increased. Our base case is for Sterling to strengthen to $1.32-$1.35, driven by renewed purchases by long-term portfolio and foreign direct investors. Three-and-a-half years after the referendum, there is pent-up international demand for UK assets. If the next government after 12 December sets out a post-Brexit roadmap for the UK – and then makes progress in trade negotiations with the EU and other countries – Sterling could rise to $1.40.

The Euro is also expected to rally once the UK's withdrawal legislation is passed. Longer-term, though, it faces headwinds that could hold back its recovery. This includes prolonged Eurozone monetary easing, with no rate rises on the horizon. In addition, there could be renewed Italian pressures, as well as potentially escalating trade tension with the US.

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5.3 Latin America: Modest growth pick-up and populist challenges

JORGE AMATO, HEAD – LATIN AMERICA INVESTMENT STRATEGY
KRIS XIPPOLITOS, HEAD - GLOBAL FIXED INCOME STRATEGY

While we expect economic growth to accelerate somewhat in 2020, asset price valuations do not appear to offer the sort of risk-reward metrics that call for large overweight portfolio allocations. More opportunistic, speculative positioning is likely to be the appropriate approach to the region for 2020.

KEY MESSAGES

- Latin American growth may accelerate modestly in 2020 to between 1.75% and 2.25%
- Global risks may become regional ones as there are greater economic interdependencies
- Regional equity markets may deliver modestly positive total returns of 5% to 10%
- After a strong 2019, we look for more modest total returns on Latin American bonds

Overview

We look for accelerating economic activity in Latin America in 2020. Consensus forecasts point to regional GDP growth increasing from an estimated 1.1% in 2019 to between 1.75 and 2.25%. Constructive as this would be, it would also still fall well short of the region's potential. A lack of positive commodity price momentum and populism risk are likely to hold the region back.

Growth in Brazil and Mexico – the two largest economies – is expected to strengthen from below 1% in 2019 to 2% and 1.3% respectively. Argentina could see a larger-than-expected bounce in activity, but much depends on the incoming administration's management of the current economic crisis. The Andean economies should be able to maintain their 2.5% to 3.5% pace. And the smaller Central American economies could again generate above average growth close to 4% to 5%.

Most of the region's economies are following orthodox policies that have fostered currency stability, low and stable levels of inflation, and manageable external accounts. More importantly, some countries like Brazil, are attempting ambitious structural reform programs. The most significant risk is the rising tide of populism, sparked by large socioeconomic inequalities, which could result in sharp political and policy change. International risks and challenges are concentrated in a further slowdown in global trade, as well as a sharp deceleration of the Chinese economy, which would worsen global financial conditions and the flow of capital into Latin America.

OUR FAVORED LATIN AMERICAN MARKETS

EQUITIES EPS GROWTH FORECAST [1]	
MEXICO	11.1%
CHILE	12.2%
BRAZIL	14.8%

SECTORS EPS GROWTH FORECAST	
CONSUMER DISCRETIONARY	11.8%
HEALTHCARE	11.0%

FIXED INCOME YIELD [2]	
EXTERNAL DEBT CORPORATE BONDS	4.8%
MEXICO LOCAL CURRENCY DEBT	7.1%

Sources: 1 - Factset consensus estimates, as of 22 Nov 2019; 2 - The Yield Book, as of 26 Nov 2019. Past performance is no guarantee of future returns. Real results may vary. Indices are unmanaged. An investor cannot invest directly in an index. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

Equities

Regional equity markets may deliver modest positive returns in 2020. The MSCI Latin America Index underperformed global equities by 13% in the first eleven months of 2019. Economic turmoil in Argentina, falling business investment in Mexico, and economic and political difficulties in Chile all weighed on performance.

Consensus forecasts are for earnings per share (EPS) growth of about 13% in 2020 – **figure 1**. This is consistent with the 10% forecast for global equity EPS. Our view, however, is that global EPS consensus expectations are too optimistic. As such, we see them being lowered to around 7%. If so, then Latin American EPS is also likely to be revised slightly lower. The balance of global risks and uncertainties also presents downside risks to global and regional growth.

As to valuation, the regional one-year forward earnings multiple of around 13 is not particularly attractive from a historical perspective. For perspective, it stood at 9.5 in January 2016 and peaked at 14.5 in October 2017. At the national level, we see positive market dynamics in Brazil, where the potential for structural reforms might boost consumer and business confidence and investors' growth expectations. Consensus 2020 EPS growth for Brazil is around 15%, following an estimated near-stalling at 3.75% in 2019. This would represent a marked improvement in earnings, but it is already discounted in Brazil's 13.1 earnings multiple. This suggests limited price upside.

Meanwhile, Mexico underperformed both the region and the world in 2019, owing to policy uncertainty, subdued investment, shaky confidence, and low growth. Bearish investor sentiment is understandable and justifiable. However, it is our view that a lot of negativity is already discounted in the price. Mexico's industries are closely linked to those of the US, and we expect a manufacturing recovery to occur north of the border. This should provide a boost for Mexico, as might possible monetary policy easing. The Mexican peso's real exchange rate is competitive. The equity market trades on a forward earnings multiple of 13.5, compared to a ten-year average of 15.25. These factors suggest Mexico could be an attractive market for contrarian investors.

At the sector level, we favor consumer discretionary, which should benefit from strengthening growth - **figure 2**. We also like healthcare, which looks well underpinned by long-term demographic trends such as people living longer.

FIGURE 1. LATIN AMERICA VALUATIONS

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE	DY (%)	CAPE
	US$bn	'20E	'21E	'20E	'21E	'19E	'19E	'19E	10yr
MSCI EM LATIN AMERICA	655.1	13.0	11.7	13.5	11.4	1.9	14.6	3.1	18.3
ARGENTINA	10.1	5.9	4.7	2.9	25.8	1.1	17.1	4.0	24.4
BRAZIL	418	13.2	12.0	15.1	9.4	2.0	15.4	3.0	19.6
MEXICO	138	13.8	12.3	11.2	12.3	2.0	21.3	3.2	17.6
CHILE	44.3	13.7	11.4	11.8	20.4	1.4	11.2	3.7	13.1
COLOMBIA	23.2	10.7	9.7	12.1	11.0	1.4	18.8	3.3	16.2
PERU	20.5	12.9	11.6	13.6	11.1	2.0	15.2	3.1	15.3

Source: Factset Consensus, MSCI, as of 25 Nov 2019. Note: The above data are compiled based on companies in MSCI AC World Index. Free MC is free float adjusted market capitalization for regions, markets and sectors. P/E (Price/Earnings), EPS growth (Earnings per share), P/B (Price/Book), Dividend yield (DY) and RoE (Return on Equity) are aggregated from Factset consensus estimates. *CAPE stands for Cyclically Adjusted Price to Earnings, and is defined as: Current price/ten-year average inflation adjusted EPS. Indices all from MSCI. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Fixed income

Latin American fixed income markets lived up to their high beta reputation in 2019. They outperformed global emerging markets (EM) for much of the year. In the summer, however, they were hit by anti-government protests in the Andean nations, as well as political and economic unrest in Argentina. The latter was the more damaging: Argentine US dollar sovereign bonds collapsed and the peso weakened 30%. Although regional fixed income has still managed to generate a positive year-to-date return, Latin American external bonds have underperformed global EM by up to 440 basis points.

However, we do not believe broad regional performance properly characterizes what a noteworthy year it was for Latin American bonds. Cheaper valuations in Mexican sovereign debt set up a 20% return in 2019, while Colombian sovereigns gained 18% on strong growth and higher oil prices. Brazil, Chile, and Peru have all produced double-digit returns, supported by falling global rates and investors reach for yield.

In 2020, we look for more moderate returns on Latin American bonds. Excluding Argentina and Venezuela, the regional external sovereign yield is 3.5% - **figure 3**. While high compared to the global developed market yield of 1.6%, yields for some regional countries are at or near their historical lows. Our preference is for a diversified portfolio combining sovereigns with corporates. Corporate bonds carry wider spreads and many are partially government-owned. Valuations can vary, although good quality issuers can bear yields between 3.5 and 4.5%. Net supply is also shrinking, as issuers redeem external US dollar bonds and issue new debt locally at lower rates. This supply shrinkage is likely to support spreads over the coming year.

In local markets, we continue to find marginal value in Mexico. Yields are still near 7%, while the peso remains attractive in inflation-adjusted terms. Local Brazilian yields are at historical lows, but may fall further. Slow growth and benign inflation may allow the central bank to push policy rates down further, while the Brazilian real looks attractive to us.

Currencies

Absent a large positive global financial market shock, Latin American currencies should remain range-bound in 2020 as they stabilize after an eventful 2019. The JP Morgan Latin America spot index was under pressure during the second half of 2019, as political and social unrest triggered capital outflows. It was down nearly 9% as of 25 November. This was heavily influenced by the decline in the Argentine and Chilean peso as well as that of the Brazilian real.

Real effective exchange rates appear most attractive in Mexico, Chile, Colombia, and Argentina. To monetize this competitiveness, however, these countries need to focus on appropriate policies and structural reforms. While we expect economic activity to strengthen relative to 2019, next year's growth differential relative to developed economies, and indeed to other emerging markets, is unlikely to prove attractive enough to result in significant or sustained long-term capital inflows. More opportunistic speculative flows will struggle to find yield given the historically low local nominal rates. Also, while inflation expectations are well contained, the risk in the case of negative surprises is asymmetric. Meanwhile, the potential for populism's resurgence will likely keep volatility high. As such, short-term portfolio flows are unlikely to sustain large currency rallies. Trade flows between the region and the rest of the world are another key driver for nominal currencies. We expect some stabilization here relative to 2019.

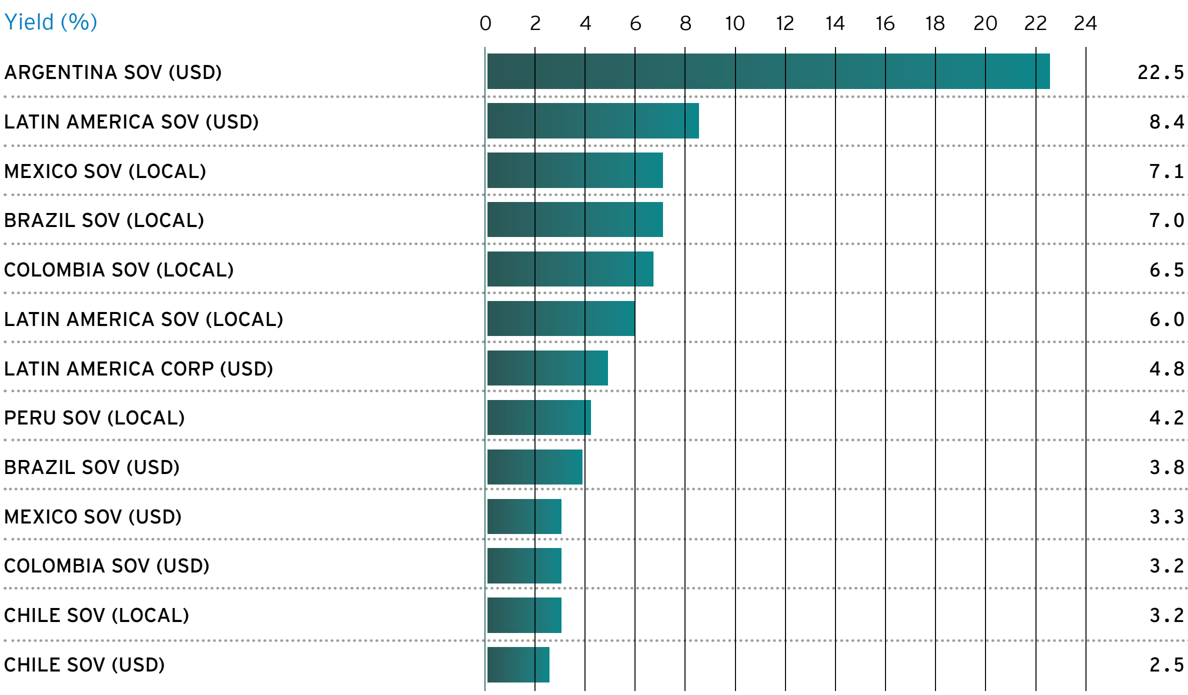
The forecasts above are as of 25 Nov 2019 and are provided for information purposes only. The investor should not base a decision to enter into a trade solely on the basis of the forecasts. Actual results may vary from the forecast rates provided herein. Forecast rates should not be construed as providing any assurance or guarantee as to future rates.

FIGURE 2. OUR FAVORED LATIN AMERICAN SECTORS

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US$bn	'20E	'21E	'20E	'21E	'19E	'19E	'19E	10yr
CONSUMER DISCRETIONARY	38.1	26.4	23.3	10.9	12.7	3.6	11.8	1.6	43
HEALTHCARE	8.1	27.4	23.3	12.3	17.3	4.7	15.6	1.4	NA

Source: Factset Consensus, MSCI, as of 25 Nov 2019. Note: The above data are compiled based on companies in MSCI AC World Index. The market capitalization for regions, markets and sectors are free float adjusted. P/E (Price/Earnings), EPS growth (Earnings per share), P/B (Price/Book), Dividend yield and RoE (Return on Equity) are aggregated from Factset consensus estimates. *CAPE stands for Cyclically Adjusted Price to Earnings, and is defined as: Current price/ten-year average inflation adjusted EPS. Indices all from MSCI. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

FIGURE 3. LATIN AMERICA FIXED INCOME YIELDS



Source: Bloomberg Barclays, Bloomberg and The Yield Book, as of 25 Nov 2019. Past performance is no guarantee of future returns. Real results may vary.

5.4 North America: Upside potential amid trade and political risks

CHARLIE REINHARD, HEAD – NORTH AMERICA INVESTMENT STRATEGY
KRIS XIPPOLITOS, HEAD - GLOBAL FIXED INCOME STRATEGY

We see modest equity and fixed income returns in the year ahead, aided by 2019 central bank easing and modest 2020 profit growth.

KEY MESSAGES

- The US and Canada should see modestly improved growth of 2% to 2.5%
- Investors should focus on consumer, trade, and manufacturing data rather than opinion polls. Data will drive markets in the end
- US equities could deliver 6%-8% total returns in 2020
- US fixed income returns may be 2%-3%, with credit outperforming other sectors

The forecasts above are as of 25 Nov 2019 and are provided for information purposes only. The investor should not base a decision to enter into a trade solely on the basis of the forecasts. Actual results may vary from the forecast rates provided herein. Forecast rates should not be construed as providing any assurance or guarantee as to future rates.

Introduction

Despite concerns including US-China trade tension, Brexit, and the impeachment inquiry, North American asset classes performed decently in 2019. In 2020, we expect US economic growth of around 2.5% and tame inflation. Having lowered interest rates three times in 2019, the Fed enters 2020 on hold for the time being. The actual amount of Fed easing in 2020 will likely depend on trade developments and the degree to which manufacturing improves.

US-China trade relations remain a potential source of volatility, as do the impeachment inquiry and November's US presidential elections. During past impeachment proceedings, the equity market ultimately focused upon the fundamentals of a recession and oil embargo in the 1970s, and a strong economy in the 1990s. We expect markets to focus on fundamentals again in 2020. As for the presidential contest, US equities have advanced in fifteen of seventeen election years since 1946.

In Canada, we expect GDP to grow 2%, driven by consumer spending. Key risks as 2019 draws to an end include oil prices and ratification of the new trade deal between the US, Mexico, and Canada. Mexico has ratified the deal and Canada is waiting on the US Congress.

OUR FAVORED NORTH AMERICAN MARKETS

EQUITIES EPS GROWTH FORECAST [1]	
US DIVIDEND GROWERS	10.5%
SECTORS EPS GROWTH FORECAST	
HEALTHCARE	6.2%
CONSUMER DISCRETIONARY	9.0%
FIXED INCOME YIELD [2]	
SECURITIZED DEBT	2.8%
IG CORPORATES INTERMEDIATE MATURITIES	2.9%

Sources: 1 - Factset consensus estimates, as of 22 Nov 2019; 2 - The Yield Book, as of 26 Nov 2019. Past performance is no guarantee of future returns. Real results may vary. Indices are unmanaged. An investor cannot invest directly in an index. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

FIGURE 1. NORTH AMERICA VALUATIONS

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE	DY (%)	CAPE
	US$bn	'20E	'21E	'20E	'21E	'19E	'19E	'19E	10yr
MSCI NORTH AMERICA	28428.56	17.37	15.86	0.10	0.09	3.26	18.62	1.92	29.18
CANADA	2018.70	14.11	14.70	0.06	-0.04	1.81	12.43	3.13	21.40
US	26911.82	17.59	15.91	0.11	0.11	3.41	18.96	1.85	29.78

Source: Factset Consensus, MSCI, as of 25 Nov 2019. Note: The above data are compiled based on companies in MSCI AC World Index. Free MC is free float adjusted market capitalization for regions, markets and sectors. P/E (Price/Earnings), EPS growth (Earnings per share), P/B (Price/Book), Dividend yield (DY) and RoE (Return on Equity) are aggregated from Factset consensus estimates. *CAPE stands for Cyclically Adjusted Price to Earnings, and is defined as: Current price/ten-year average inflation adjusted EPS. Indices all from MSCI. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Equities

In 2020, we expect US total returns of 6% to 8%, underpinned by modest earnings growth. We believe analyst expectations for 10% earnings per share (EPS) growth are likely to be trimmed. Reduced EPS outlooks are routine and only a source for worry if the economy fails to grow. Since 1996, the S&P 500 Index has advanced in twelve of the thirteen years when EPS forecasts were pared, but no recession took place. The lone exception was 2002 when the technology bubble was still deflating. Recent US dollar strength will likely be a drag on US earnings growth, while allowing policy easing in other countries, which should boost global economic activity. Canada, meanwhile, is likely to also see modest EPS growth, putting the market on a forward price/earnings multiple of 14. We remain neutral on Canadian equities.

Although the US yield curve is no longer inverted, its relative flatness points to the possibility of occasional bouts of volatility during 2020. Dividend growing equities have historically produced higher returns than passive exposure to US equities, and have done so with less volatility. Many such equities are supported by strong businesses, whose management teams are skilled in allocating capital to value-creating projects, but also have the discipline to return cash to shareholders instead of also pursuing lower-returning projects.

At a sectoral level, healthcare continues to benefit from the dynamics of an aging population. Advances in medicine are occurring due to firms' investment in research & development, particularly in areas such as oncology and immunology. The risk of the 2020 election leading to radical reforms of the US healthcare system has constrained equity prices, leaving the sector on an attractive valuation relative to its own history.

The interest rate cuts of 2019 should feed into an upturn in new order activity in 2020. Historically, this has benefited consumer discretionary sector, which may also be assisted by the

FIGURE 2. OUR FAVORED NORTH AMERICAN SECTORS

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US$bn	'20E	'21E	'20E	'21E	'19E	'19E	'19E	10yr
MSCI USA	26911.82	17.59	15.91	0.11	0.11	3.41	18.96	1.85	29.78
CONSUMER DISCRETIONARY	2691.78	20.83	18.18	0.14	0.15	7.48	24.66	1.30	35.57
FINANCIALS	3416.41	12.64	11.72	0.05	0.08	1.47	11.49	2.17	22.07
HEALTHCARE	3791.19	16.09	14.54	0.09	0.11	4.13	26.47	1.64	31.72

Source: Citi Research, Worldscope, MSCI, Factset, as of 25 Nov 2019. *Note: The above data are compiled based on companies in MSCI AC World Index. The market capitalization for regions, markets and sectors are free float adjusted. P/E (Price/Earnings), EPS growth (Earnings per share), P/B (Price/Book), Dividend yield and RoE (Return on Equity) are aggregated from Factset consensus estimates (calendarized to December year end) with current prices. CAPE is calculated by current price divided by ten-year average EPS based on MSCI index level data. NM = Not Meaningful; NA = Not Available. Indices all from MSCI. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

lowest unemployment in fifty years, healthy wage growth, and contained fuel prices.

Financials have performed well in the year following first Fed rate cuts, manufacturing bottoms and when the sector's dividend yield exceeds ten-year Treasury yields, as is currently the case.

Fixed income

Owing to persistent negative interest rate policies in Europe and Japan, nearly half of the world's ex-US dollar fixed income market now trades on a yield below zero. This has produced wide rate differentials between those negative yielding markets and US dollar bonds. Although US Treasury yields have largely fallen throughout 2019, ten-year yields near 1.75% are still among the highest yielding sovereign bonds in the developed world.

For the coming year, we expect US fixed income to continue offering the best relative value. With a market-weighted yield of 2.5%, including high yield (HY) corporates and emerging markets, income-oriented investors should keep finding opportunities in US bonds. Owing to steep credit curves, we see the best value in IG taxable corporates of between five and ten years' duration, while longer durations offer US taxpayers even more attractive potential in tax-exempt US municipal bonds.

We expect US fixed income returns in 2020 to be between 2% and 3%, with credit markets outperforming. Fed policy, US politics, and trade uncertainties are expected to help keep a lid on US rates. However, today's higher valuations offer a less attractive starting point. While US growth optimism and Fed rate cuts mean lower recession risks, the effect of spread tightening may be offset by slightly higher long-term yields.

From an allocation perspective, we prefer to keep portfolio quality high. With the risks to US rates balanced, we enter 2020 with a neutral duration view. HY bonds could face an uptick in default rates, albeit from very low levels.

The forecasts above are as of 25 Nov 2019 and are provided for information purposes only. The investor should not base a decision to enter into a trade solely on the basis of the forecasts. Actual results may vary from the forecast rates provided herein. Forecast rates should not be construed as providing any assurance or guarantee as to future rates.

Refinancing risks are low, which is likely to support tight spreads. As an alternative, we prefer HY bank loans, which offer higher yields and lower price volatility than HY bonds.

Securitized debt markets also offer some unique opportunities. Unlike in the corporate sector, US household leverage is at low levels. Certain securities backed by auto loans, credit card receivables or residential mortgages, can provide yields similar to IG corporates, with lower correlations and attractive risk-adjusted profiles.

For US investors in the highest tax bracket, we believe US municipals (munis) should remain the largest holding of core bond portfolios. Strong technical factors are likely to drive valuations throughout the year, as persistent high demand meets modest supply. Value continues to favor long-duration, although taxable-equivalent yields in US munis are still higher than taxable IG corporates across the entire yield curve.

Currencies

In 2019, the US dollar – as measured by the US dollar index – reached its strongest level in two years. The currency was bolstered by trade uncertainty, higher interest rates than in other advanced economies, and weaker-than-expected economic growth throughout much of the global economy for most of the year. We expect the US dollar to trade near current levels into 2020 against most major currencies. Longer-term, though, we sense the US dollar's advance is running out of steam. Once market sentiment and economic growth prospects outside the US improve, the greenback should give some ground to other currencies amid large fiscal and current account deficits in the US. By contrast, we expect the Canadian dollar to strengthen slightly from 1.32 to 1.28 in 2020, due to the Bank of Canada having diverged from the recent easing paths of other central banks around the world by holding its policy rate steady.

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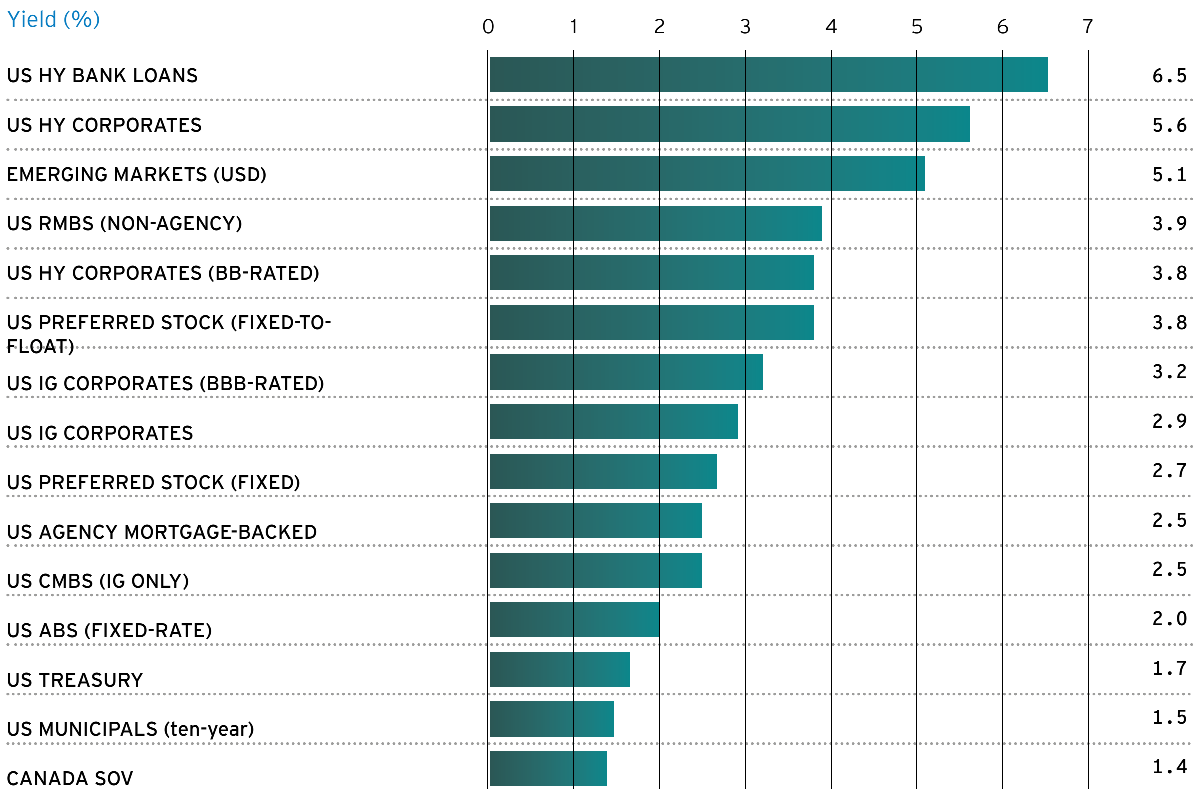
FIGURE 3. NORTH AMERICA FIXED INCOME YIELDS



Source: Bloomberg Barclays, Bloomberg and The Yield Book, as of 25 Nov 2019. Past performance is no guarantee of future returns. Real results may vary.

DAVID BAILIN
CHIEF INVESTMENT OFFICER

STEVEN WIETING
CHIEF INVESTMENT STRATEGIST
AND CHIEF ECONOMIST

OUTLOOK 2020

TEAM

IAIN ARMITAGE
GLOBAL HEAD OF CAPITAL MARKETS

DAN O'DONNELL
GLOBAL HEAD OF CITI INVESTMENT MANAGEMENT ALTERNATIVES

GREGORY VAN INWEGEN
GLOBAL HEAD OF QUANTITATIVE RESEARCH AND ASSET ALLOCATION

KEN PENG
ASIA STRATEGIST

JEFFREY SACKS
EUROPE STRATEGIST

JORGE AMATO
LATIN AMERICA STRATEGIST

WIETSE NIJENHUIS
GLOBAL EQUITY STRATEGIST

KRIS XIPPOLITOS
GLOBAL FIXED INCOME STRATEGIST

CHARLES REINHARD
NORTH AMERICA STRATEGIST

ASSET CLASS DEFINITIONS

Cash is represented by US 3-month Government Bond TR, measuring the US dollar-denominated active 3-Month, fixed-rate, nominal debt issues by the US Treasury.

Commodities asset class contains the index composites — GSCI Precious Metals Index, GSCI Energy Index, GSCI Industrial Metals Index, and GSCI Agricultural Index — measuring investment performance in different markets, namely precious metals (e.g., gold, silver), energy commodity (e.g., oil, coal), industrial metals (e.g., copper, iron ore), and agricultural commodity (i.e., soy, coffee) respectively. Reuters/ Jeffries CRB Spot Price Index, the TR/CC CRB Excess Return Index, an arithmetic average of commodity futures prices with monthly rebalancing, is used for supplemental historical data.

Emerging Markets (EM) Hard Currency Fixed Income is represented by the FTSE Emerging Market Sovereign Bond Index (ESBI), covering hard currency emerging market sovereign debt.

Global Developed Market Corporate Fixed Income is composed of Bloomberg Barclays indices capturing investment debt from seven different local currency markets. The composite includes investment grade rated corporate bonds from the developed-market issuers.

Global Developed Market Equity is composed of MSCI indices capturing large-, mid- and small-cap representation across 23 individual developed-market countries, as weighted by the market capitalization of these countries. The composite covers approximately 95% of the free float-adjusted market capitalization in each country.

Global Developed Investment Grade Fixed Income is composed of Barclays indices capturing investment grade debt from twenty different local currency markets. The composite includes fixed-rate treasury, government-related, and investment grade rated corporate and securitized bonds from the developed-market issuers. Local market indices for US, UK and Japan are used for supplemental historical data.

Global Emerging Market Fixed Income is composed of Barclays indices measuring performance of fixed-rate local currency emerging markets government debt for 19 different markets across Latin America, EMEA and Asia regions. iBoxx ABF China Govt. Bond, the Markit iBoxx ABF Index comprising local currency debt from China, is used for supplemental historical data.

Global High Yield Fixed Income is composed of Barclays indices measuring the non-investment grade, fixed-rate corporate bonds denominated in US dollars, British pounds and Euros. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt. Ibbotson High Yield Index, a broad high yield index including bonds across the maturity spectrum, within the BB-B rated credit quality spectrum, included in the below-investment grade universe, is used for supplemental historical data.

Hedge Funds is composed of investment managers employing different investment styles as characterized by different sub categories – HFRI Equity Long/Short: Positions both long and short in primarily equity and equity derivative securities; HFRI Credit: Positions in corporate fixed income securities; HFRI Event Driven: Positions in companies currently or prospectively involved in wide variety of corporate transactions; HFRI Relative Value: Positions based on a valuation discrepancy between multiple securities; HFRI Multi Strategy: Positions based on realization of a spread between related yield instruments; HFRI Macro: Positions based on movements in underlying economic variables and their impact on different markets; Barclays Trader CTA Index: The composite performance of established programs (Commodity Trading Advisors) with more than four years of performance history.

High Yield Bank Loans are debt financing obligations issued by a bank or other financial institution to a company or individual that holds legal claim to the borrower's assets in the event of a corporate bankruptcy. These loans are usually secured by a company's assets, and often pay a high coupon due to a company's poor (non-investment grade) credit worthiness.

Private Equity characteristics are driven by those for Developed Market Small-Cap Equities, adjusted for illiquidity, sector concentration, and greater leverage.

INDEX DEFINITIONS

The **Bloomberg Barclays Global Aggregate Bond Index** is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.

The **Bloomberg-JP Morgan Asia Currency Index** is designed as a spot index of the most actively traded currency pairs in Asia's emerging markets valued against the US dollar.

The **Bloomberg JP Morgan Latin American Currency Index** represents Latin America's currency markets on an aggregate basis. It is a spot index of Latin America's most actively traded currency pairs valued against the US dollar, whose composition is based primarily on trade weights, with an added liquidity filter.

The **CSI 300** is a capitalization-weighted stock market index designed to replicate the performance of top 300 stocks traded in the Shanghai and Shenzhen stock exchanges. It was considered as a blue chip index for mainland China stock exchanges

Citi US Broad Investment Grade Index (USBIG)—Corporate, is a subsector of the USBIG. The index includes fixed rate US dollar denominated investment grade corporate debt within the finance, industrial and utility sectors. This index includes US and non-US corporate securities (excludes US government-guaranteed and non-US sovereign and provincial securities).

Citi Emerging Markets Sovereign Bond Index includes local currency sovereign bond indices for 14 emerging markets countries. These indices comprise fixed-rate sovereign debt with at least one-year until maturity. They are market capitalization-weighted and rebalanced monthly for Brazil, Chile, Colombia, Hungary, Indonesia, Malaysia, Mexico, Peru, Philippines, Poland, Russia, Thailand, Turkey, and South Africa.

The **Citi Euro Broad Investment Grade Index** is a multi-asset benchmark for Investment grade, Euro-denominated fixed income bonds. It includes government, government-sponsored, collateralized, and corporate debt.

Citi's US High Yield Market Index is a US dollar-denominated index which measures the performance of high yield debt issued by corporations domiciled in the US or Canada. Recognized as a broad measure of the North American high-yield market amongst all Citi's fixed income indices, it includes cash-pay and deferred-interest securities. All the bonds are publically placed, have a fixed coupon, and are non-convertible.

The **Citi World Broad Investment Grade Index** is a multi-asset, multicurrency benchmark which provides a measure of the global fixed income markets.

The **Euro Stoxx 50 Index** is a blue-chip index for the Eurozone, provides a blue-chip representation of supersector leaders in the region. The index covers fifty stocks from eleven Eurozone countries.

The **FTSE All-World Index** is a stock market index representing global equity performance that covers over 3,100 companies in 47 countries starting in 1986.

The **MSCI Emerging Markets Index** captures large- and mid- cap representation across twenty-four Emerging Markets (EM) countries. With 837 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The **MSCI Emerging Markets (EM) Latin America Index** captures large and mid-cap representation across five Emerging Markets (EM) countries in Latin America. With 113 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The **MSCI World Index** represents the performance of more than 1,600 large- and mid-cap stocks across 23 developed markets countries. The index covers approximately 85% of the free float-adjusted market capitalization in each country

The **MSCI World ex-USA Index** represents the performance of large and mid-cap representation across 22 of 23 developed markets countries excluding the United States. With 1,005 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The **S&P 500 Index** is a capitalization-weighted index that includes a representative sample of 500 leading companies in leading industries of the US economy. Although the S&P 500 focuses on the large-cap segment of the market, with over 80% coverage of US equities, it is also an ideal proxy for the total market.

The **S&P 1500 Index** combines three leading indices, the S&P 500, the S&P MidCap 400, and the S&P SmallCap 600, to cover approximately 90% of US market capitalization. It is designed for investors seeking to replicate the performance of the US equity market or benchmark against a representative universe of tradable stocks.

The **S&P 500 Fossil Fuel Free Index** is designed to measure the performance of companies in the S&P 500 that do not own fossil fuel reserves. Fossil fuel reserves are defined as economically and technically recoverable sources of crude oil, natural gas and thermal coal.

The **S&P Global Dividend Aristocrats** is designed to measure the performance of the highest dividend yielding companies within the S&P Global Broad Market Index (BMI) that have followed a policy of increasing or stable dividends for at least ten consecutive years.

The **U.S. Dollar Index** (DXY) is an of the value of the US dollar relative to a basket of major US trade partners' currencies.

OTHER TERMINOLOGY

Adaptive Valuations Strategies is Citi Private Bank's own strategic asset allocation methodology. It determines the suitable long-term mix of assets for each client's investment portfolio. Correlation is a statistical measure of how two assets or asset classes move in relation to one another. Correlation is measured on a scale of 1 to -1. A correlation of 1 implies perfect positive correlation, meaning that two assets or asset classes move in the same direction all of the time. A correlation of -1 implies perfect negative correlation, such that two assets or asset classes move in the opposite direction to each other all the time. A correlation of 0 implies zero correlation, such that there is no relationship between the movements in the two over time.

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LIBOR – The London interbank offered rate is the rate of interest at which banks offer to lend funds to each other. It is used a reference rate for large amounts of financial contracts.

Price-to-book ratio (P/B) compares the capitalization of an individual stock or of an index of stocks to the value of that stock or that index's combined shareholder capital. It is calculated by dividing the current closing price of the stock by the most recently reported book value per share. A low P/B can indicate a lowly-valued company or index, while a high P/B can indicate high valuation.

Price-earnings ratio (P/E) measures a company's or an index of companies' current share price relative to its earnings per share. A low P/E can indicate a lowly-valued company or index, while a high P/E can indicate high valuation.

Return on equity (ROE) is the amount of net income earned as a percentage of shareholders equity. It captures a company's profitability – or aggregate profitability among numerous companies – by showing how much profit is achieved with shareholders' capital.

Strategic asset allocation is the process of creating a long-term investment plan by assembling an appropriate mix of equities, fixed income, cash and other investments. It can potentially enhance portfolio returns and help manage risk. Strategic Return Estimates are Citi Private Bank's forecast of returns for specific asset classes over a 10-year time horizon. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes are forecast using a proprietary methodology based on the calculation of valuation levels with the assumption these valuation levels revert to their longterm trends over time. Fixed Income asset classes are forecast using a proprietary methodology based on current yield levels. Other asset classes have other specific forecasting methodologies. Please note that hedge funds, private equity, real estate, structured products and managed futures are generally illiquid investments and are subject to restrictions on transferability and resale. Each SRE is gross of actual client fees and expenses. Components of the methodology used to create the SREs include the rate of return for various asset classes based on indices. Termination and replacement of investments may subject investors to new or different charges. Past performance is not indicative of future results. Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely over time, especially for long-term investments. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index.

Tactical asset allocation looks to adjust the strategic asset allocation of a client's investment portfolio to incorporate shorter-term market insights.

Volatility – is a statistical measure of the variation of returns for a given security, market index, or asset class. It is most often measured by way of standard deviation. The higher the volatility, the riskier the underlying asset is considered to be.

Yield-to-Maturity (YTM) is the total return received on a bond or index of bonds when held to maturity. The total return includes both the payment of coupons and the return of the principal at maturity.

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Bonds are affected by a number of risks, including fluctuations in interest rates, credit risk and prepayment risk. In general, as prevailing interest rates rise, fixed income securities prices will fall. Bonds face credit risk if a decline in an issuer's credit rating, or creditworthiness, causes a bond's price to decline. High yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. Finally, bonds can be subject to prepayment risk. When interest rates fall, an issuer may choose to borrow money at a lower interest rate, while paying off its previously issued bonds. As a consequence, underlying bonds will lose the interest payments from the investment and will be forced to reinvest in a market where prevailing interest rates are lower than when the initial investment was made.

Bond rating equivalence

Alpha and/or numeric symbols used to give indications of relative credit quality. In the municipal market, these designations are published by the rating services. Internal ratings are also used by other market participants to indicate credit quality.

Bond credit quality ratings		**Rating agencies**	
Credit risk	**Moody's**[1]	**Standard and Poor's**[2]	**Fitch Ratings**[2]
Investment Grade			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (Strong)	A	A	A
Medium grade	Baa	BBB	BBB
Not Investment Grade			
Lower medium grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	B	B	B
Poor quality (may default)	Caa	CCC	CCC
Most speculative	Ca	CC	CC
No interest being paid or bankruptcy petition filed	C	D	C
In default	C	D	D

1 The ratings from Aa to Ca by Moody's may be modified by the addition of a 1, 2, or 3 to show relative standing within the category.
2 The ratings from AA to CC by Standard and Poor's and Fitch Ratings may be modified by the addition of a plus or a minus to show relative standing within the category.

(MLP's) - Energy Related MLPs May Exhibit High Volatility. While not historically very volatile, in certain market environments Energy Related MLPS may exhibit high volatility.

Changes in Regulatory or Tax Treatment of Energy Related MLPs. If the IRS changes the current tax treatment of the master limited partnerships included in the Basket of Energy Related MLPs thereby subjecting them to higher rates of taxation, or if other regulatory authorities enact regulations which negatively affect the ability of the master limited partnerships to generate income or distribute dividends to holders of common units, the return on the Notes, if any, could be dramatically reduced. Investment in a basket of Energy Related MLPs may expose the investor to concentration risk due to industry, geographical, political, and regulatory concentration.

Mortgage-backed securities ("MBS"), which include collateralized mortgage obligations ("CMOs"), also referred to as real estate mortgage investment conduits ("REMICs"), may not be suitable for all investors. There is the possibility of early return of principal due to mortgage prepayments, which can reduce expected yield and result in reinvestment risk. Conversely, return of principal may be slower than initial prepayment speed assumptions, extending the average life of the security up to its listed maturity date (also referred to as extension risk).

Additionally, the underlying collateral supporting non-Agency MBS may default on principal and interest payments. In certain cases, this could cause the income stream of the security to decline and result in loss of principal. Further, an insufficient level of credit support may result in a downgrade of a mortgage bond's credit rating and lead to a higher probability of principal loss and increased price volatility. Investments in subordinated MBS involve greater credit risk of default than the senior classes of the same issue. Default risk may be pronounced in cases where the MBS security is secured by, or evidencing an interest in, a relatively small or less diverse pool of underlying mortgage loans.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements. Price volatility may also occur from other factors including, but not limited to, prepayments, future prepayment expectations, credit concerns, underlying collateral performance and technical changes in the market.

Alternative investments referenced in this report are speculative and entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in the fund, potential lack of diversification, absence of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds and advisor risk.

Asset allocation does not assure a profit or protect against a loss in declining financial markets.

The indexes are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance.

Past performance is no guarantee of future results.

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Investing in smaller companies involves greater risks not associated with investing in more established companies, such as business risk, significant stock price fluctuations and illiquidity.

Factors affecting commodities generally, index components composed of futures contracts on nickel or copper, which are industrial metals, may be subject to a number of additional factors specific to industrial metals that might cause price volatility. These include changes in the level of industrial activity using industrial metals (including the availability of substitutes such as manmade or synthetic substitutes); disruptions in the supply chain, from mining to storage to smelting or refining; adjustments to inventory; variations in production costs, including storage, labor and energy costs; costs associated with regulatory compliance, including environmental regulations; and changes in industrial, government and consumer demand, both in individual consuming nations and internationally. Index components concentrated in futures contracts on agricultural products, including grains, may be subject to a number of additional factors specific to agricultural products that might cause price volatility. These include weather conditions, including floods, drought and freezing conditions; changes in government policies; planting decisions; and changes in demand for agricultural products, both with end users and as inputs into various industries.

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