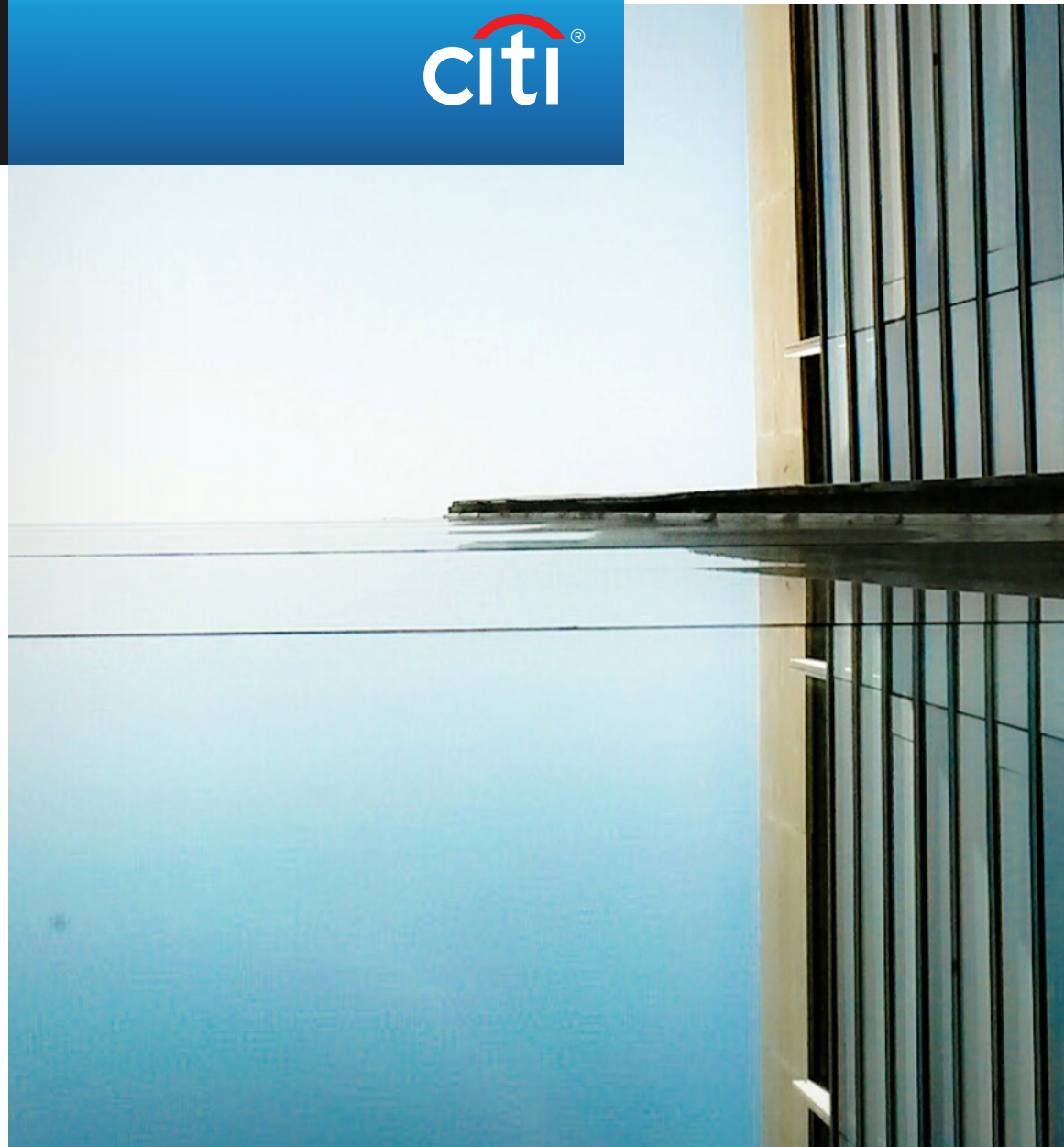


Private Bank



Climbing over the wall of worry:
Building enduring global portfolios

Mid-year Outlook 2018

Outlook 2018 Watchlist

The average client portfolio has 45% of assets that aren't aligned to the recommended allocation*

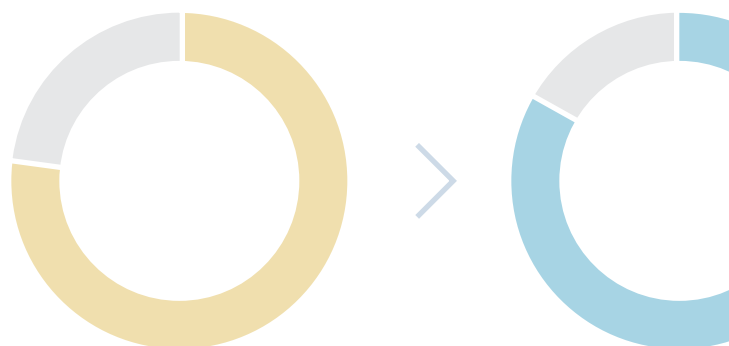
How does yours compare?

Failing to follow an established long-term plan is one of the main reasons why families can drift below the world's wealthiest over time.

To help keep your portfolio aligned to your recommended allocation and to our investment themes, we can provide you 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.

To request your report, please reach out to your Banker or Investment Counselor.



*Source: Citi Private Bank Global Investment Lab, as of 23 May 2018. Recommended allocation is the reference allocation that reflects our understanding of a client's investment objectives and risk tolerance.

Climbing over the wall of worry: Building enduring global portfolios

Mid-year Outlook 2018

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'What do I do now?'

In every way, 2018 looks like a very different year than 2017. Last year saw 75% of the calmest days in markets for the previous ten years. In 2018 so far, we have experienced three corrections, and a surge in volatility across equities, fixed income, and currencies. The average 'down-day' for equities in 2018 is 24% larger than the average 'up-day'. So, what is the root cause of this sea-change in market conditions? Is it the prospect of trade wars? Potential political meltdown in Italy? Fed tightening in the US? Changes in geopolitics from Iran to Russia to US-European relations? Elections in Mexico? President Trump's unpredictability?

At times such as these, the job of a trusted advisor is to look beyond the headlines and focus on three critical factors. The first is the data. Our Mid-year Outlook presents hard data that defines global growth prospects by region, country, and industry to determine where we are and where we are likely to be from 2018-2019. The second is history. We present information on the behavior of markets to explain what is likelier to happen if the world economy performs as we expect. And the third is strategy. We know that global diversification, consistency of portfolio implementation, and the right selection of investment opportunities are most critical.

Through in-depth analysis, an understanding of market behavior, and wise strategies, Citi Private Bank's Mid-year Outlook answers our clients' most frequently asked question these days: 'What do I do now?'

We believe that the resilience of global markets is greater than many expect. We see corporate earnings continuing to grow and global growth slowing a bit, but not to recessionary levels. We see equity valuations coming down as interest rates rise, consistent with previous similar market cycles. And we also think that portfolios need to adjust to address the concerns we see, from politics to debt levels to currencies.

Most importantly, as we meet with families across the world, we frequently see highly inefficient portfolios, saddled with severe concentration risk in single assets and single currencies. Often, investors have not looked sufficiently at their options to diversify adequately and add liquidity. We aim to provide advice and long-term strategies to address these issues.

Our Mid-year Outlook 2018 advice is clear and thorough. And our recommendations are designed to help you preserve the value of your portfolio and potentially to profit even amidst uncertainty. We highlight that while the reasons behind today's volatility in markets are of the moment, the way that markets respond to local and regional issues is typical.

A globally diversified, high quality investment portfolio has never been more important to countering uncertainty. Your Investment Counselor and Private Banker stand ready to discuss how you might implement our ideas in your portfolio. I look forward to speaking with you in person, either at one of our Mid-year Outlook events or thereafter.

David Bailin
Global Head of Investments, Citi Private Bank



Robust strategies for a strongman's world

Steven Wieting, Global Chief Investment Strategist

Has the global economic expansion that began almost a decade ago hit its peak? A combination of tightening monetary policy, deceleration in a few economic indicators, and greater uncertainty over world trade has convinced many investors that it has. The return of volatility to financial markets in early 2018 has further fanned their fears.

A longer expansion than expected

Citi Private Bank does not share their stance. We think the global expansion may endure for longer than pessimists expect. And while we acknowledge the potential threats - particularly around trade - we advise that investors take more constructive and potentially profitable actions in their portfolios than simply retreating from risky assets.

In our view, global GDP is likely to see decent growth in 2018 and 2019, with Citi Research forecasting around 3.5% for both years. If so, that would mark the strongest rate of growth of the whole expansion to date. Corporate earnings worldwide have exceeded our bullish expectations and look set to rise more than 15% in 2018.

Admittedly, the US is at a later stage of its expansion than the rest of the world. However, it has also shown a reinvigorated capacity to grow. A rebound in the labor force, stronger investment growth, corporate tax cuts, and deregulation measures are all contributing factors. While some of these actions create risks of their own, we still expect positive momentum in the world's largest economy for 2018 and beyond. An imminent US business cycle peak looks unlikely - see [When will the US cycle peak?](#)

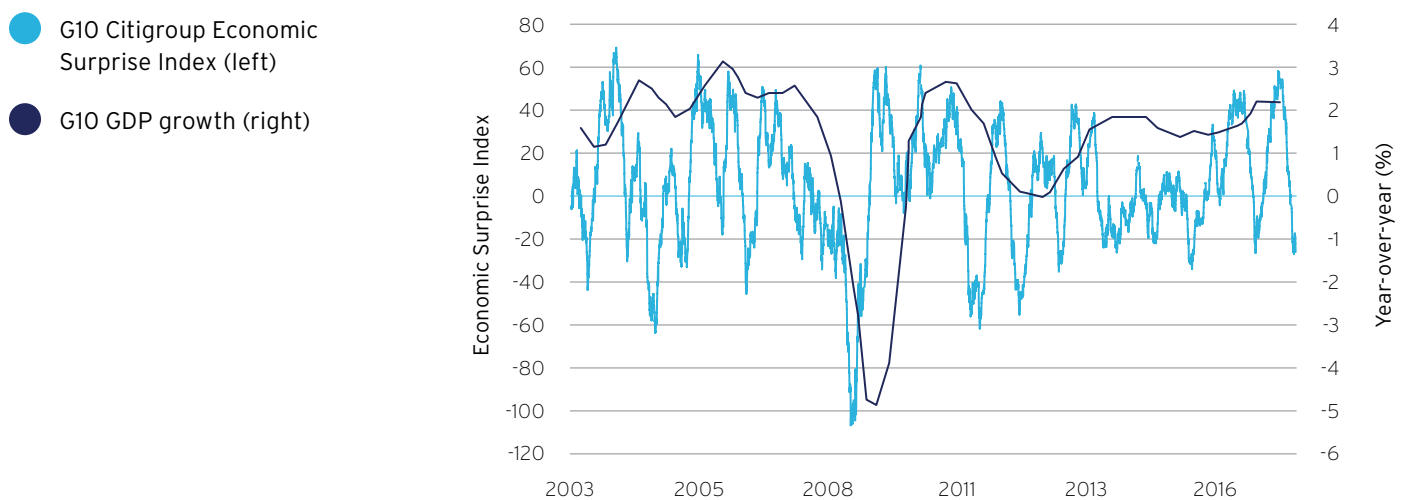
We continue
to overweight
many non-US
equity markets.

Stay bullish, be selective, go global

Remarkably strong and stable returns in 2017 fostered some bullish complacency. However, the shaky performance of financial markets in 2018 so far is inconsistent with our constructive global economic view. Growth scares, driven by downside surprises to short-term data, occur regularly, and demonstrably mean little to full-year economic performance - **figure 1**. The Citi Private Bank Global Investment Committee therefore remains 4% overweight global equities. Within that allocation, we continue to overweight many non-US equity markets. This is based upon their significantly lower valuations, solid earnings prospects, and local economies that have not enjoyed the full recovery that the US has - see highlighted area in **figure 2**. By contrast, we are still neutral on US equities, despite a sharp recent improvement in valuations and rising US profits.

Our global fixed income weighting remains underweight by 4% with a bias towards higher quality, low duration fixed income and cash equivalents in higher yielding markets. The single tactical change we made in early 2018 was to reallocate a portion of our overweight in US high yield to US investment grade fixed income after a sharp yield backup in both asset classes.

Figure 1. Economic growth scares are common



Source: Haver Analytics through May 8, 2018. G-10 Countries Real GDP Y/Y% vs Citi Economic Surprise Index. The G10 CESI is the Citigroup Economic Surprise Index covering the Group of 10 Countries. It objectively and quantitatively measures economic news. They calculated as weighted historical standard deviations of data surprises, defined as actual releases vs consensus. The G10 countries are the US, Japan, Germany, France, UK, Italy Canada, Switzerland, Sweden, Netherlands, and Belgium.

Figure 2. Asset class performance and positioning

Market	GIC recommendation	P/E	YTD return	12-month return		2013-present		
				Trailing 4Q	USD	Local	USD	Local
Equities								
MSCI DM	Overweight	16.9	0.6%	0.8%	13.3%	11.2%	79.4%	93.3%
MSCI EM	Overweight	14.2	-1.1%	0.5%	19.5%	19.2%	24.6%	50.3%
S&P 500	Neutral	19.7	0.6%	0.6%	13.6%	13.6%	109.3%	109.3%
Euro Stoxx 600	Overweight	14.9	0.6%	1.4%	10.0%	1.5%	46.3%	61.9%
Fixed Income								
Global Aggregate	Underweight		-0.7%	-0.5%	3.7%	1.6%	3.3%	15.7%
US Aggregate	Overweight		-2.3%	-2.3%	-0.2%	-0.2%	8.4%	8.4%
Emerging Market Sovereign	Overweight		-4.6%	-4.6%	-0.8%	-0.8%	16.6%	16.6%
US High Yield Corporate	Overweight		-0.2%	-0.2%	3.4%	3.4%	32.2%	32.2%

Source: Citi Private Bank Office of the Chief Investment Strategist, Haver Analytics, The Yield Book, through 8 May, 2018. See Glossary for definitions. 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.

Handling trade tensions and strongmen

Despite being more positive than the more fearful consensus, we don't dismiss some of the challenges that lie ahead for economies and markets. Trade protectionism, the rise of international friction, monetary tightening, and higher asset price volatility are some of the very real issues facing investors. However, we believe there is an appropriate way to prepare portfolios both for these and other challenges. This creates not only potential to manage risk but also to exploit improving opportunities.

The world order has been shaken up in recent years. Particularly since the 2016 shocks of Brexit and the election of President Trump, policies favoring national self-interest have eclipsed international co-operation.

Unilateral actions have gained ground over multilateral agreements. Nationalists from both the right and left have come to prominence in many countries, with various strongmen either consolidating their power or getting closer to office. We see all of this as part of a shift from a 'multi-partner world' to a 'multi-polar world', where several powers compete more and collaborate less. Consider that, for the first time since the post-war alliances were formed, the US may penalize European firms that do not comply with its Iranian sanctions regime. And consider that, in response, Europe may sanction firms if they do comply with US sanctions. We think these political and policy trends will have material implications for investors' portfolios over the medium and long term.

Compare this with the situation just a few years ago. When the Global Financial Crisis of 2008-09 struck, policymakers worldwide coordinated efforts to stimulate economic growth and strengthen the financial system. They also vowed against a return to the damaging trade protectionism of the 1930s. If there were a fresh crisis tomorrow, it is hard to imagine such a level of international cooperation being repeated. And there is a risk that tariffs and trade restrictions will rise significantly for the first time in almost a century. As we warned in [Outlook 2018](#), potential trade disruption from protectionism represents today's biggest risk to global growth. The risks for certain countries are greater still.

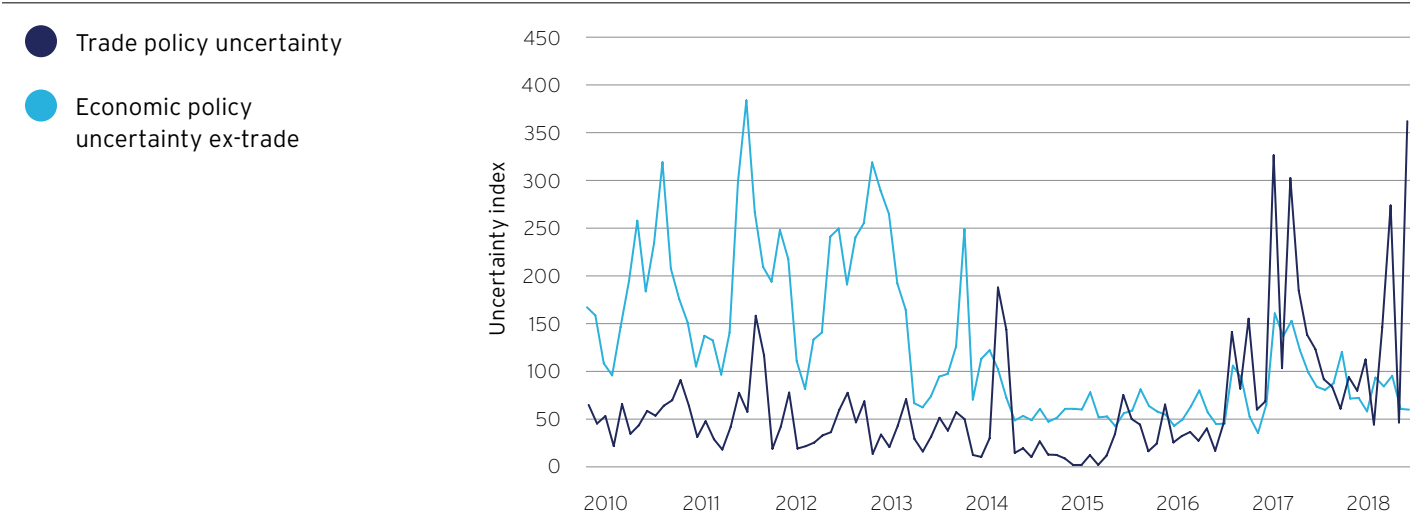
Trade fears are likely overblown

Fears over international trade have already impacted equity markets globally in recent months, as uncertainty over US trade policy has hit a multi-year high - **figure 3**. Importantly, though, the global economy has yet to suffer negative effects. In the US, uncertainty over economic policy overall remains fairly low. Bilateral negotiations between the US, China, Mexico, and

Canada regarding their future trade relationships all show tentative signs of progress. Although legitimate, concerns at the global level over a potential trade war seem overdone to us, particularly as such a conflict would create opportunities for many to exploit and displace those who became subject to bilateral country tariffs.

Meanwhile, international friction and protectionist domestic policies remain a topical threat for the near-term. Mexico's leading presidential candidate Andres Manuel López Obrador supports ending the privatization of the national oil monopoly and hopes to face down Trump in trade negotiations if he wins the country's 1 July presidential election. In Brazil, certain candidates on both the far left and far right have argued for nationalizing particular industries. In India, Prime Minister Modi faces a growing regional backlash against the rule of his Hindu nationalist party. The phenomenon is not confined to emerging markets. President Trump - a self-confessed admirer of hardline leaders elsewhere who 'get things done' - has lashed out against numerous firms over particular business practices. In other cases, he has boosted them in an equally unpredictable fashion.

Figure 3. US policy uncertainty indices



Source: Haver Analytics through April 2018.
Uncertainty indices are derived using terms from over 2,000 US newspapers by scanning for language stressing uncertainty around various policy event types. "Non-trade" is a simple average of the following separate indices: Monetary Policy, Fiscal Policy, Taxes, Government Spending, Healthcare, National Security, Entitlements, Regulation, Financial Regulation, Debt and Currency issues.

More diversification, please

In light of this, we ask quite simply, how many eggs should an investor have in any one strongman's basket? For many investors who invest only in one country or region, the combination of strongmen, trade tensions, and other factors have raised their risks. While national economies may experience only limited damage in the event of future trade restrictions, particular sectors and companies would suffer a great deal more. The case for global diversification in today's multi-polar world has therefore become even more compelling. And yet, our own data shows that around 80% of Private Bank clients remain overly concentrated in a single currency in their investment holdings.

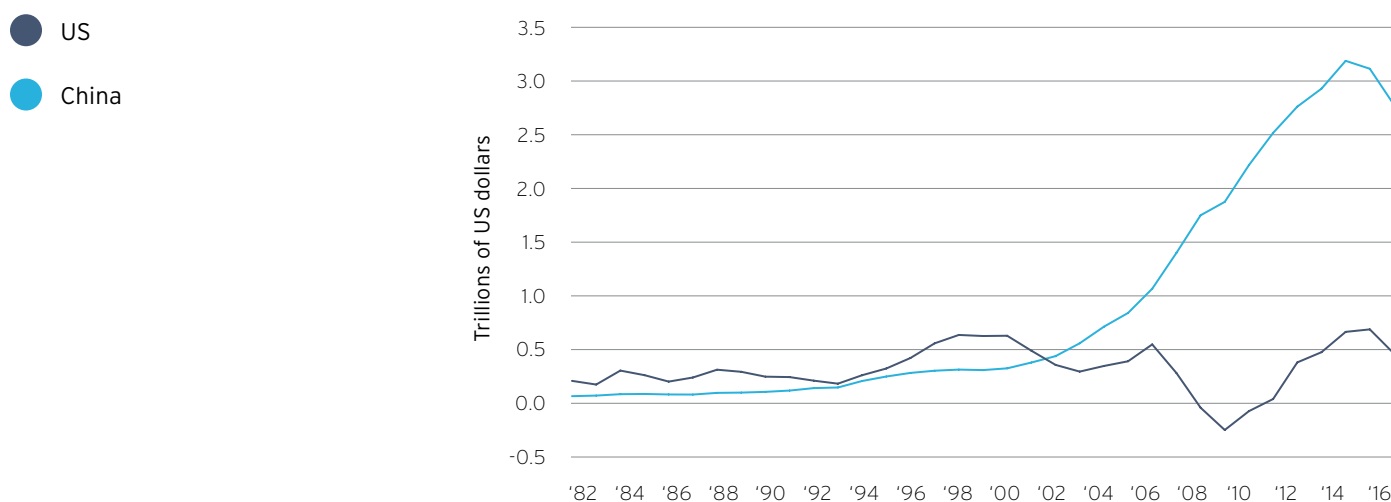
China represents one particular area where we see most international portfolios underexposed. Global investors remain reluctant to invest in the country, perhaps scarred by memories of the turbulence in its equity markets in 2015 and 2016. However, China's fundamentals are positive, with rapid technological innovation, a growing middle class powering consumer spending, and increasingly disciplined state-owned industries. Net national annual savings far exceed those of the US, greatly mitigating perennial debt concerns - **figure 4**.

Given President Xi Jinping's autocratic move to allow himself to stay in power for life - and the country's trade standoff with the US - it may seem controversial or uncomfortable to add to China exposure. Our point, however, is that China is a vital pole in today's multi-polar world. Its importance will likely increase further in coming years. It deserves a place in a global diversified allocation - along with assets from many other countries.

Rising rates and rates of return

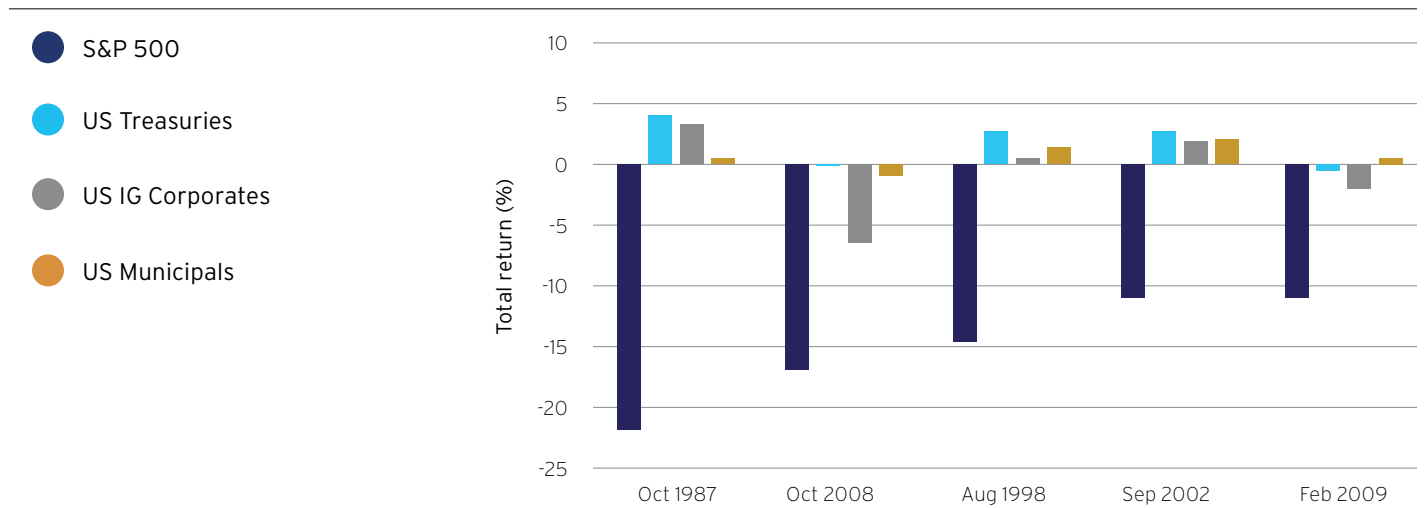
Going into 2018, we expected higher rates across developed and emerging markets. We thought that the US Federal Reserve's reduction in its bond holdings would create competition for funds, requiring increased private savings to finance US government borrowings. We believed this demand for increased savings would push interest rates higher and attract inflows from other asset classes, creating market volatility. Rates have indeed risen, with the US 10-year Treasury yield notably breaching the 3% level for the first time in over four years.

Figure 4. Annualized net national savings



Source: Haver Analytics as of 15 May 2018.

Figure 5. Fixed income during the S&P 500's worst months



Source: Haver, as of 8 May 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. Past performance is no guarantee of future results. Real results may vary.

US monetary policy tightening will become increasingly relevant for investors over time. With the significant premium of US yields over other developed yields, we continue to expect a range-bound US dollar in 2018, with 'counter-trend' recoveries. However, our longer-term outlook is for the US dollar to resume its 2017 downtrend. We do not believe that the US economy will sustain rising short rates much beyond 2019. The likelihood of further multi-year dollar declines is one of the reasons we favor non-US equities over US equities.

We also tactically overweight the front end of the US yield curve in order to take advantage of the rise in Federal Reserve policy rates, which has made many short-term interest rate products attractive. Floating rate US fixed income looks increasingly appealing as the Fed expects to bring its funds rate up to 2.75% by end 2019 - see also [Build an enduring global investment portfolio now](#).

Exploit volatility to generate income

After an unusually long period of calm in financial markets, our expectation was for volatility to return in 2018. We set out our views in [Exploiting volatility](#) in **Outlook 2018** and also highlighted ways to help protect portfolios and seek to generate returns from the expected trend. Just a few weeks into the year, implied volatility surged as investor sentiment turned fearful and strategies to generate income from falling volatility were broadly abandoned.

With continuing monetary tightening and the potential for market volatility from trade tensions, we expect volatility to remain structurally higher for the rest of the cycle. Hedging strategies for unusually large market moves remain an attractive option in our view. However, we see a different opportunity-set than we did going into 2018. In some cases, we are attracted by the potential of generating income by volatility-selling strategies, where the seller receives income and can potentially make a profit if volatility falls or stays contained at now higher levels. In the event that it rises, however, the seller faces potential losses. In idiosyncratic cases, such as the Mexican election, we would expect currency market volatility to move higher - see [Identifying opportunistic investments for enduring portfolios](#).

As many investors began the year doubting the value of fixed income in portfolios, we would also emphasize that various fixed income assets have been the best performing globally in four of the last eleven years since the last economic peak in 2007. Also, fixed income has also proved a useful diversifier during many of the worst months for US equities over the last few decades - **figure 5**. The lowest yields in history linger in much of Europe and Japan. Avoiding these countries' markets creates portfolio capacity to own both equities and fixed income assets with sturdier yields elsewhere.

Portfolios for a strongman's world

Almost halfway through 2018, we continue to see significant opportunities - but also risks - for investors arising from today's multi-polar world. We would stress that many of the risks are highly localized in nature. The most appropriate response is to build portfolios that are broadly diversified by geography and asset class. In [Outlook 2018](#), we highlighted that in the past two decades, global equities outperformed regional equities in specific crisis years by an average of 33%. In the articles that follow, we consider some key principles for such portfolios, as well as some specific strategies for them.

The most appropriate
response is to build
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When will the US cycle peak?

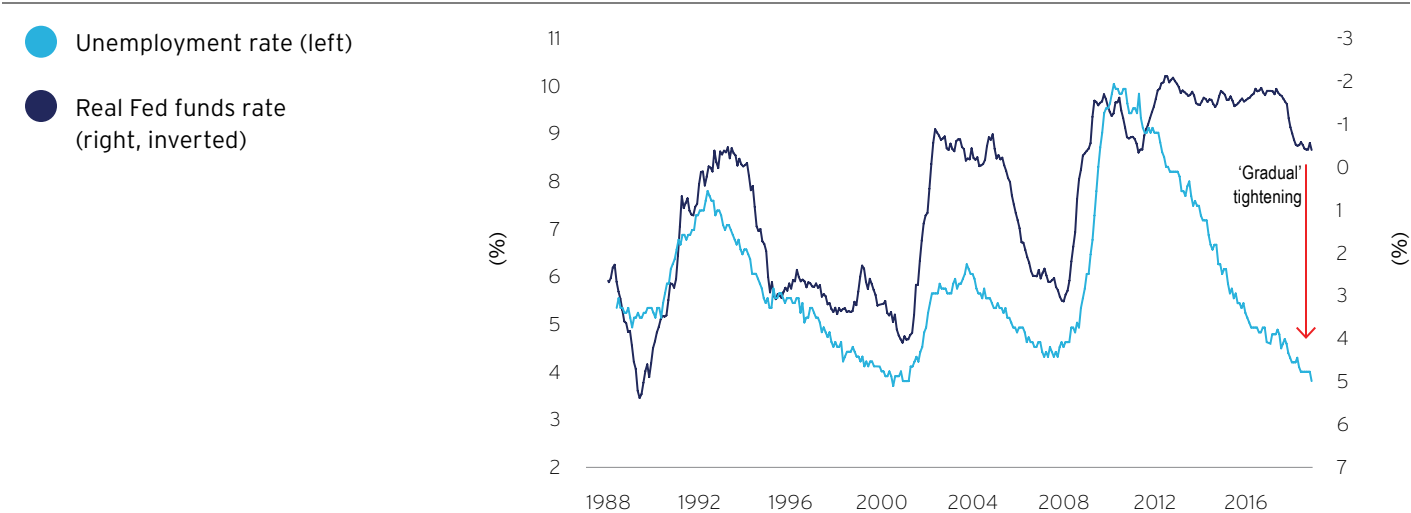
The US business cycle has traditionally been a bellwether for the world economy. In the last nine years, the US has experienced the strongest recovery among developed market economies, albeit a weaker one than its own previous recoveries. And, in an unusual experiment, the US reinvigorated its late-stage expansion in the last year with deregulation and tax cuts. As a result, the US is living beyond its means. Its budget deficits are worsening at a point of the cycle when they would typically improve.

The trifecta of an aging US business cycle, tightening monetary policy and larger current deficits means the likelihood of a near-term US business cycle peak is more than just theoretical. US unemployment has fallen as low as it generally ever does at an economic peak - **figure 6**. However, the economy also has never seen such modest wage and consumer price pressures at similar historical points. As a result, the Federal Reserve is tightening policy unusually gradually. Other factors are also consistent with ongoing US growth. Households are much less financially stretched than they were ahead of the last two recessions, while we see no excesses in demand - **figure 7**. And finally, we believe that the next downturn, whenever it occurs, should be nowhere near as severe as that of 2008-09.

To give some perspective on how the Fed will handle any such recession, bear in mind that in previous downturns, the Federal Reserve has responded by cutting interest rates by several percentage points. But nominal rates are unlikely to be sufficiently high by the start of the next recession for this to happen. That said, the Fed's current balance sheet reduction program should create room to deliver monetary stimulus in the future by restarting bond purchases. If necessary to support the economy, it may be able to purchase \$1 trillion of assets without exceeding its prior peak in holdings.

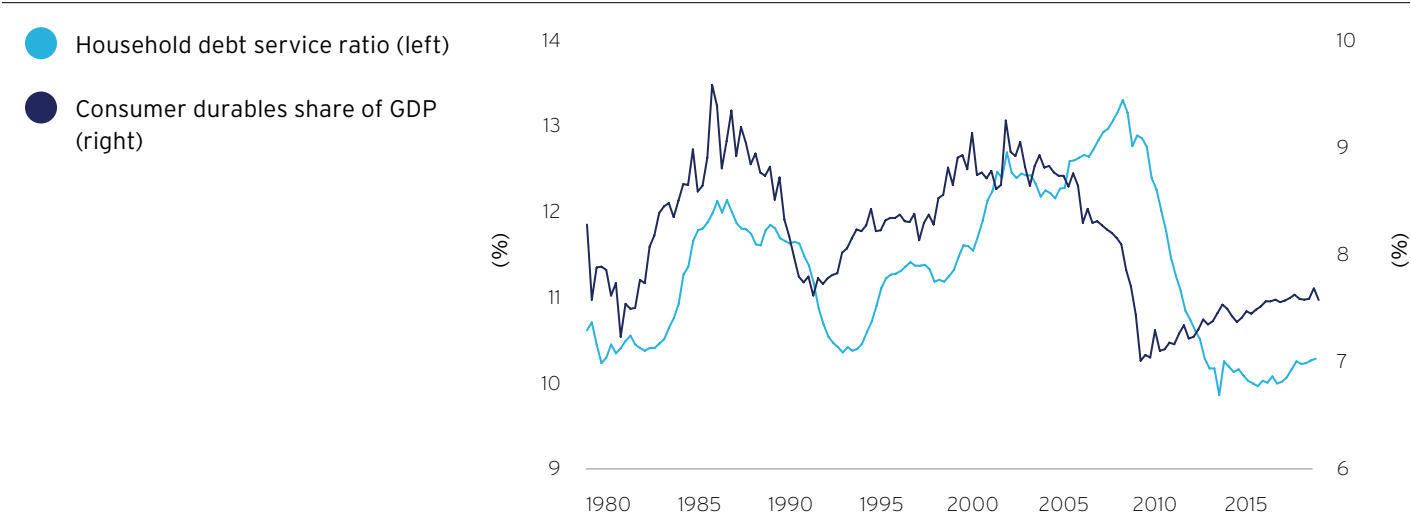
So, when might the mild next downturn that we expect finally begin? Given the rebounding labor force, strengthening business investment, and gradual monetary tightening, we think a US business cycle peak before the end of 2019 is unlikely. We see tepid financial market performance in 2018 to date as at odds with the genuine prospects for continuing growth, both in the US and elsewhere.

Figure 6. Fewer jobless, rising rates



Source: Haver, as of 8 May 2018

Figure 7. Few signs of US excesses



Source: Haver, as of 8 May 2018

Build an enduring global investment portfolio now

Steven Wieting, Global Chief Investment Strategist
Phil Watson, Head of the Global Investment Lab
Kris Xippolitos, Global Head of Fixed Income Strategy

With the global economic expansion likely to continue for longer than the consensus expects, we recommend remaining overweight equities and other risk assets. Even more important than this intermediate-term portfolio positioning, though, is the composition of our long-term recommended asset allocations. By combining prudent exposures to risk assets and a globally diversified asset allocation, investors can build an enduring investment portfolio. We think it is important they do so now.

So, what exactly is an enduring portfolio? We define it as one that can withstand local or regional difficulties and even most catastrophes. Examples of these include major political shocks such as presidential impeachments, commodity price slumps, financial crises and economic downturns. Over time, there have been many regional crises that have initially impacted markets both regionally and globally. Typically, though, markets outside of the affected region have gone on to outperform strongly on a one-year view, providing examples of the value of diversification for investors wise enough to have an enduring portfolio - **figure 1**.

Figure 1. Global and regional equity performance after regional crises

Regional crisis	Return during the first year of crisis (%)		Global return 1 month after crisis onset (%)
Asian crisis 1997	Asia -28.3	Global 15.0	-7.0
Latin American crisis 1998	Latin America -35.1	Global 22.0	-14.0
EU crisis 2011-2013	Europe -10.5	Global -6.9	-8.9
Commodity collapse 2015	Latin America -30.8	Global -1.8	0.2

Source: Haver, as of 8 May 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. Past performance is no guarantee of future results. Real results may vary.

Enduring portfolios are global and diversified

Global diversification is the cornerstone of every enduring portfolio. This involves holding a broad selection of different asset classes and sub-asset classes across countries worldwide. Actual events and resulting data suggests that this is no mere theoretical exercise. Decades of financial history have repeatedly demonstrated that globally diversified portfolios are likelier to produce attractive risk-adjusted returns than other concentrated portfolios.

To see an enduring portfolio in action, consider the performance of major asset classes and sub-asset classes between 2007 and 2017.

The highest risk-adjusted performance - as measured by the Sharpe ratio - would have been achieved by a globally diversified allocation aligned at an asset class level to Citi Private Bank's AVS Risk Level 3 allocation in US dollars - **figure 2**. Even in the aftermath of the Global Financial Crisis of 2008-09 - during which the global equity total return index fell 54% - the same global allocation proved enduring, suffering no net decline when measured over a 5-year or longer time period. Looking simply at returns, client portfolios that have most closely followed our recommended globally diversified asset allocations have generally outperformed those that have not over the last one- and three-year periods - **figure 3**.

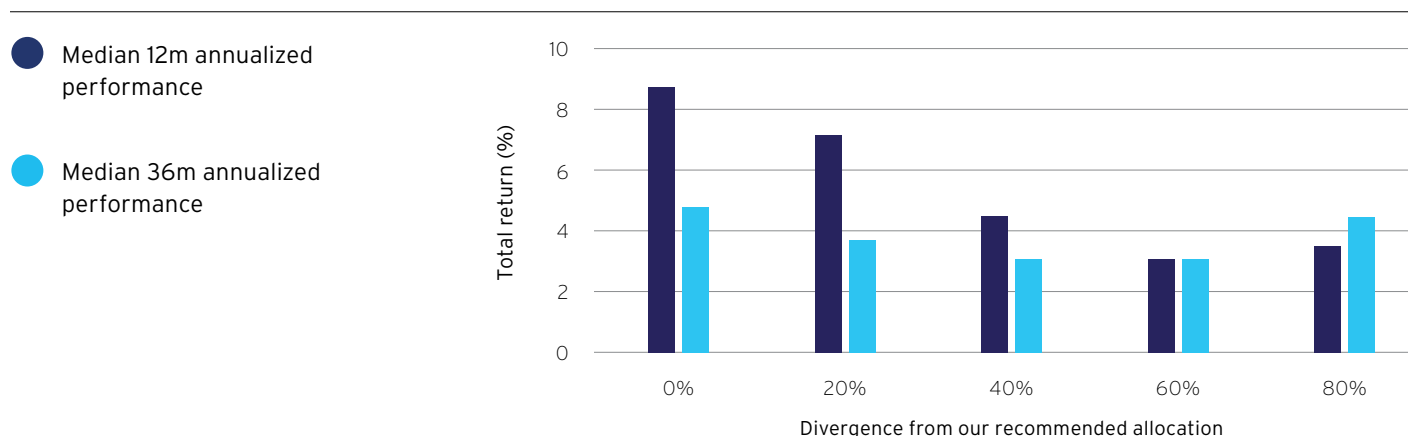
Figure 2. Asset class and asset allocation performance

2007 (%)	2008 (%)	2009 (%)	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	2015 (%)	2016 (%)	2017 (%)	Cumulative (%)	Risk-adjusted return*
EM Equities 33.6	Developed Govt 13.0	High Yield 63.9	US Small/Mid 27.1	EM Hard Currency 8.7	High Yield 18.9	US Small/Mid 36.6	US Large Cap 13.6	World ex-US Small/Mid 10.9	US Small/Mid 16.0	EM Equities 31.0	US Small/Mid 157.7	Asset Allocation 0.39
Developed Govt 10.5	Cash 1.8	EM Equities 62.8	World ex-US Small/Mid 16.0	Developed Govt 7.1	EM Hard Currency 18.0	US Large Cap 32.1	US Small/Mid 10.0	World ex-US Large Cap 3.4	High Yield 14.0	USA Large Cap 22.3	US Large Cap 140.0	High Yield 0.39
Asset Allocation 8.9	Developed IG -8.6	US Small/Mid 39.2	EM Equities 14.4	Developed IG 4.3	World ex-US Small/Mid 17.7	World ex-US Small/Mid 29.4	World ex-US Small/Mid 7.7	US Large Cap 1.9	US Large Cap 11.5	World ex-US Small/Mid 20.1	High Yield 118.9	EM Hard Currency Debt 0.38
Developed IG 6.7	EM Hard Currency -11.7	World ex-US Small/Mid 34.9	High Yield 13.8	High Yield 2.6	US Small/Mid 17.5	World ex-US Large Cap 25.8	EM Hard Currency 7.2	EM Hard Currency 1.5	EM Equities 10.1	USA Small/Mid 18.6	EM Hard Currency 113.3	US Large Cap 0.34
US Large Cap 6.4	Asset Allocation -22.4	EM Hard Currency 29.6	US Large Cap 13.5	US Large Cap 2.6	EM Equities 17.4	Asset Allocation 15.4	Asset Allocation 6.2	Asset Allocation 0.1	EM Hard Currency 9.3	Asset Allocation 15.5	EM Equities 107.3	US Small/Mid 0.28
EM Hard Currency 6.0	High Yield -27.9	World ex-US Large Cap 25.3	EM Hard Currency 12.3	Cash 0.1	World ex-US Large Cap 16.7	High Yield 8.4	World ex-US Large Cap 6.2	Cash 0.0	Asset Allocation 7.5	World ex-US Large Cap 14.3	Asset Allocation 95.4	EM Equities 0.27
World ex-US Large Cap 5.8	US Large Cap -36.0	US Large Cap 25.3	Asset Allocation 10.4	Asset Allocation -0.7	US Large Cap 16.0	EM Equities 3.8	EM Equities 5.6	Developed Govt -2.1	World ex-US Small/Mid 7.3	High Yield 10.3	World ex-US Small/Mid 75.7	World ex-US Small/Mid 0.27
Cash 4.8	World ex-US Large Cap -38.9	Asset Allocation 23.4	Developed Govt 7.5	US Small/Mid -2.0	Asset Allocation 12.0	Developed IG 0.3	Developed IG 3.1	US Small/Mid -2.6	World ex-US Large Cap 7.1	EM Hard Currency 9.3	Developed IG 62.0	Developed IG 0.25
US Small/Mid 3.8	US Small/Mid -39.5	Developed IG 19.2	Developed IG 5.8	World ex-US Large Cap -11.2	Developed IG 11.2	Cash 0.0	High Yield 0.2	Developed IG -3.6	Developed IG 4.3	Developed IG 9.1	World ex-US Large Cap 48.4	World ex-US Large Cap 0.20
High Yield 2.6	World ex-US Small/Mid -42.7	Developed Govt 1.4	World ex-US Large Cap 4.8	EM Equities -12.5	Developed Govt 0.2	Developed Govt -5.7	Cash 0.0	High Yield -4.9	Developed Govt 1.8	Developed Govt 6.0	Developed Govt 44.3	Developed Govt 0.12
World ex-US Small/Mid -2.4	EM Equities -45.7	Cash 0.1	Cash 0.1	World ex-US Small/Mid -14.4	Cash 0.1	EM Hard Currency -6.0	Developed Govt -0.9	EM Equities -5.4	Cash 0.3	Cash 0.8	Cash 8.4	

Source: Citi Private Bank, Bloomberg, as of 10 May 2018. See glossary for asset class definitions. 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.

Adaptive Valuation Strategies (AVS) is the Private Bank's proprietary strategic asset allocation methodology. "Asset allocation" in this diagram represents an AVS Risk Level 3 allocation, which includes 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. The returns shown were calculated at an asset class level using indices and do not reflect fees, which would have reduced the performance shown.

Figure 3. The importance of following the plan



Source: Citi Private Bank Global Investment Lab, as of 1 May 2018.

Divergence from our recommended allocation measures the degree to which clients' portfolios follow our recommended allocations at all risk levels. The lower the percentage divergence, the more aligned the portfolios with our recommended allocations. A reading of 0% indicates full alignment with our recommendation. This information is drawn from the Private Bank's proprietary data covering client portfolios in comparison to AVS allocations.

Past performance is no guarantee of future returns. Real results may vary.

Despite these financial history lessons, we find that many clients continue to be invested predominantly in just a couple of asset classes. Fewer than one in five clients has a portfolio that is broadly diversified across asset classes and investment types. They also typically do not diversify internationally, with 91% of their holdings concentrated in a single currency. Such 'home biased' portfolios, concentrated in certain asset classes, are always riskier. In our view, they look especially vulnerable amid today's more polarized, less global political and economic environment.

Our advice is to address this vulnerability right now by implementing a carefully considered portfolio drawn from the global asset classes shown in **figure 4**, taking advantage of the valuation disparities we see across the world.

Figure 4. Our long-term outlook for global asset classes

	Strategic Return Estimate (%)	Estimated 10-year return after compounding (%)
Global Developed Equity	4.9	61.3
Global Emerging Equity	8.4	124.0
Global Developed Investment Fixed Income	2.3	25.5
Global High Yield Fixed Income	4.1	49.5
Global Emerging Market Fixed Income	4.1	49.5
USD Cash	2.3	25.5
Hedge Funds	5.7	74.1
Private Equity	10.3	166.5
Real Estate	10.1	161.7
Commodity	1.9	20.7

Source: Citi Private Bank Quantitative Research team, Strategic Return Estimates are based on data as of 31 Dec 2017. Returns are estimated 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. Past performance is no guarantee of future returns. Real results may vary. AVS uses index returns to proxy for each asset class. Please see Glossary for definition of terms.

Stay invested and stay disciplined

As well as being globally diversified, an enduring portfolio harnesses the power of time in the markets. Over the long run, compound returns – the result of reinvesting dividends and coupon payments – can be enormous.

The experience of US equities provides a good example. Since 1970, US equities have returned an average of 8% a year in simple price terms. But with dividends and the reinvestment of dividends, this becomes 12% a year. Even over the past three decades, when US dividend payout ratios have been historically low, the growth and reinvestment of dividends accounted for half of US equities' total return. Our estimates of compound returns from each asset class over the next ten years are shown in **figure 4**.

As you can see, there are major differences in estimated returns and the relative investment value of different assets classes. Ten-year strategic return estimates, like the ones shown above, assume that there will be economic slowdowns, recessions and other significant events over that period. When such events occur and the forward-looking strategic values change, enduring portfolios are rebalanced to gain greater exposure to cheaper assets. Enduring portfolios remain invested and are regularly reallocated. Holding many asset classes over long periods of time also help.

Do not time the markets

Investors with shorter holding periods lose the benefits of diversification and rebalancing and actually expose their portfolios to higher risk. **Figure 5** shows volatility (standard deviation) and risk-adjusted returns (Sharpe ratio) for both US and global equities over various historical time periods. The shorter the holding period, the higher the volatility and the weaker the risk-adjusted returns. The same applies with fixed income. Trading a bond over a short-period does not allow the security to earn accrued interest. The advantage of taking a ten-year view – as our strategic asset allocation methodology does – is obvious.

Although the evidence for staying the course with risky assets is compelling, many investors take the opposite approach. They switch aggressively between risky assets and cash in an effort to maximize upside while trying to avoid significant drawdowns. Far from increasing portfolio returns or decreasing risk, however, market timing can all too easily have the opposite effect. Very often, investors who seek to time the markets base their decisions on 'instinct' or their reading of 'market psychology.' What typically happens, though, is that market timers fall victim to greed and fear themselves, and end up both sitting in cash for too long and/or taking excessive risk exposures too late into a bull market.

Figure 5. Volatility and risk-adjusted returns for US and global equities

Volatility (standard deviations)			Risk-adjusted return (Sharpe ratio)		
	S&P 500	MSCI AC World		S&P 500	MSCI AC World
10 year	4.6	4.1	10 year	1.6	1.3
1 year	17.1	16.9	1 year	0.4	0.3
1 quarter	32.3	30.4	1 quarter	0.2	0.2
1 month	54.9	49.5	1 month	0.1	0.1
1 week	55.0	829.2	1 week	0.1	0.0

Source: Factset as of 10 May 2018. Covers period from 1988 to 2018. See glossary for definitions.

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.

And do not overweight cash

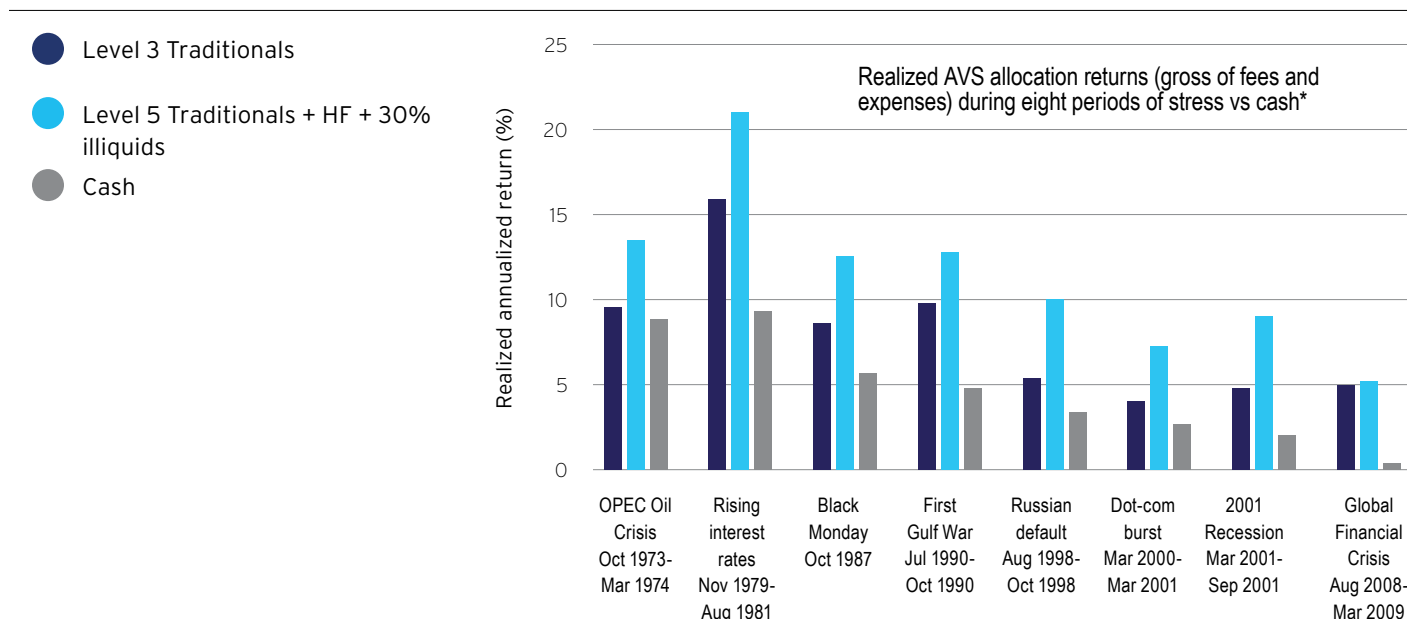
Holding excess cash is not riskless, nor does it increase portfolio returns. Aside from missing out on compound returns from holding risk assets, hoarding large amounts of cash exposes portfolios to the ravages of inflation. The Private Bank's proprietary strategic asset allocation methodology - Adaptive Valuation Strategies - estimates an annualized return for cash of just 1.88% over the next decade. This is the lowest Strategic Return Estimate (SRE) of any asset class, with the exception of Commodities - **figure 4**. Nonetheless, we observe around one-third of clients holding more than 80% of their portfolios in cash and cash equivalents.

And here's the thing: even if a portfolio is implemented at the worst possible time, the benefits of staying the course with a globally diversified asset allocation are still available.

Figure 6 shows the ten-year performances of global allocations formed one month before the outbreak of major bouts of market stress, including the Global Financial Crisis of 2008-09. In all eight cases, such allocations went on to outperform cash significantly over time, despite the suffering substantial drawdowns almost immediately after their formation.

Even if there is another bout of major market stress in the near future - which is possible, but not our expectation - we advise investors who are sitting on large reserves of cash to invest fully and invest now, and then stay the course. See our fixed income ideas in [Make all of your cash work harder](#).

Figure 6. The benefits of staying the course



*The investor entered into an allocation one month before the beginning of a stress period, and stayed invested for 10 years.

AVS is Citi Private Bank's proprietary strategic asset allocation methodology, developed by our Global Asset Allocation team. Risk Level 3 seeks modest capital appreciation and, secondly, capital preservation, Risk Level 5 seeks maximum long-term growth of capital. Past performance is no guarantee of future results. Real results may vary.

Helping to preserve existing gains and manage portfolio risk via hedging strategies

After almost a decade of strong returns across many risky asset classes and markets, we understand that many investors are interested in preserving the gains they have made. However, this does not mean selling up and sitting on cash. There are other, smarter ways to mitigate the effects of volatility upon a portfolio, locking in profits, while also retaining exposure to any continuing market upside.

One possibility to consider is implementing a consistent hedging strategy. Hedging can help improve the risk profile of a portfolio and thereby reduce uncertainty. For example, an investor may be nervous about the S&P 500's high long-term valuation, but reluctant to miss out on potential further gains. By implementing a strategy that will provide a payoff if the market falls by more than a certain amount, the investor can retain exposure to the index while limiting downside. There is a premium for hedging portfolios, but when market volatility is average or below average, it may be worthwhile.

Hedging can help improve the risk profile of a portfolio and thereby reduce uncertainty.

Build an enduring portfolio now

The first step towards building your enduring portfolio is an analysis of your current allocation. Our Global Investment Lab will be happy to provide you with a short report that summarizes your present allocations and highlight how they diverge from our recommendations. Your Private Banking team can then work with you to help find appropriate ways to enhance your global diversification. We believe that the enduring portfolio you build in this way should form the core of your financial wealth. You can then pursue opportunistic investments beyond this core allocation, as we explore in the following article.

Gasem Abdulaev, Joe Kaplan, Paisan Limratanamongkol, and Malcolm Spittler also contributed to this article.

Make all of your cash work harder

Six policy rate hikes from the Federal Reserve since December 2015 have pushed up short-term rates across Treasury Bills, commercial paper, and Libor instruments. Three-month US dollar Libor at 2.35% is now at its highest in ten years. If the Fed continued to raise rates as we expect, we believe Libor rates could rise another 100 basis points (bp) from current levels over the next 18 months. For the lower-risk portion of portfolios, we see many attractive options to make cash work harder in this environment.

A number of floating-rate fixed income markets have already benefited from Libor's rise. They range from senior unsecured corporate bonds to non-agency residential mortgage-backed securities (RMBS). Typically lower in duration, these markets have shown relative stability throughout periods of elevated interest rate volatility. We continue to believe these assets can complement core portfolios by providing stable or rising income and relatively lower price sensitivity.

We also favor US high yield (HY) variable rate bank loan strategies run by third-party active managers. While issued by companies with lower credit ratings, these securities are typically secured loans and have a senior position in the capital structure. More importantly, their coupon payments float off US Libor rates. Along with the supportive corporate credit fundamentals backdrop, this has helped HY bank loans outperform both US HY bonds and equity markets year-to-date.

Still, investors should understand that technical factors are driving up Libor rates and how that may influence bank loan performance. The spread of 3-month Libor rates over 1-month rates has widened. In some cases where this has happened, issuers can switch the underlying base rate to the lower yielding option, which in turn produces a lower cash flow.

That said, we see HY bank loan-to-Libor spreads of around 370bp as still offering good value, especially in comparison to the spreads on higher quality BB-rated HY bonds.

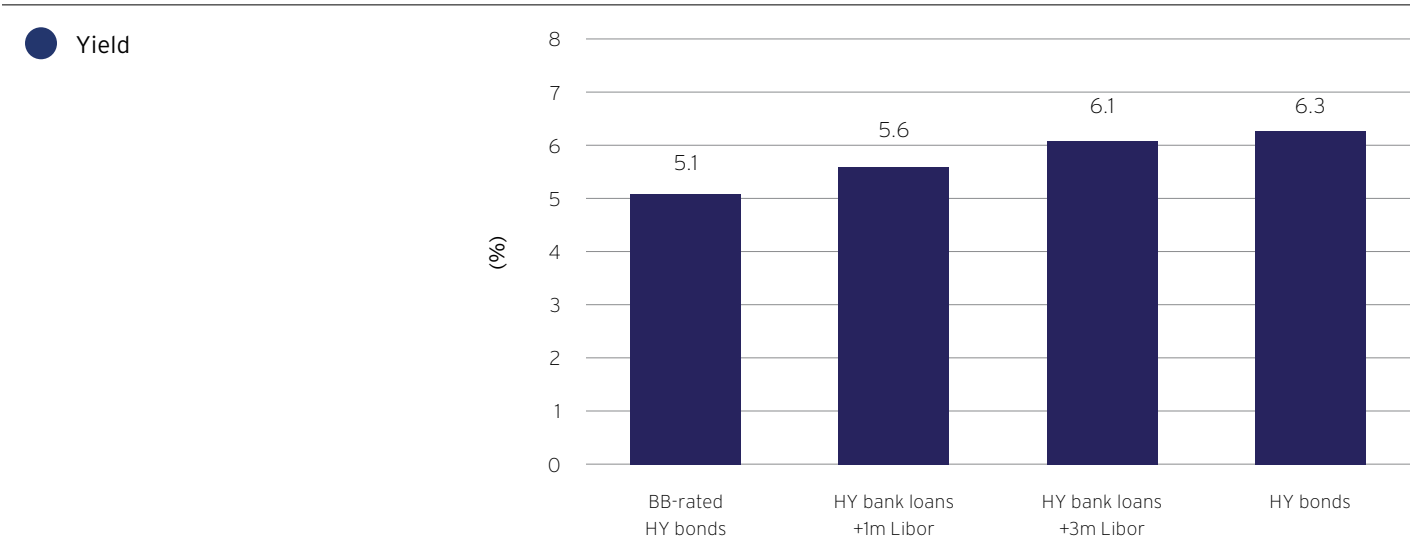
While not wholly floating-rate, the active third-party strategies that participate in non-agency residential mortgage backed securities market (RMBS) can also benefit from rising short rates. Created by pooling various residential mortgage loan types, non-agency RMBS offer varying levels of risk, yield, and income generation. Although often associated with the 2008 Global Financial Crisis, market transparency has since improved and underlying risks are much more apparent. We expect non-agency RMBS to remain relatively insulated from heightened equity volatility.

Hybrid securities may also benefit from higher Libor. US fixed-to-floating rate preferred securities offer fixed-rate coupons for a certain period, during which the issuer has the option to redeem the securities at par. If not redeemed, these securities then float off Libor, plus a specified spread. Owing to rising long-term US Treasury yields and higher equity volatility, such securities' prices have fallen in recent months. With hybrid yields-to-call back above 5%, we favor the US financial sector.

Finally, for US taxpayers, municipal debt across the yield curve remains attractively priced, with the long-term muni yield curve steepening. Net supply is expected to remain soft, pressuring yield ratios lower. Higher short-term rates look attractive and we favor both coupon and floating-rate opportunities. Shorter callable munis also provide an attractive yield pick-up.

Our Global Investment Committee is overweight short-dated US investment grade fixed income.

Figure 9. High yield opportunities



Sources: Haver Analytics, Bloomberg Barclays Indices, S&P as of May 2018. Benchmark high yield bonds and loan yield to worst (%). Past performance is not indicative of future returns. Real results may vary.

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.

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. There may be additional risk associated with international investing, including foreign, economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be magnified in emerging markets. International investing may not be for everyone.

Strategies mentioned in this document may not be suitable for all investors. Strategies and services discussed herein may have eligibility requirements that must be met prior to investing. Each investor should carefully view the risks associated with the investment and make a determination based upon the investor's own particular circumstances, that the investment is consistent with the investor's objective. Products and strategies described herein involve risk and may not perform as described.



Identifying opportunistic investments for enduring portfolios

Opportunistic investments beyond your core holdings
may potentially enhance your risk-adjusted returns.

We believe that global
investment portfolios
may benefit from more
speculative opportunistic
investments in order
to seek enhanced
risk-adjusted returns.

In [Outlook 2018](#), we made the case that a globally diversified multi-asset class portfolio should ideally form the core of your financial wealth. In [Build an enduring global investment portfolio now](#), we present further evidence about why such a core portfolio should be held for the long-term. Global portfolios benefit from greater diversification and exposure to markets that have the potential to add returns to 'home biased' portfolios.

We also believe that global investment portfolios may benefit from more speculative opportunistic investments in order to seek enhanced risk-adjusted returns. We define 'opportunistic investments' as those that provide exposures to markets that may be mispriced or misunderstood, or that create exposures to structural and cyclical changes in markets, or new issuances. Depending upon a client's investment objectives and risk tolerance, for a medium risk portfolio, we estimate that up to 15% might be allocated to such opportunistic investments

In the following pages, we present five opportunistic strategies of various timeframes and risks that may be suitable for certain investors.

1

Increase allocations to Chinese securities

Asset class

Equities and fixed income

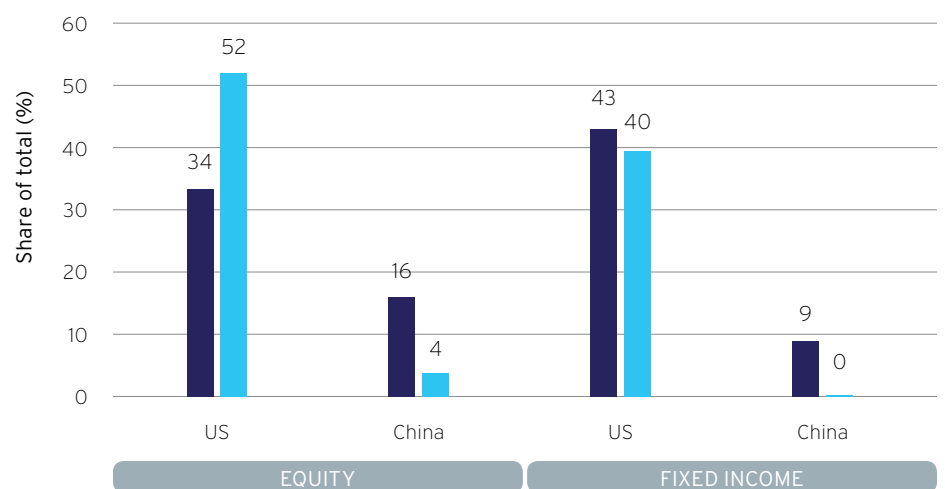
Holding period

Long-term

- We believe in the positive long-term outlook for China's economy.
- Economic reforms, improving capital investment discipline, and technological innovation may feed through into greater than expected Chinese financial market returns.
- While Chinese equities and fixed income are equivalent to 16% and 9% of global capitalization respectively, their current weightings in major indices are significantly lower.
- As MSCI and other benchmark providers increase China's weightings this year, these are far short of actual representation and we expect international inflows into Chinese assets over time.
- We see a range of possibilities for increasing long-term China allocations including direct holdings of securities and active managers.
- Risk: If China retreated from its plans to open its financial markets to foreign investment, it would negatively impact our bullish case.

Global index weightings for China and the US

- Total outstanding
- Total index benchmark



Source: World Federation of Exchanges, Bloomberg and Haver Analytics as of 5 May 2018. Equity is represented by the MSCI All Country World Index and fixed income by the Barclays Multiverse 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.

Invest in digital infrastructure

Asset class

Equities, fixed income, and private equity

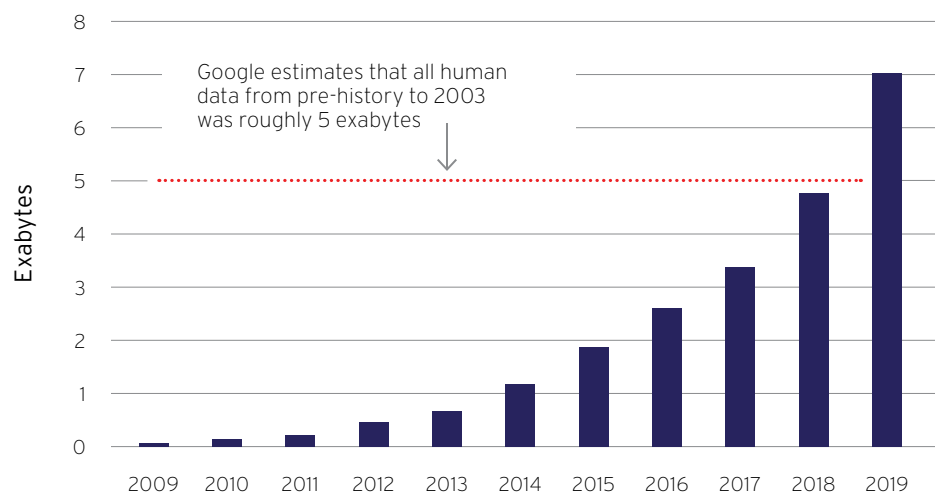
Holding period

Medium and long-term

- Digital assets include data centers, wireless towers, small cell/fiber networks, automated warehouses and autonomous robots.
- Digital data is proliferating: in 2017, 90% of the world's data had been created in the previous two years.¹
- Mobile data traffic is projected to grow sevenfold between 2016 and 2021, a compound annual growth rate of 46%.²
- Data demand from artificial intelligence, cloud computing, and virtual reality are set to benefit the firms that develop, own, and operate real digital assets.
- We see owners and operators of automated warehouses and manufacturers of autonomous robots as equity investments that have long-term outperformance potential.
- We identify numerous potential beneficiaries among US and Chinese firms in technology services, infrastructure, e-commerce, in both public and private markets.
- Risk: Producers backing the wrong technology standard and falling behind competitors would be negative for returns.

Hourly marginal data storage demand

● Data



Source: Seagate and Google, as of 11 May 2018. An exabyte is one quintillion bytes. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

¹ 10 Key Marketing Trends for 2017 – IBM

² Cisco Visual Networking Index ("VNI"): Forecast and Methodology, 2016-2021

3

Seek floating rate US dollar fixed income returns

Asset class

Fixed income

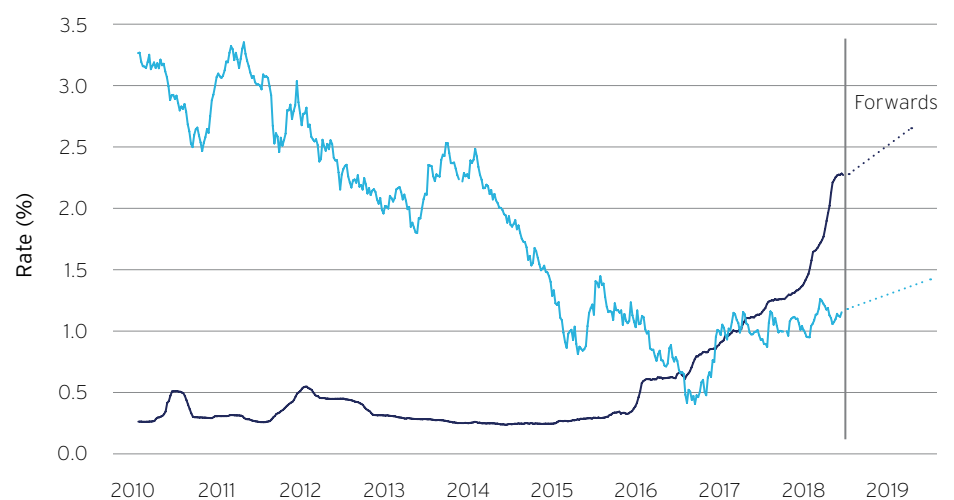
Holding period

Short to medium term

- Three-month US Libor is set to rise another 1% to 3.35% over the next 18 months based on the Federal Reserve's projections.
- As the Fed moves towards a late-stage policy tightening phase, we wish to overweight the front-end of the US Treasury yield curve, targeting attractive, low risk returns.
- The current 3-month Libor rate is already 115 basis points above non-US developed market bond yields.
- Add short-term money market instruments that approximate Libor with a small positive yield premium.
- We also recommend higher risk floating rate instruments, such as high yield bank loan structures, and various structured products that may earn a larger premium rate above Libor, without the duration risk of bonds but with the additional risk to principal.
- These yields may not be available in other currencies given hedging costs.
- Risk: Were the Fed to cut US rates back to zero in a future recession, it would represent a key risk to our view.

Rates on the rise

- 3-month US Libor rate
- G7 (ex-US) 10yr govt bond yields



Source: Bloomberg as of 5 May 2018. Past performance is no guarantee of future results. 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. The G7 countries are Canada, France, Germany, Italy, Japan, the United Kingdom and the US.

Long Mexican peso volatility amidst political uncertainty

Asset class

Foreign exchange

Holding period

Short term

- Mexico's peso has been waxing and waning on trade-related issues in recent months, weakening significantly once 10-year US bond yields rose to 3%.
- While the currency looks undervalued, whether it can strengthen against the US dollar may depend on future Mexican economic policies.
- Who wins July's Mexican election is likely to determine the path of Mexican economic policy - see [Robust strategies in a strongman's world](#).
- We favor buying cheap hedges for Mexican risk assets, which could be monetized quickly if they gained in value for any reason. This is timely, as peso implied volatility is low.
- Risk: The Mexican election passing calmly without financial market impact would negatively impact this hedge.

Mexican peso volatility still reasonably priced

● 1-month peso implied volatility



Source: Bloomberg as of 5 May 2018.

5 Buy Eurozone cyclicals and banks

Asset class

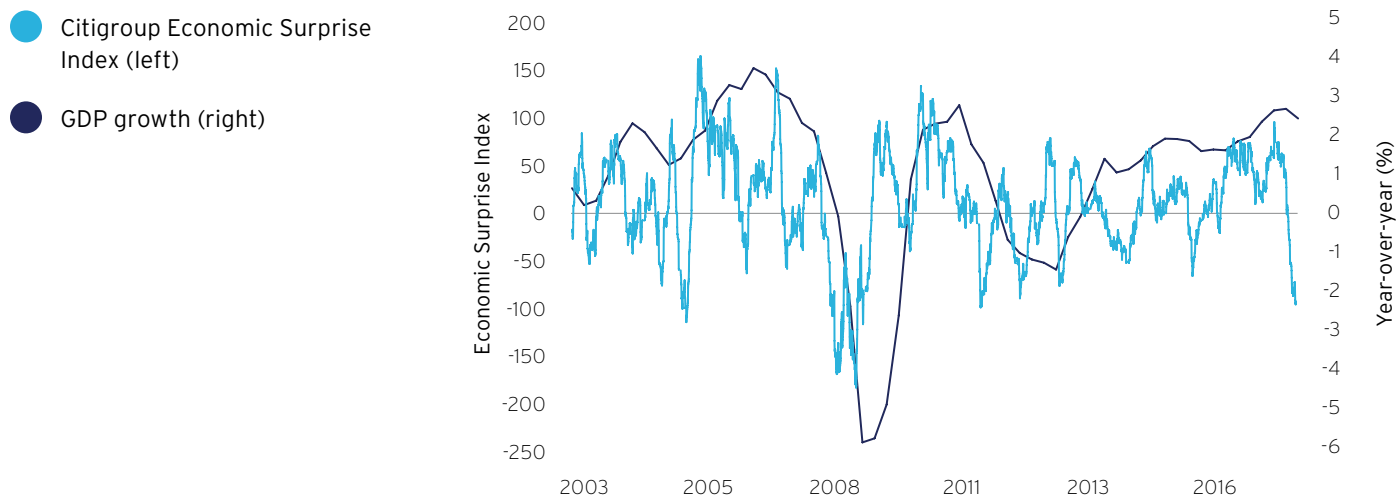
Equities

Holding period

Medium term

- The Eurozone's economic recovery is much less mature than the US expansion, but has lately experienced what we believe is a temporary growth scare.
- While investor confidence has waned as a result of a sharp drop in positive economic data surprises, underlying forecasted growth over the coming year remains strong and intact.
- On the ten previous occasions where the Economic Surprise Index was this depressed, Eurozone equities' average return in the subsequent twelve months was 18.4%. There is no guarantee that the pattern will repeat itself or that the returns will be as robust.
- Europe ex-UK dividend yields are 130 basis points above US dividend yields. The same firms pay 300 basis points less than US counterparts for their debt.
- German exporters look particularly beaten down by US protectionism concerns, despite the trade dispute being largely confined to the US, China, and Mexico.
- Eurozone banks trade at a price/book discount to US banks of more than 40% despite a very small difference in their returns on common equity.
- While a full recovery in Eurozone banks may take longer than for trade fears to subside, regional equities look ripe for a rebound.
- Risk: An external shock hitting the Eurozone while the ECB retreats from helping its most fragile governments would undermine our case.

Data surprise dip doesn't always mean less growth



Source: Haver Analytics, as of 5 May 2018. Index shown is the Citigroup Euro Area Economic Surprise Index. See Glossary for definition.

The investor must ascertain if they are suitable for each investment strategy based on their unique investment objectives and risk tolerances. Strategies discussed herein may have eligibility requirements that must be met prior to investing. Each investor should carefully view the risks associated with an investment and make a determination based upon the investor's own particular circumstances, that the investment is consistent with the investor's objective. Strategies described herein involve risk and may not perform as described.

International investing entails greater risk, as well as greater potential rewards compared to US investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economics.

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.

Currency Risk

One currency may decline in value versus another. The value of a multi-currency portfolio will fluctuate with exchange rates.

Glossary

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 Market Sovereign is composed of bonds issued by countries with developing economies, as well as by corporations within those nations. It does not include borrowing from government, supranational organizations, or private sources.

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 Equity is composed of MSCI indices capturing large- and mid cap representation across 24 individual emerging market countries. The composite covers approximately 85% of the free float-adjusted market capitalization in each country.

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.

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 incorporate 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.

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

Real Estate contains index contains all Equity REITs (US REITs and publicly-traded real estate companies) not designated as Timber REITs or Infrastructure REITs: NAREIT US REIT Index, NAREIT Canada REIT Index, NAREIT UK REIT Index, NAREIT Switzerland REIT Index, NAREIT Euro-zone REIT Index, NAREIT Japan REIT Index, NAREIT Hong Kong REIT Index, NAREIT Singapore REIT Index, NAREIT Australia REIT Index.

US High Yield Corporate is composed of US dollar-denominated high-yield corporate bonds issued by companies whose country of risk use official G10 currencies. Securities must have a below investment-grade rating and maturities of one or more months.

US Aggregate is composed of US traded investment grade bonds, including Treasury securities, Government agency bonds, mortgage-backed bonds, corporate bonds, and some foreign bonds traded in the US.

Index definitions

The Barclays Multiverse Bond Index is a broad fixed-rate multicurrency benchmark that measures the global fixed income bond market. The index represents the union of the Global Aggregate Index and the Global High-Yield Index and captures investment grade and high yield securities in all eligible currencies.

The Cisco Visual Networking Index forecast is a measure of the Internet's growth using analyst projections for broadband connections, video subscribers, mobile connections, and Internet application adoption.

The Citigroup Euro Area Economic Surprise Index is a measure of how economic data compares with consensus expectations of market economists. The index is a gauge of optimism about the economy.

The Euro Stoxx 600 represents large, mid and small cap companies across 17 countries across Europe including: Austria, Belgium, Czech Republic, Denmark, Finland, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The Household Debt Service Ratio is the ratio of total required household debt payments to total disposable income published by the US Federal Reserve Board. The Debt Service Ratio is divided into two parts: The Mortgage Debt Service Ratio is the total quarterly required mortgage payments divided by total quarterly disposable personal income. The Consumer Debt Service Ratio is the total quarterly scheduled consumer debt payments divided by the total quarterly disposable personal income.

The MSCI AC Asia Index captures large and mid cap representation across Developed Markets countries and Emerging Markets countries in Asia. With 967 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The MSCI All Country World Index represents 48 developed and emerging equity markets. Index components are weighted by market capitalization.

The MSCI with DM Exposure Index is derived from the MSCI World Index, its parent index. The top-ranked constituents with the highest proportion of revenues derived from Developed markets are selected for the MSCI World with DM Exposure Index. With 650 constituents, the index concentrates on companies with high revenue exposures to developed markets.

The MSCI Emerging Markets Index captures large and mid cap representation across 24 Emerging Markets (EM) countries. With 845 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 5 Emerging Markets (EM) countries in Latin America. With 121 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

European equities are represented by the MSCI Europe index, which captures large- and mid-cap representation across 15 Developed Markets (DM) countries in Europe. It covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.

The G10 CESI is the Citigroup Economic Surprise Index covering the Group of the G10 countries. It objectively and quantitatively measures economic news. They are calculated as weighted historical standard deviations of data surprises, defined as actual releases vs consensus

The Standard & Poor's 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.

Uncertainty indices are derived using terms from over 2,000 US newspapers by scanning for language stressing uncertainty around various policy event types. "Non-trade" is a simple average of the following separate indices: Monetary Policy, Fiscal Policy, Taxes, Government Spending, Healthcare, National Security, Entitlements, Regulation, Financial Regulation, Debt and Currency issues.

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.

Compound return is the rate of return that represents the cumulative effect that a series of gains or losses have on an original amount of capital over a period of time.

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.

The Sharpe ratio is a ratio used to measure risk-adjusted performance. The Sharpe ratio is calculated by subtracting the risk-free rate - such as that of the 10-year US Treasury bond - from the rate of return for a portfolio and dividing the result by the standard deviation of the portfolio returns.

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 long term 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.

US Libor is a benchmark interest rate in US dollars that some of the world's leading banks charge each other for short-term loans. Libor stands for London Interbank Offered Rate and serves as the first step to calculating interest rates on various loans throughout the world.

Volatility is a measure of the dispersion of returns for a given asset or market index. It refers to the amount of uncertainty or risk related to the size of changes in an asset's value. Volatility is typically referred to as the annualized standard deviation of an asset.

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