

Private Bank



Accelerating global growth: profits and pitfalls

Outlook 2018

Outlook 2018 Watchlist

The average client portfolio has 47% of assets that aren't aligned to the recommended allocation.*

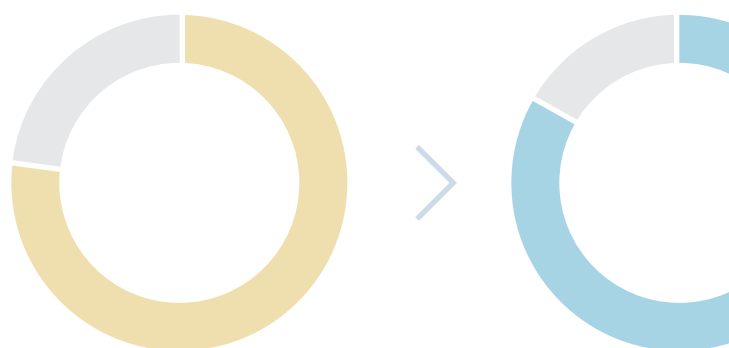
How does yours compare?

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, as of 21 Nov 2017. Recommended allocation is the reference allocation that reflects our understanding of a client's investment objectives and risk tolerance.

Accelerating global growth: profits and pitfalls

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Foreword

If anyone had predicted that synchronous worldwide growth would be accelerating in the ninth year of a global recovery after the second worst economic downturn of the past hundred years, we would have been impressed. Had they further predicted that this acceleration would occur after the UK voted to leave the European Union and after the US elected a volatile, politically inexperienced real estate billionaire as its President, we might have thought them daft. And yet, here we are. Welcome to Outlook 2018!

While risky assets seem unlikely to deliver returns as strong as they did in 2017, we are bullish entering the year. Citi Private Bank recently raised its tactical allocation to equities and reduced its recommended exposure to fixed income. We now believe that the most attractive opportunities lie outside the US. We are particularly positive about the prospects for emerging markets, especially in Asia. We also believe that there are several potential ways to earn attractive yields, despite today's continued low interest rate environment. And finally, we identify distinctive themes – from disruptive innovation to healthcare technology – that offer the potential for smart, sustainable investment opportunities.

Although we expect further positive returns from markets in 2018, we also expect an increase in market volatility. Every time the US Federal Reserve has changed its monetary policy in recent years, a shift in market volatility has occurred. With volatility low but likely to increase, now is the time to help enhance your portfolio with hedges and other strategies designed to assist with protecting your wealth.

Put simply, our principal investment recommendation is to 'go global now.' There are important benefits of global portfolio diversification – particularly the higher return potential and downside risk mitigation. By shifting away from allocations biased to your home market, you increase the potential risk-adjusted returns of your portfolio.

Our most important message in Outlook 2018 concerns portfolios as a whole. Despite our best efforts, many clients do not follow the vital principles and practices that have helped some families remain among the world's wealthiest for generations. We therefore revisit these, highlighting the risks to wealth of failing to create and follow an appropriate long-term plan. We then encourage all clients to take advantage of the personalized reports that we are offering to help align their portfolios to our recommended allocations, while reflecting the opportunities we discuss in this publication.

Thank you for the trust and confidence you place in the Private Bank. It is our privilege to serve as your advisor.

David Bailin
Global Head of Investments

Go global now: riding the global expansion's second wind

Steven Wieting, Global Chief Investment Strategist

We expect an acceleration of economic growth around the world in 2018. Investors should take this potential opportunity to build fully global allocations.

The world economy appears to have entered a new phase of moderately stronger growth. Global GDP likely increased by 3.1% in 2017, up from 2.5% in 2016. Citi Research also expects this to quicken further to 3.4% in 2018. This acceleration comes some nine years after the global economic expansion began. We liken it to a long-distance runner who enjoys a 'second wind' in the later stages of a marathon. We expect this second wind to continue to sustain positive investment returns in 2018.

Whereas the acceleration in growth in 2017 surprised investors and propelled markets, the further pick-up we envisage over the coming year is likely to drive smaller market gains in 2018 - **figures 1 and 2**. Nevertheless, we see potentially rewarding opportunities in particular markets and investments. Outside the US, for example, equity valuations are significantly lower and corporate earnings could again record double-digit gains in the next twelve months.

Figure 1. Global equity return estimates 2018¹

MSCI Global	8%
S&P 500	6%
MSCI Global ex-US	9%
MSCI Emerging Markets	12%
Euro Stoxx 600	12%

Figure 2. Global currency-hedged fixed income return estimates 2018²

Global Aggregate	3%
US Aggregate	2%
Euro Area Aggregate	-1%
Emerging Market Sovereign	5%

Figures 1 and 2 Source: Citi Private Bank, as of 17 Nov 2017. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

Note: 'Global Aggregate' is Citi World Broad Investment Grade Index, 'US Aggregate' is Citi US Broad Investment Grade Index, 'Euro-Area Aggregate' is Citi Euro Broad Investment Grade Index, 'Emerging Market Sovereign' is Citi Emerging Markets Sovereign Bond Index (ESBI), and 'High Yield Corporate' is Citi US High Yield Market Index.

We enter 2018 with a full allocation to US equities, with an expectation of positive returns – **figure 3**. However, we are overweight non-US markets – see [Emerging opportunities](#) and our regional asset class previews – where we look for outperformance, even if the US dollar consolidates in the near

term. Non-US equities are valued at a significant discount to US equities – **figure 4** – while emerging market fixed income offers a higher yield than developed market fixed income – **figure 5**. We believe this divergence in valuations creates potential opportunities for 2018 and beyond.

Figure 3. Our asset allocation

Asset class	Strategic (%)	Tactical (%)	Position
Global Equities	54.2	4.0	Overweight
Global Fixed Income	31.8	-4.0	Underweight
Hedge Funds	12.0	0.0	Neutral/fully allocated
Commodities	0.0	0.0	Neutral/fully allocated
Cash	2.0	0.0	Neutral/fully allocated

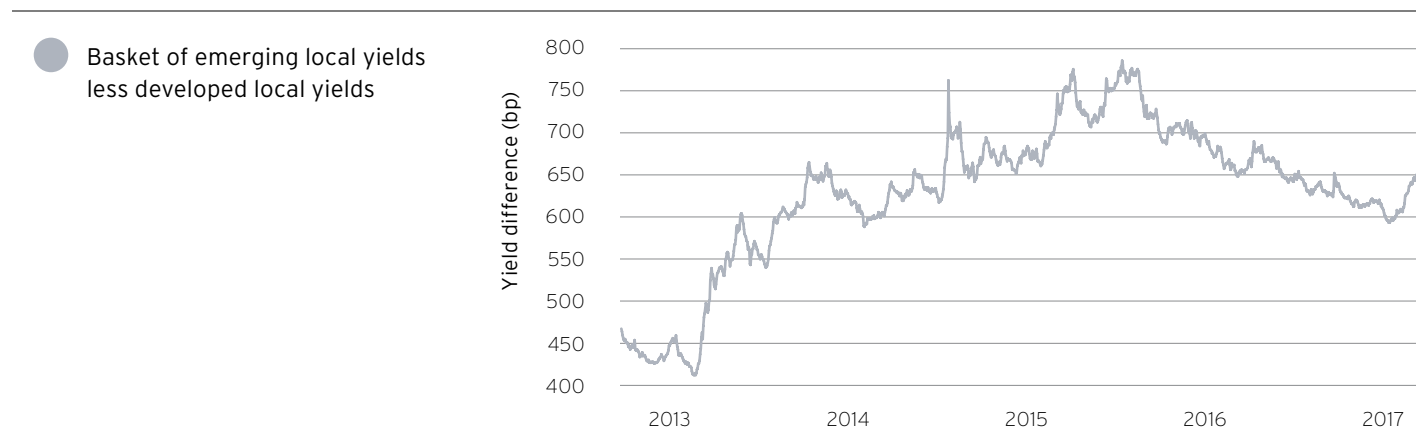
Source: Citi Private Bank, as of 27 Nov 2017. Strategic = benchmark; tactical = the Citi Private Bank Global Investment Committee's (GIC) current view. All allocations are subject to change at discretion of the GIC of the Citi Private Bank. Risk Level 3 is designed for investors with a blended objective 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.

Figure 4. Non-US equities' wide valuation discount



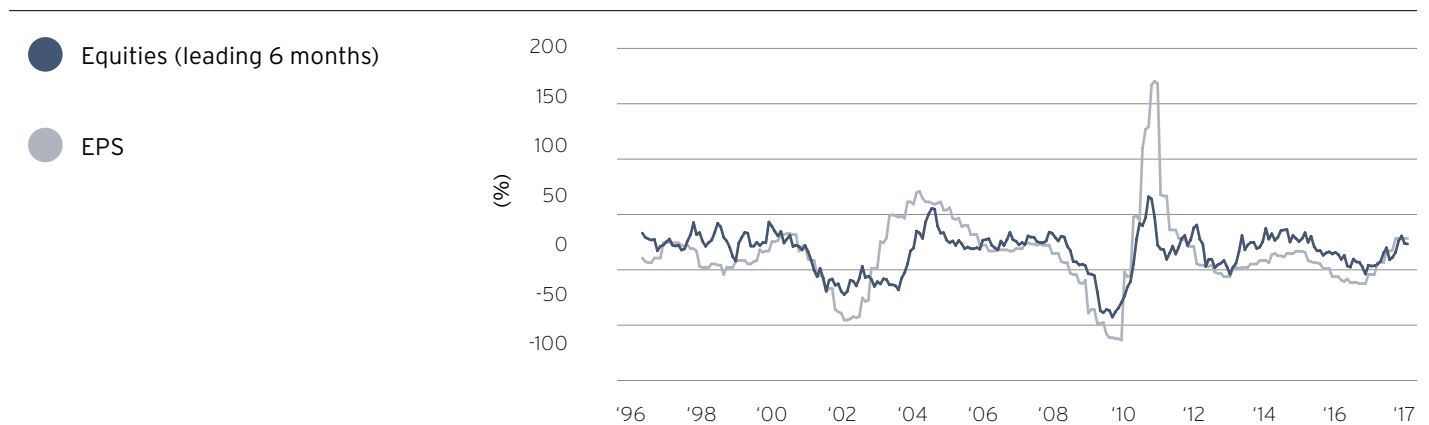
CAPE stands for cyclically-adjusted price/earnings ratio, which compares the present equity price with the ten-year average of inflation-adjusted earnings. Source: Factset, as of 27 Nov 2017. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Figure 5. Emerging sovereign premium



Source: Bloomberg, as of 28 Nov 2017. The EM basket is composed of traded debt from Brazil, China, Columbia, India, Indonesia, Mexico, Russia, South Africa, and Turkey. Past performance is not indicative of future returns. Real results may vary.

Figure 6. Global equities and corporate earnings



Sources: Haver, as of 27 Nov 2017. Chart shows year-on-year change, with 6 months' lead time for earnings per share (EPS). 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.

Go global now

The most important opportunity for investors in 2018 is that of going global. A fully global asset allocation may potentially generate a higher long-run return while also seeking to minimize risk. Just as synchronous global expansions like this one are rare, so too are global market declines. Regardless of your 'home' market, moving away from regionally-concentrated allocations full of idiosyncratic local risks is wise. Investors should therefore take the opportunity to diversify their portfolio risk by allocating more to cheaper asset classes and markets worldwide. These include higher yielding fixed income investments – see [Core income strategies](#). Our key message for 2018 is therefore to 'go global now' – see [Building great portfolios](#).

Drivers of the second wind

We identify various reasons why the global expansion should continue to experience a second wind in 2018. Growth is broadening out across global regions, with stronger activity in emerging markets as well as in the US. This broadening effect is feeding into higher corporate earnings around the world, which in turn has the possibility of fueling further gains in global equities – **figure 6**.

Inflation worldwide remains low, even in the economies with the most advanced business cycle recoveries. This suggests that the global economy is not overheating as it tries to meet demand. As such, there is still no need for the sort of aggressive monetary tightening that has helped terminate many past expansions. Together, broadening economic growth and tame inflation can drive the global expansion forward. By contrast, we expect that central banks will step back and provide less fuel in the form of cheap money in 2018 and beyond. Central banks are set to reduce monetary easing in some parts of the world while modestly tightening policy in others. The US Federal Reserve has already announced that it is to shed \$300bn of its \$4.2tr portfolio of bonds over the next twelve months – **figure 7**. The European Central Bank (ECB) is cutting its monthly bond purchases from €60bn to €30bn through September 2018.

Figure 7. The Fed's asset holdings plan



Source: Bloomberg, as of 27 Nov 2017. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

Central banks step back

Although we do not believe more restrictive central bank policies will hold back the expansion's second wind in 2018, they may have some impact on financial markets. Between them, the Federal Reserve's and ECB's planned reductions in asset purchases will require other investors to purchase \$850bn more sovereign and other investment-grade securities in 2018. This could temper demand for risky investments such as equities. Offsetting this reduction in liquidity, we expect world GDP to grow by \$6tr, some of which may end up flowing into risky assets. In any event, we note that previous shifts in monetary policy in recent years have triggered a rise in market volatility and we believe 2018 may see the same - see [Exploiting volatility](#). Geopolitical surprises could also contribute to volatility, as we discuss in [Politics, security, and world trade: what could go wrong?](#)

The weakening of the US dollar in 2017 helped to drive substantial gains in emerging market assets. Many investors are now positioned for further dollar weakness in 2018. We believe they may be surprised once more, as they were in 2017. The dollar could well consolidate for a time before resuming its downtrend in a future Fed easing cycle after 2018. Despite our expectation of a more range-bound US dollar in the year ahead, we continue to emphasize the case for emerging markets both for 2018 and beyond - see [Emerging opportunities](#).



The value of going global

In recent years, US-dominated allocations have performed strongly, owing to the outperformance of US equities in particular. However, we believe that this is a short-term phenomenon. Looking at the period between 1952 and 2017, a globally diversified multi-asset class allocation would have produced an annualized total return 1.3% above that of an equity and fixed income allocation entirely drawn from the best-performing region: the US. What is more, the global allocation's annualized volatility would have been 1.8% lower than the US-only allocation.

The long-term outperformance of global allocations is no coincidence. Economic dislocations and geopolitical shocks that strike multiple regions simultaneously are relatively rare, the Global Financial Crisis of 2007-09 being one example. Such episodes are more frequently focused upon a particular region, such as the Asian crisis of 1997-1999 or the European sovereign crisis of 2012-2013.

According to our analysis of the four main regional economic crises of recent decades, financial markets outside those regions were negatively impacted, while economies were generally not. Those external markets subsequently

recovered much faster than those of the affected regions, outperforming them by an average of 33% in the year after the onset of a regional recession – **figure 8**. Having a globally diversified portfolio is intended to mitigate the effects that periodic regional difficulties can have upon performance.

Although we always stress the benefits of global diversification, many clients do not heed this vital message. Nearly four-fifths of all clients maintain portfolio holdings concentrated in a single currency. This subjects them to greater idiosyncratic risks and to longer-term underperformance. Especially given today's valuation divergences around the world, we reiterate our call to diversify allocations globally. In many cases, this means shifting away from US equities and certain local bond markets.

The continued second wind for the global expansion that we expect in 2018 reinforces our case for going global now. With many regional economies worldwide likely to experience faster growth, globally diversified investors may be better placed to experience robust returns in both the coming year and, more importantly, over the long run.

Figure 8. Global equity performance amid regional crises

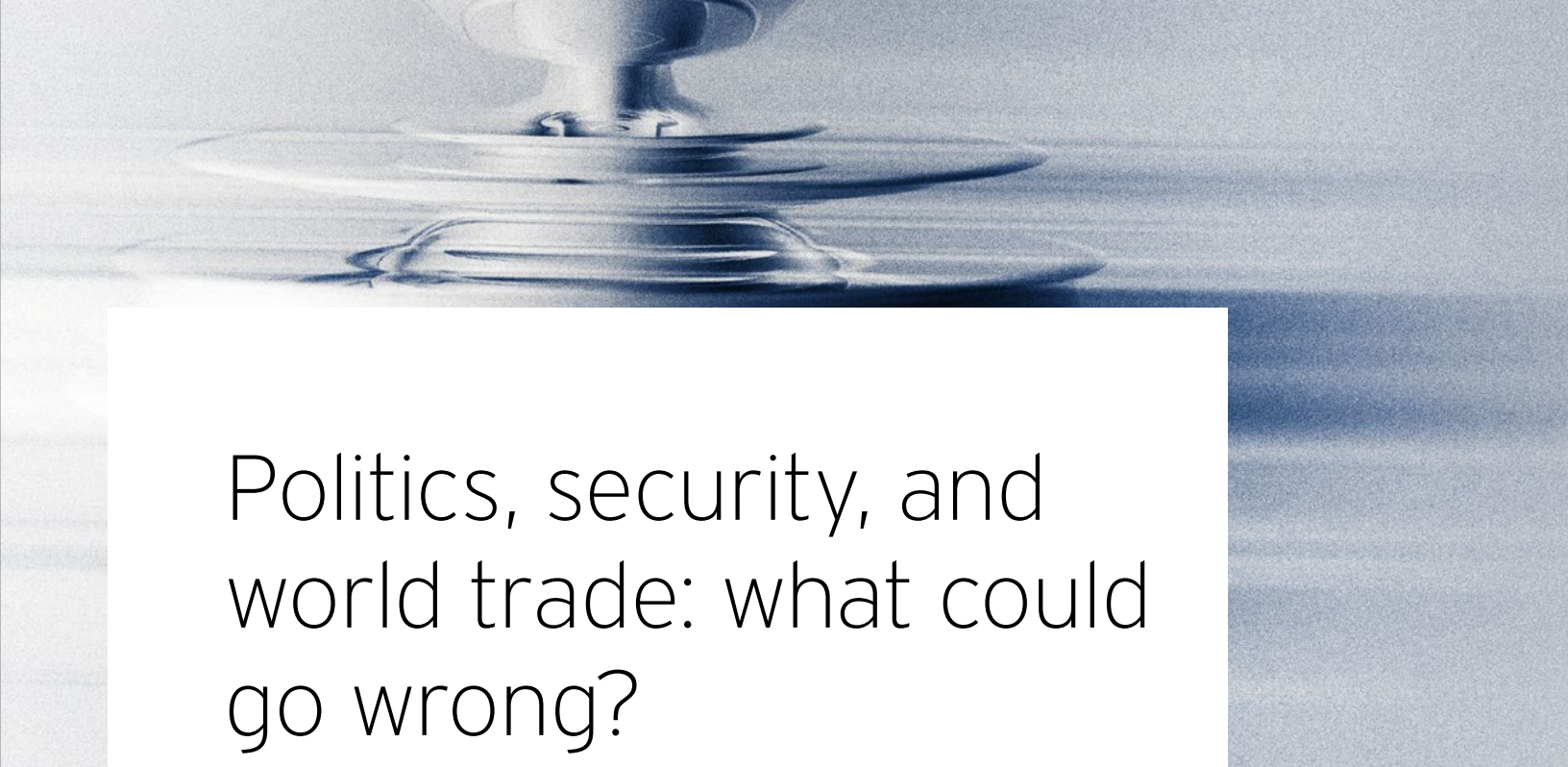
	Affected region's worst monthly return (%)	Global vs local performance, 1yr after regional recession (%)
Asia 1997	-11.2	43.3
Latin America 1998	-34.7	57.1
Eurozone 2011-13	-12.1	3.6
Commodities Latin America 2015	-10.8	29.0
Average	-19.2	33.2

Source: Bloomberg, as of 1 Nov 2017. Returns were measured by the corresponding MSCI Indices for MSCI AC Asia, Latin America, and Europe. 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.

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.

Products and strategies may not be suitable for all investors. Products and strategies 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.

Diversification does not ensure against loss.



Politics, security, and world trade: what could go wrong?

Steven Wieting, Global Chief Investment Strategist

We consider some of the unpredictable developments that could confront investors in 2018 and beyond.

If 2016 was the year of surprising political turbulence, 2017 was the year of unexpected political calm. Following the shocks of Donald Trump's US presidential election victory and of the UK's vote to exit from the European Union (EU), investors were braced for growing populist anger leading to ever more outlandish political outcomes. It seemed also as if a shift away from global free trade and towards greater protectionism might be imminent. But these fears were not realized. With many investors now expecting relative stability in politics, international security, and global trade in 2018, we ask 'what could go wrong?'

What happened

Contrary to expectations, traditional political movements stemmed the populist tide in 2017. The Netherlands' ruling center-right party came well ahead of its anti-immigrant and Euroskeptic rival in March's general election, defying fears that the latter might win a plurality of seats. In May's French presidential vote, the public rallied behind the candidate campaigning for further European Union integration and liberal economic reforms, rejecting the far-right populist with the opposite agenda.

An improving Eurozone economy may have helped soothe populist and anti-EU sentiment somewhat. However, some voters may also have reconsidered their views after seeing the UK struggle to define its future outside the EU. A sharp increase in favorability towards the EU was registered in an annual poll of its citizens. Euroskeptics may also be losing ground in Italy, where disaffection with the European single currency had previously been running high – see [Europe](#) asset class preview.

Populism hasn't gone away

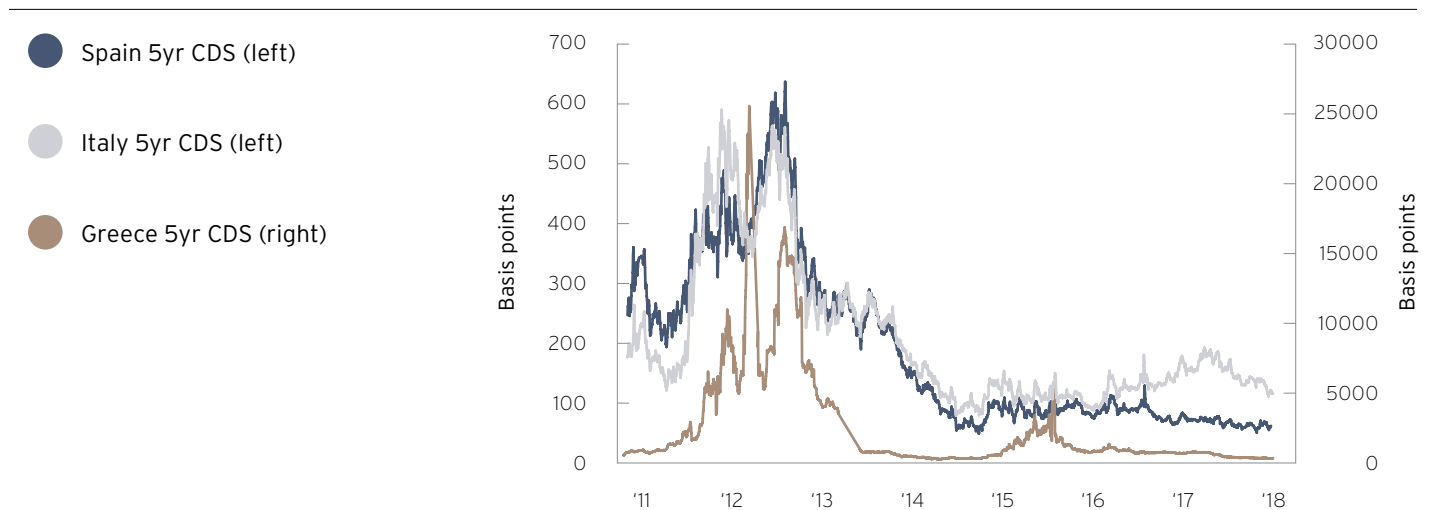
While populist sentiment may have been contained in 2017, it has not gone away. In much of the developed world, many citizens continue to feel angry and insecure about the impact that globalization, immigration, and technological progress have had upon their working lives and communities. Continued economic growth in the US and a long-awaited pick-up across many European economies may have helped ease these feelings over the last twelve months. Looking ahead, though, a resurgence of populism remains an ever-present risk, one that could accelerate during a future economic downturn. In some countries, populists may only be one crisis away from winning power.

If anything, we believe investors may have become complacent about the risk of international populist contagion – and about other risks. It was striking how markets almost responded too calmly to the significant

country risk of Catalonia's voting to secede from Spain in October's illegal referendum. As **figure 1** shows, the market's view of Spanish creditworthiness changed very little in the face of the stand-off between the Spanish state and one of its most economically-important regions. Other Southern Eurozone nations saw barely any reaction at all, in contrast to the pricing contagion that was common during Europe's crisis in 2011 and 2012.

National politics could provide further potential flashpoints for markets in 2018. For example, Mexico and Brazil both hold elections that may cause some investor apprehension – **figure 2**. In the latter, leftist former President Lula may seek the presidency again if his appeal against a corruption conviction succeeds. In the build-up to his first election victory in 2002, the Brazilian currency sold off as investors fretted about his redistributive agenda, before rebounding once he won – **figure 3**.

Figure 1. Eurozone national creditworthiness



A credit default swap (CDS) is a financial swap agreement whereby the CDS seller will compensate the buyer in the event of a loan default by the debtor or other credit event. A country's CDS is often used to measure that country's creditworthiness.

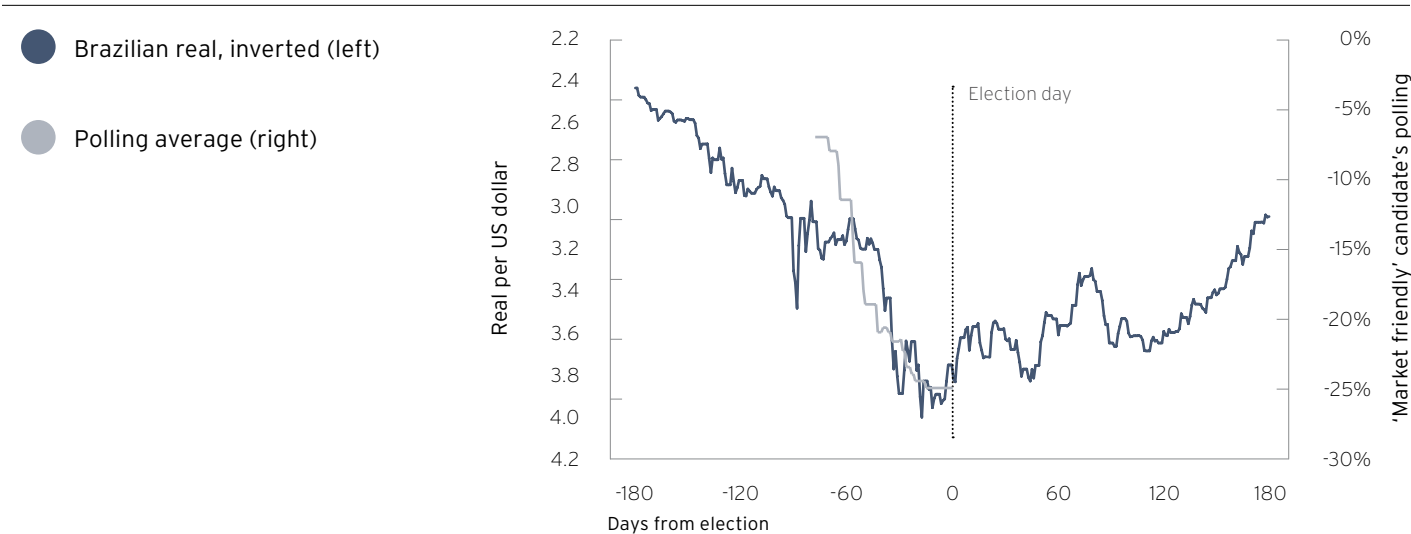
Source: Haver, as of 27 Nov 2017. Past performance is no guarantee of future returns. Real results may vary.

Figure 2. The global political calendar for 2018

ASIA	
January - May & December	India State Assembly election
June	Indonesia & South Korea local election
August	Malaysia general election
September	Japan Liberal Democratic Party presidential election
October - December	Thailand general election
November	Taiwan local election
EUROPE	
January	Czech Republic presidential election
March	Russia presidential election
March - May	Italy general election
May	UK local election
September	Sweden general election
2018, likely October	Republic of Ireland presidential election
LATIN AMERICA	
March	Colombia parliamentary election
May and June	Colombian presidential election, 1 st and 2 nd rounds
July	Mexico presidential and parliamentary elections
October	Brazil general election, 1 st and 2 nd rounds
NORTH AMERICA	
November	US mid-term election

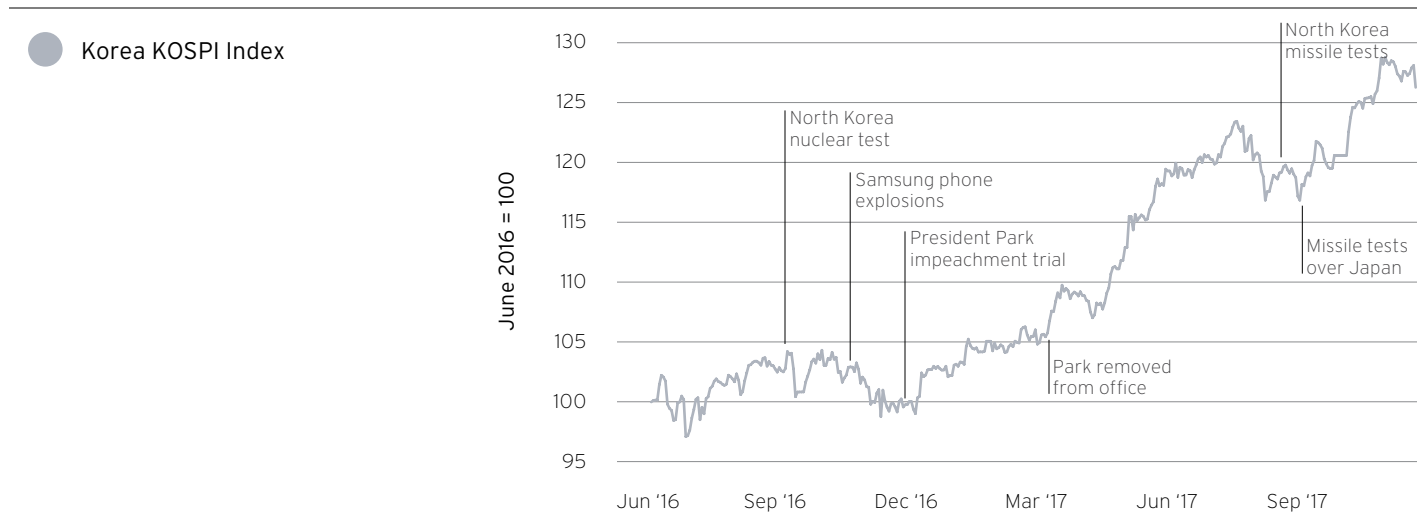
Source: Citi Private Bank, as of 17 Nov 2017.

Figure 3. Brazil keeping it real in 2002



Source: Bloomberg, as of 17 Nov 2017. Past performance is no guarantee of future returns. Real results may vary.
Market-friendly candidate is defined as the candidate whose policies are deemed more favorable for investors.

Figure 4. Korean equities' swift recoveries



The Korea Composite Stock Price Index or KOSPI is the index of all common stocks traded on the Korea Stock Exchange.

Source: Factset, as of 27 Nov 2017. 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.

The hazards of underestimating risk

The tendency for investors to shrug off risks is also evident in geopolitical security. North Korea's tests of two long-range missiles in July and of a mid-range missile that passed over Japan in August put only brief pressure on South Korea's equity market and currency – **figure 4**. To put it in context, the local financial impact was only roughly as significant as the short-lived bout of investor nerves in late 2016 when it emerged that one of Samsung's smartphone models was prone to battery explosions. South Korean equities have since recovered even more sharply after the missile tests than it did after the smartphone episode, despite an increasingly heated exchange of words between the North Korean leader and President Trump.

Alongside international security, trade is something we continue to monitor closely. Fears that the US might pursue a significantly more protectionist agenda – and trigger retaliation from its trading partners – were not realized in 2017. However, we do not downplay the risks ahead. Because the world economy today is more integrated than ever before, future episodes of trade friction could be relatively more important than local political events.

In recent months, the renegotiation of the North American Free Trade Agreement has already caused some unease among investors. While we think the renegotiation will likely succeed – see [North America](#) asset class preview – we would also caution that a collapse of the agreement would cause US-Mexico trade to revert to World Trade Organization rules. That would involve a 3.5% average tariff on Mexican goods entering the US and a 7% tariff on goods going the other way.

Energy poses another potential source of political and social instability in 2018, especially in energy-producing nations. The sharp decline of the oil price since 2014 has already contributed to Venezuela's economic crisis, political tension, and the country's recent debt default. In the heavily oil dependent Middle East, there is a pressing need for the nations to diversify their economies away from energy, or else face potential challenges to the social order. Below the surface, risks in the Middle East seem to be worsening. Oil wealth has done much to keep these in check so far, but we should not be surprised if this comes unstuck at some point.

Risk management begins with global diversification

How might investors address the risks to portfolios posed by local political developments, international tensions, and trade friction? As we emphasize in [Building great portfolios](#), global diversification across several asset classes may help mitigate the effects of these often localized or regionalized flare-ups. Given our positive outlook for 2018, we would also argue that market weakness during such episodes can often make suitable entry-points for investors looking to add to their exposure. In the case of geopolitical events, history shows that initial US equity market sell-offs have taken an average of just one month to reverse - **figure 5** - with an average gain of 2.8% three months after the event.

It is not our base case that the world will suffer further significant populist shocks, geopolitical security crises, or a trade dislocation in 2018. By their very nature, however, such developments are unpredictable. Even in absence of such shocks, investors should not assume that markets will continue to react with the same degree of calm that they did to other unforeseen events in 2017. An increase in volatility seems likely to us, as we discuss in [Exploiting volatility](#). The time to prepare portfolios for this is now.

Figure 5. Equity performance after geopolitical events

Geopolitical event	Date	S&P 500 (% since event date)		
		Initial reaction	30 days	90 days
Pearl Harbor	12 Jul 1941	-6.87	-2.90	-12.02
Cuban missile crisis	19 Oct 1962	-3.78	7.61	17.16
JFK assassination	21 Nov 1963	-2.81	3.06	8.28
US bombs Cambodia	29 Apr 1970	-15.30	-6.43	-4.94
Arab oil embargo	18 Oct 1973	-16.23	-8.45	-13.04
USSR invades Afghanistan	24 Dec 1979	-2.27	5.37	-7.78
US bombs Libya	15 Apr 1986	2.95	-1.39	0.16
US invades Panama	15 Dec 1989	-2.06	-3.73	-3.43
Gulf War	24 Dec 1990	-4.16	0.09	12.10
World Trade Center bombing	26 Feb 1993	-0.31	1.67	2.04
9/11 attacks	11 Sep 2001	-11.60	0.45	4.34
US invasion of Iraq	20 Mar 2003	2.49	2.06	15.57
Russian annexation of Crimea	27 Feb 2014	1.07	0.68	3.62
North Korea-related				
Korean war	23 Jun 1950	-12.80	-8.67	1.20
Operation Paul Bunyan	18 Aug 1976	-3.15	1.64	-4.32
2006 nuclear test	9 Oct 2006	0.90	2.60	4.60
2009 nuclear test	25 Apr 2009	-1.28	5.09	13.05
2013 nuclear test	12 Feb 2013	0.02	2.88	7.53
2016 nuclear test	9 Sep 2016	-2.55	-0.81	2.97
2017 escalation	7 Aug 2017	-0.24	-0.64	4.4
Missile test over Japan	28 Aug 2017	0.08	2.69	6.43
Average - all events		-3.71	0.14	2.76

Source: Factset, Bloomberg, as of 17 Nov 2017. 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.



Building great portfolios

Gregory van Inwegen, Global Head of Quantitative Research, Asset Allocation, and Investment Risk Management at Citi Investment Management
Philip Watson, Head of the Global Investment Lab
Steven Wieting, Global Chief Investment Strategist

Citi Private Bank exists to serve the world's wealthiest individuals and families. Our long experience of working with these clients has given us a unique perspective into the responsibilities and challenges of investing great wealth. Of the many insights we have gained, one in particular stands out:

The families who have managed to remain among the world's wealthiest over several generations have typically built great investment portfolios following the fundamental principles of asset allocation, whereas those who have drifted below the wealthiest have typically not.

These fundamental principles are not some closely-guarded secret. In fact, they are almost universally known. However, we know that they are almost as widely ignored. We have therefore decided to reiterate them and illustrate with first-hand evidence the impact they have upon clients' wealth. We contrast best practice with some of the mistakes that we unfortunately see some clients decide to make, despite our best efforts. In light of this, we urge all clients to ensure their portfolios are thoughtfully constructed and maintained.

Critical elements of asset allocation:

Follow the plan

Go global now

Stay invested

Address risk

Review regularly

Follow the plan

Behind every great portfolio is a robust, long-term plan. A robust plan begins with defining goals, risk tolerance, and time horizon. It also specifies liquidity requirements and other investment preferences. Together, these provide the essential rules for both client and advisor. Having such a plan is, of course, no guarantee of success. But not having a plan or failing to follow an agreed plan almost guarantee inadequate returns and needless risk-taking over time.

Based upon these rules, a long-term investment strategy - or strategic asset allocation - can be created. Citi Private Bank has developed its own methodology for creating a strategic asset allocation. Adaptive Valuation Strategies (AVS) is built upon the principles of global multi-asset class diversification over long-term investment horizons, the importance of which we explore below.

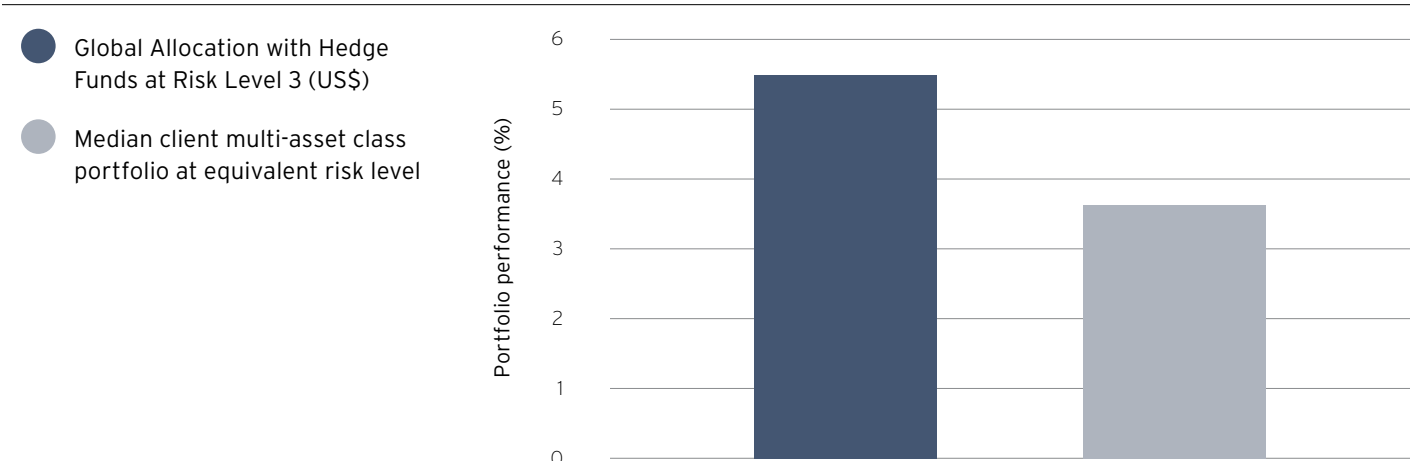
Compared to many traditional methodologies, AVS takes a distinctive approach to creating asset allocations. Instead of simply assuming that future returns will resemble past average returns, AVS estimates returns over the next ten years based on current valuations - see below: [The long-term view](#). This is because low valuations have often been followed by high returns and high valuations by low returns.

AVS typically then allocates more to asset classes with high return estimates and less to those with lower return estimates. It also reflects our belief that the most relevant risk for investors is severe portfolio losses during a crisis. The allocations generated by AVS are specifically designed to serve as the investment 'core' of each client's wealth framework - see [Opportunistic investing alongside core portfolios](#) below.

Although we create a personalized AVS allocation for every client of the Private Bank, not all choose to follow this plan. The average client portfolio has 47% of assets that are not in alignment with the recommended allocation. This includes a 24% underweight versus our recommended equities allocation and a 21% overweight to fixed income.

Figure 1 shows how the median client portfolio at Risk Level 3 has performed in relation to an AVS Global Allocation with Hedge Funds at Risk Level 3 in US dollars* over the last three years, whose performance is measured at an asset class level. Two-thirds of client portfolios at the equivalent risk level failed to keep up with this benchmark allocation between 2015 and 2017, with underperformance of almost 2% a year. The impact of foregoing such returns each year upon your level of wealth can be profound.

Figure 1. The cost of not following the plan



A Global Allocation at Risk Level 3 in US dollars is made up of 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. An example of such an allocation is shown in figure 4. Source: Citi Private Bank Global Investment Lab, as of 31 Oct 2017. Past performance is no guarantee of future returns. Real results may vary.

Figure 2. Global diversification has beaten US home bias over time

1952-2016	US-only allocation	Global US dollar allocation
Annualized return (%)	9.3	10.6
Annualized volatility (%)	9.5	7.7

Source: Global Asset Allocation team, Citi Private Bank, as of 31 Dec 2016. The US-only allocation assumes 60% equity and 40% fixed income proportions, rebalanced on an annual basis. The Global US Dollar allocation represents a AVS Risk Level 3, the 31 Dec 2016 allocations of which are shown in Figure 4. They include 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.

Diversification does not ensure against the loss of your investment.

Go global now: diversification is powerful

While there are no free lunches in investment, diversification may just be the next best thing. By investing in a broad range of different asset classes across the world, it is possible to lower a portfolio's risk while also potentially enhancing its returns based on a client's investment objectives and risk tolerances.

Figure 2 demonstrates the effect of diversification over time. It shows how a global multi-asset class allocation would have produced a 10.6% annualized return before fees between 1952 and 2016, compared to 9.3% for an allocation of equities and fixed income entirely from the best-performing individual region, the US. Not only would the global allocation have produced a potentially higher return, but it was also less risky on an asset class level. While 1.3% annualized outperformance may not sound like much, its long-term effect is significant. **Figure 3** shows how the portfolios described in **figure 2** would evolve over time in these historical index-based allocations. On an asset class level, an investment of \$1m in a portfolio following an AVS Risk Level 3 global strategic allocation in 1952 would have grown to almost \$700m by June 2017 gross of all fees, compared to \$333m for the US-only allocation. Of course, when fees are applied, the performance would have been reduced by investment management fees and other management expenses.¹

The power of diversification comes from having exposure to multiple sources of return and risk. Various countries' business and financial market cycles are often at differing stages, as we believe they are today - see [Go global now: riding the global expansion's second wind](#). By investing in a country or region with faster economic growth than one's own, potentially higher returns from that growth may be captured, albeit often involving exposure to greater geopolitical and individual country risks. Diversifying across different economic sectors - such as energy or technology - can achieve much the same, along with having exposure to particular risk factors like that of smaller-capitalization or growth companies, as well as to different currencies.

Despite these benefits, many clients are somehow reluctant to embrace global multi-asset class diversification fully. We frequently observe portfolios that are narrowly focused on just two or three asset classes. A typical client's exposure is also concentrated 70% to 85% in a single currency. Of those with exposure to emerging markets fixed income, we find that they are on average 3.2% underweight compared to our recommended allocation. In emerging market equities, they are 2.2% underweight on average.

¹ The compounding effect of not deducting investment management fees will increase the impact by an amount directly related to gross account performance. For example, on an account with a 2% annual fee, if gross performance is 10% annually for three years, the effect of the fees will result in net performance of approximately 7.81% in the first year, 8.41% in the second year, and 9.06% in the third year, for a total net performance of approximately 25.27% over the three-year period. By comparison, the gross performance over that same three-year period is 33.1%.

One possible explanation for this behavior is that clients may feel more comfortable investing in regions and asset classes with which they are familiar. There is a surprisingly widespread belief that portfolios exposed to emerging markets, different currencies, or illiquid asset classes actually increase overall risks. We emphasize that the opposite may be true when looked at on a rolling 5-year basis for the period between 1955 and 2016. We created historical globally diversified allocations consisting of indexes to proxy for each asset class of equities, fixed income, hedge funds, commodities and cash. On an asset class level between 1955 and 2016, this would have produced an annualized return of 10.9% before fees, while not experiencing a negative return over any five-year period. On a one-year annualized basis the returns would be different.

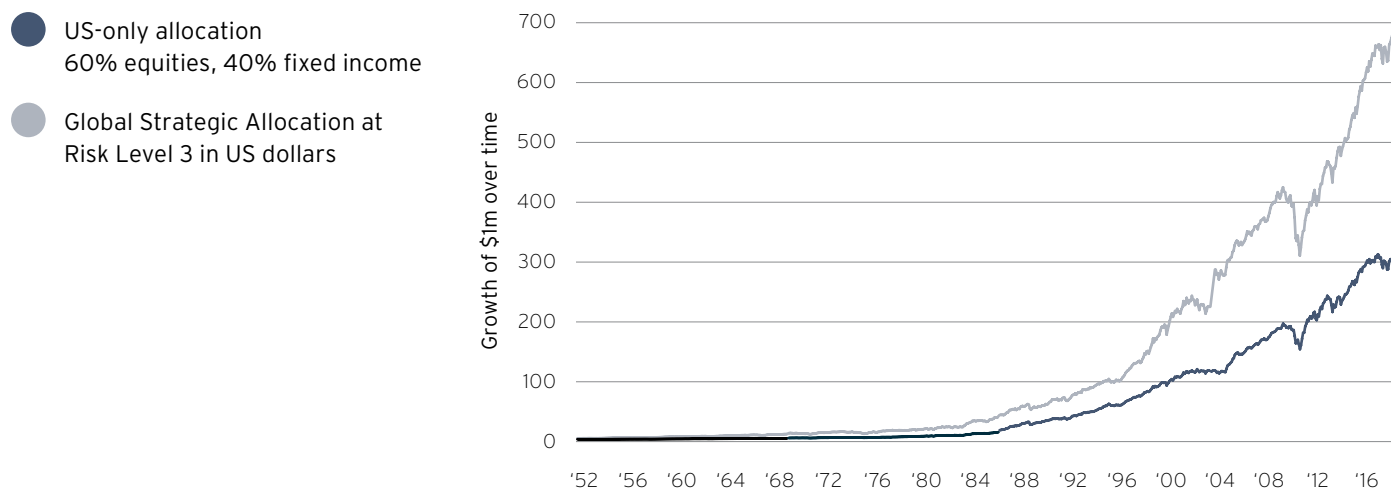
Our strategic asset allocation methodology incorporates ten broad asset classes – see [The long-term view](#) below – from more than forty-five countries worldwide. Although it accommodates preferences for particular currencies or regions, we think clients should always consider a global allocation. We then recommend full implementation of the allocation within the portfolio and regular rebalancing to keep the portfolio in line with the allocation, as we discuss below.

For clients who currently have regionally-biased portfolios – particularly to the US – we think that it is an opportune time to correct this. Non-US equities trade at a substantial discount to US equities, including emerging markets – see [Emerging opportunities](#). Our message could not be any clearer: go global now.

Stay invested: aggressive market timing increases risk

Compounding can be a powerful ally when investing. Over longer periods, the effect of earning compound returns by staying invested in a balanced allocation that includes risky assets has been compelling. As demonstrated in **Figure 3**, \$1m invested in the global allocation would have become almost \$700m before fees. By contrast, aggressive attempts to time the markets by switching into risky assets and then out of risky assets – not being fully invested – can all too easily result in foregone compound returns and excessive exposure at unfavorable times.

Figure 3. Global multi-asset allocation's wealth effects*



Source: Global Asset Allocation team, Citi Private Bank, as of 31 Dec 2016. The US-only allocation assumes 60% equity and 40% fixed income proportions, rebalanced on an annual basis. The Global US Dollar allocation represents a AVS Risk Level 3, the 31 Dec 2016 allocations of which are shown in Figure 4. They include 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. Past performance is no guarantee of future returns. Real results may vary.

Diversification does not ensure against loss of investment.

Cash is not king

Although we always stress the case for staying invested over time, many clients insist instead upon holding large cash balances. Whereas our most conservative global allocation has a 6.2% strategic weighting in cash, we frequently see clients with much higher risk levels holding cash allocations of 30% or more. That is despite one of the poorest return environments for cash in decades, with an estimated return after inflation of -6.3% over the last five years.

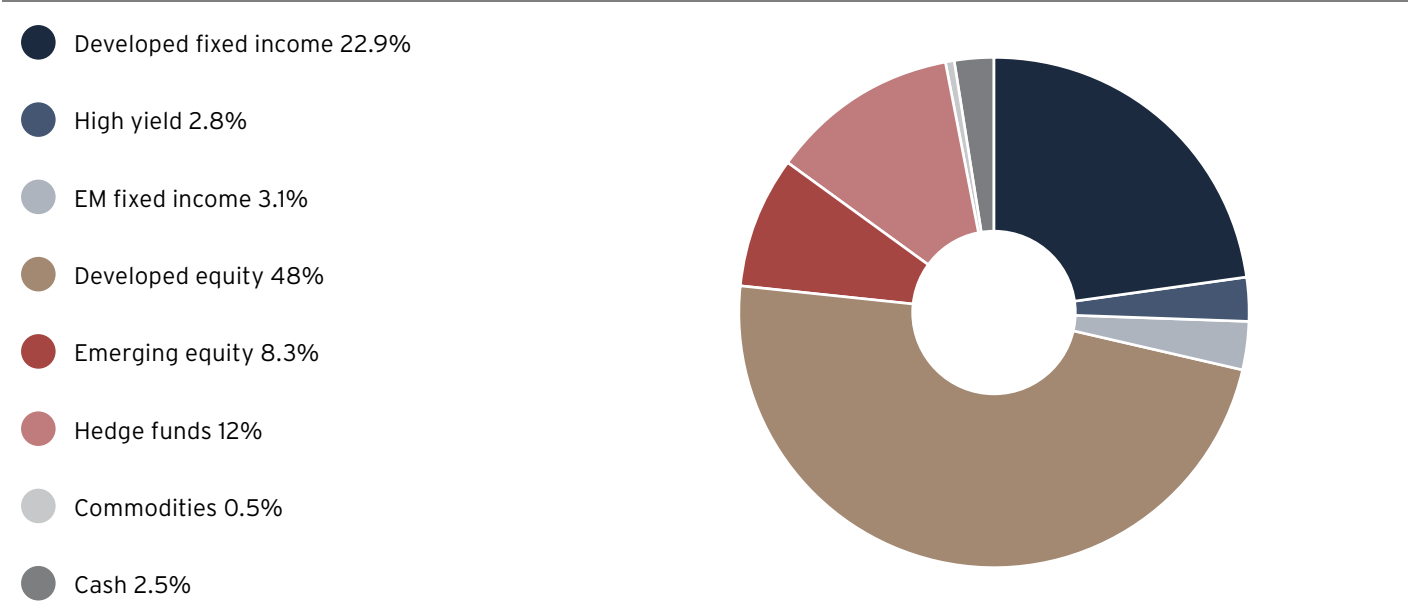
Over time, having large weightings to cash can have a dramatic effect on an investor's level of wealth. In a further analysis, we looked at a historical allocation at an asset class level consisting of 42% equities, 28% fixed income and 30% cash. As shown in **figure 5**, this allocation would have grown from \$1m in 1952 to \$150m by the end of 2016, albeit before fees which would have reduced returns, compared to \$700m before fees for a Global Allocation with Hedge Funds at Risk Level 3.

Clearly, the investor who chose the cash-heavy allocation would have suffered a substantial decline in level of wealth relative to the investor in the balanced global allocation.

Given the clear risks to wealth from holding too much cash, why do so many clients persist with such an approach? In some cases, clients overestimate the amount of cash they will need for regular or unforeseen expenditures in the future. In others, they do so in the hope of investing in risky assets when they are more cheaply valued at some point. However, attempts to time the markets in this way are themselves risky.

We do acknowledge the wisdom of every investor holding some cash. Doing so can provide a reserve for unplanned expenditures, flexibility to pursue opportunistic investments, as well as helping to diversify a portfolio. What we would stress, however, is the importance of holding cash in appropriate amounts. Rather than simply opting for an arbitrarily large figure, we recommend taking a quantitative approach to determine your future cash needs under various scenarios. Your Private Banker stands ready to assist you with this, drawing upon the analysis of our Global Investment Lab.

Figure 4. Global Asset Class Allocation with Hedge Funds in US dollars at Risk Level 3



Source: Citi Private Bank, as of 31 Oct 2017. Please see Glossary for definition of terms. Allocations for 2017; based on data as of 30 Nov 2016.

Address risk

To seek the higher returns necessary to keep families among the wealthiest, risks must be taken. Such risks should always be carefully calculated, however. This means understanding the potential risk of your allocation and trying to manage it. We reiterate that we believe the most effective form of risk mitigation over time has been global multi-asset class diversification itself. But portfolios that implement such allocations are still subject to significant drawdowns over time. And we recognize that such drawdowns cause some clients concern.

One reason that clients often maintain outsized allocations to cash is the desire to help manage the effects of portfolio drawdowns upon wealth. While this may be effective during the drawdowns themselves, we have already witnessed the longer-term drag that it has on portfolio performance. For suitable clients, however, employing hedging strategies may enable risky asset exposure to be maintained while also helping to shield wealth from large drawdowns.

We reiterate that we believe the most effective form of risk mitigation over time has been global multi-asset class diversification itself.

Review portfolios regularly

Having determined a strategic allocation and implemented it in a portfolio, regular reviews are essential. Over time, a portfolio will tend to drift away from the target allocation as some assets perform strongly and others struggle. Unless corrected, this can lead to lower returns and excessive risk being taken.

Reviews should also be used to correct any over-diversification in the portfolio. Over time, many investors build up a large number of small positions in the portfolio, which can dilute performance and demand significant time and expense to monitor. To keep allocations focused, therefore, reviews need to determine the ongoing relevance of each position and sell those that do not fit.

We review all AVS allocations each year, updating them to reflect changes in AVS's estimates of returns and risk. The next step is to rebalance portfolios to keep them in line with the updated allocations. This has the potential advantage of buying lower valued asset classes and selling higher valued asset classes, which could increase returns over time. We address key changes and recommended rebalancing in our regular meetings with each client.

To help you consider your portfolio in light of your AVS allocation as well as our key investment themes, our Global Investment Lab can generate an individual analysis highlighting any differences between the two. We can then recommend possibilities for adjusting your portfolio accordingly. If you would like to take advantage of this analysis please speak to your Private Banker or Investment Counselor.

Figure 5. Outsized cash, undersized returns

	US\$ portfolio cash overweight (30%)	Global Allocation in US\$
Annualized performance (%)	8.0	10.6
Annualized volatility (%)	6.6	7.7
Sharpe ratio	1.21	1.37

Source: Global Asset Allocation team, Citi Private Bank, as of 31 Dec 2016. The US\$ portfolio cash over weight, a historical allocation on an asset class level assumes 42% equity and 28% fixed income proportions and 30% cash, rebalanced on an annual basis. The Global US dollar allocation represents a AVS Risk Level 3, the 31 Dec 2016 allocations of which are shown in Figure 4. They include 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. Past performance is no guarantee of future returns. Real results may vary.

Diversification does not ensure against loss of investment.

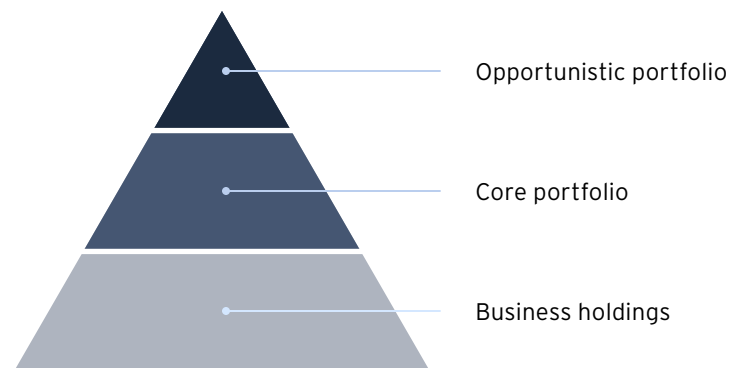
Opportunistic investing alongside core portfolios

We believe that a core portfolio of investments that apply the principles discussed in this piece may offer the best approach for clients as they seek to remain among the world's wealthiest. But how does such a core portfolio fit into their overall wealth framework, including their business holdings and any other investments they may wish to take?

Many clients of the Private Bank have built their wealth by taking highly concentrated risks in a single business, in which they continue to have a significant interest. The core portfolios we recommend are specifically designed to help diversify the risks of such concentrated holdings. We therefore analyze each client's business exposure and create an allocation accordingly.

We also recognize that many clients wish to pursue opportunistic investments beyond their core portfolio. Opportunistic investments seek to generate enhanced risk-adjusted returns by exploiting periodic short- or long-term opportunities based on a client's risk tolerance and investment objectives. They can arise for many reasons including market dislocations, mis-pricings, structural and cyclical changes in markets, and new issuances. They can involve all kinds of investment, including individual securities, currencies or commodities, structured products and derivatives, alternative investments like hedge funds or private equity, or capital markets strategies. They should not be confused with short-term tactical adjustments to strategic asset allocations.

Figure 6. A core-opportunistic wealth framework



Source: Citi Private Bank, as of 31 Oct 2017.

As with core portfolios, a disciplined approach is essential for opportunistic investing. Pursuing such investments informally can result in duplicating the risks of a core portfolio or business holdings. We therefore recommend considering potential opportunistic investments in context of these other assets.

How much investment wealth might be allocated to an opportunistic portfolio? This should depend on a client's risk level within our AVS framework. The higher the risk level, the more might be allocated to opportunistic investments. **Figure 7** shows these risk levels and our recommended weightings for each.

The higher the client's risk level, the more might be allocated to opportunistic investments.

Figure 7. Recommended core and opportunistic portfolio sizing

Level 1 Lower risk portfolio	Weight of core strategy	At least 95%
	Weight of opportunistic investment	up to 5%
Level 2 Lower risk portfolio	Weight of core strategy	At least 92.5%
	Weight of opportunistic investment	up to 7.5%
Level 3 Medium risk portfolio	Weight of core strategy	At least 85%
	Weight of opportunistic investment	up to 15%
Level 4 Higher risk portfolio	Weight of core strategy	At least 82.5%
	Weight of opportunistic investment	up to 17.5%
Level 5 Higher risk portfolio	Weight of core strategy	At least 80%
	Weight of opportunistic investment	up to 20%

Source: Citi Private Bank, as of 31 Oct 2017. Please see Glossary for definition of terms. The aforementioned recommended core and opportunistic allocations are subject to change and are for illustrative purposes only. When implemented the individual's investment objective and risk tolerances need to be taken into consideration.

The long-term view

Gregory van Inwegen, Global Head of Quantitative Research, Asset Allocation, and Investment Risk Management at Citi Investment Management

What does Adaptive Valuation Strategies (AVS) currently say about long-term returns? **Figure 8** shows its annualized return forecasts – Strategic Return Estimates (SREs) – for ten major asset classes over the next decade.

Based on 31 October 2017 data, AVS forecasts Global Emerging Equity to produce the highest return among public asset classes. Its SRE of 8.4% is well above the 4.9% for Global Developed Equity, despite its performance over the last year. This higher SRE reflects Emerging Equity's relatively modest long-term valuation.

Within Fixed Income, High Yield's SRE of 4.1% remains above Developed Investment Grade at 2.3%. Having returned an annualized 4.5% over the last ten years, Developed Investment Grade's low SRE reflects one of the highest valuations of sovereign debt ever recorded. Emerging Market (EM) Fixed Income's SRE has increased from 2.6% last year to 4.1% this year. This increase in both SRE and Extreme Downside Risk is due to a change in treatment of EM Fixed Income, moving from a local currency, hedged to US dollars to a hard currency dollar denominated debt perspective, the latter instruments having both higher return and risk forecasts.

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

Figure 8. Strategic Return Estimates and Extreme Downside Risk

Asset class	Strategic Return Estimate	Extreme Downside Risk
Global Developed Equity	4.9%	-55.8%
Global Emerging Equity	8.4%	-63.8%
Global Developed Investment Fixed Income	2.3%	-10.8%
Global High Yield Fixed Income	4.1%	-49.8%
Global Emerging Market Fixed Income	4.1%	-45.5%
Cash	2.3%	0.0%
Hedge Funds	5.7%	-36.9%
Private Equity	10.3%	-87.3%
Real Estate	10.1%	-78.9%
Commodity	1.9%	-50.5%

Source: Citi Private Bank, SREs and historical returns over last 10 years are based on data as of 31 Oct 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. EDR is a measure used to estimate the risk of an asset allocation. EDR is calculated as the average of the worst 5% of 12-month losses for the asset allocation over each 10-year period in Citi's proprietary (AVS) historical database. Please see Glossary for definition of terms.

Extreme Downside Risk (EDR) is a measure used to estimate the risk of an asset allocation. EDR seeks to estimate the typical type of loss, over a 12-month time horizon, that an asset allocation may experience in a period of extreme market stress. It is calculated using a proprietary methodology and database. For a given asset allocation, this approach estimates the loss, over a 12-month time horizon, that the asset allocation may have experienced during historical periods of extreme market stress. EDR is calculated by taking the average loss in the worst 5% of this historical periods of extreme market stress. EDR does not estimate the maximum possible loss. Potential losses for a given asset allocation may exceed the value of the EDR.

Strategic Return Estimates (SRE) are the 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. Past performance is not indicative of future results.

Adaptive Valuation Strategies is the strategic asset allocation methodology of Citi Private Bank. Strategic asset allocation attempts to define the appropriate combination of asset classes for a portfolio that may drive the portfolio to achieve the desired long-term goals of the investor.

Opinions expressed in this document may include those of Citi Private Bank, Citigroup affiliates, or non-affiliated third parties. In addition, your investment team may highlight topics that are specific to your objectives. These opinions may differ from the opinions expressed by other businesses or affiliates of Citigroup; they are not intended to be a forecast of future events, a guarantee of future results or investment advice and are subject to change based on market and other conditions. In any event, 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. Further, any projections of potential risk or return are illustrative and should not be taken as limitations as to the maximum possible loss or gain. The official view of Citi Private Bank is available to you in 'The Quadrant' magazine, published monthly and available upon request.

Our favored markets for 2018

We enter 2018 with an increased tactical overweight to equities, focused on Europe and Asia ex-Japan. We have also increased our underweight to fixed income.

EUROPE

EPS growth forecast 2018:¹



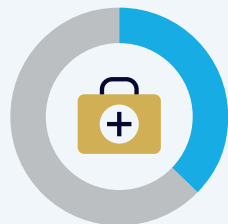
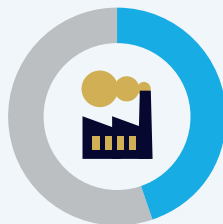
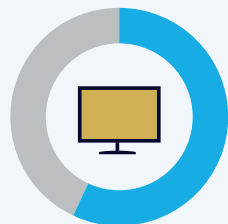
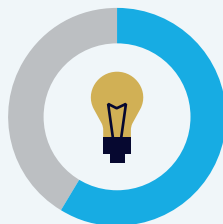
Europe (ex-UK) financials and energy offer a favorable combination of earnings growth, undemanding valuations and dividend yields over 4%²

NORTH AMERICA

Equity

IT, healthcare, energy, industrials may benefit from the weaker US dollar

Foreign sales as % of total sales:²



Fixed income

US High Yield and US Investment Grade offer higher yields than other developed market securities³

US HIGH YIELD



5.7%

US INVESTMENT GRADE



3.2%

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RETURN. REAL RESULTS MAY VARY

LATIN AMERICA

Equity

EPS growth forecast 2018¹



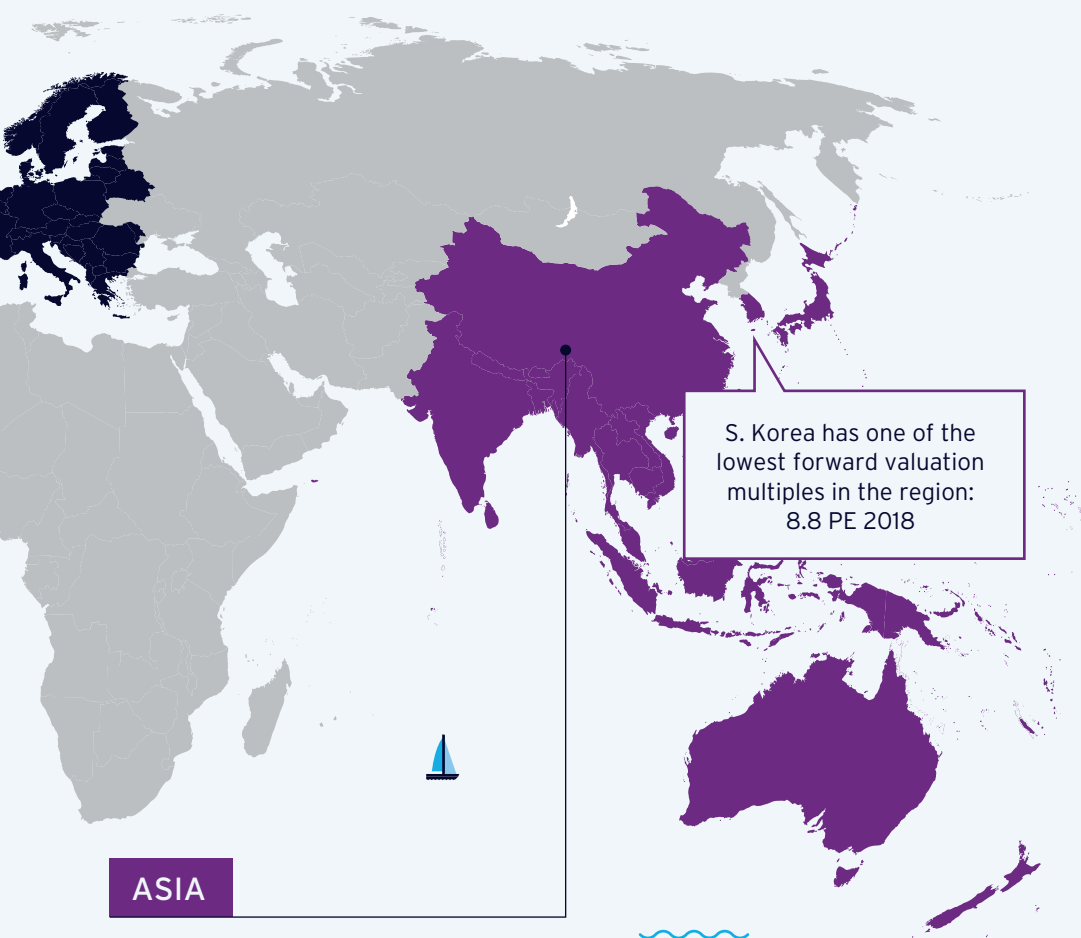
Energy, materials, consumer discretionary, and financials look attractive

Fixed income

Local currency sovereign bonds offer 5-year yields of:³



US dollar denominated: Argentina, Brazil, and Colombia - spreads over US Treasuries of roughly 270 basis points



OPPORTUNITIES

- ✓ Emerging markets - especially in Asia - have long-term outperformance potential
- ✓ Seeking higher yields from selective fixed income, private equity and real estate investments
- ✓ Private credit, e-commerce related real estate
- ✓ Global healthcare, including healthcare disruptors like biosimilar makers
- ✓ Robotics makers and their beneficiaries
- ✓ Cheap hedges as central banks, elections may boost market volatility in 2018

Equity

EPS growth forecast 2018:¹



Fixed income

Local currency sovereign bonds offer 5-year yields of:³



Financials and information technology stand to gain from falling Chinese non-performing loans and ongoing growth in e-commerce.

Sources: 1. Citi Research, as of 28 Nov 2017. 2. Factset, as of 28 Nov 2017. 3. The Yield Book, as of 28 Nov 2017.

Indices are unmanaged. An investor cannot invest directly in an index.

Opinions expressed herein may differ from the opinions expressed by other businesses or affiliates of Citigroup, Inc., and are not intended to be a forecast of future events, a guarantee of future results for investment advice, and are subject to change based on market and other conditions.

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.

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 objectives.

Asia
Europe
Latin America
North America

Portfolio perspectives

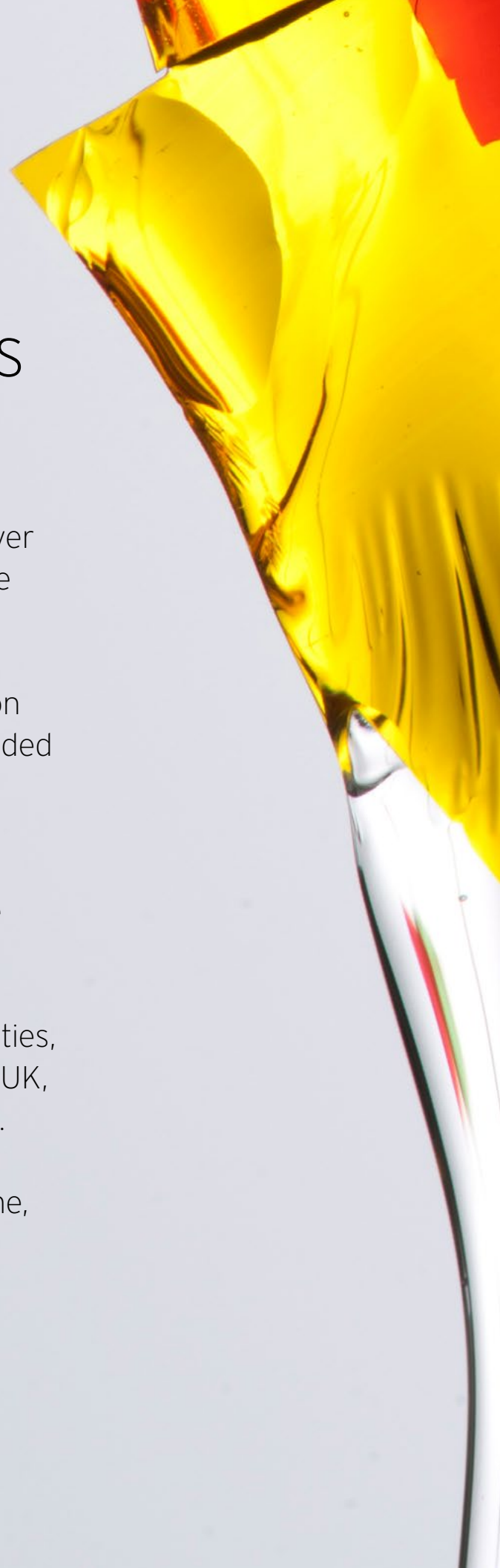
While risky assets seem unlikely to deliver returns as strong as they did in 2017, we remain bullish.

We recently raised our tactical allocation to equities and reduced our recommended exposure to fixed income.

In our view, the most attractive opportunities lie outside the US and we urge clients to 'go global now'.

We have a neutral allocation to US equities, but are overweight Europe outside the UK, developed Asia, and emerging markets.

Despite our underweight to fixed income, we still see selective opportunities, particularly in developed high yield and emerging markets fixed income.





Asia: leaders and laggards

Ken Peng, Investment Strategist - Asia
Kris Xippolitos, Global Head of Fixed Income Strategy

With moderating regional growth, we prefer markets with reasonable valuations and improving fundamentals.

Our favored markets

Equities

Markets: China, South Korea, Japan

Sectors: financials, information technology, consumer discretionary

Fixed income

Local currency: Indian, Indonesian, and Chinese sovereigns

US dollar denominated: high yield bonds

The growth story in Asia continues - **figure 1**. Citi Research believes that GDP may expand by almost 6% in 2018, while inflation may pick up to around 2.6%, but remain moderate owing to the strengthening of regional currencies. Given expected growth, good corporate earnings prospects, and modest inflation, we recommend that investors continue to increase allocations to selective emerging market (EM) fixed income and equities.

The China story evolves under Xi

China's cyclical expansion remains strong, allowing for further policy tightening in 2018. The country tightened monetary and regulatory policy in 2017, which squeezed out shadow financing, redirected credit demand back to the banking sector, and pushed up interest rates. This has been helpful for banks and insurers, and in turn for financial stability.

The central bank is likely to remain hawkish in the near term, while growth remains solid. It also aims to contain the pace of debt build-up, but does not intend to enforce deleveraging dogmatically. If the economy slows further, there is scope to ease monetary policy. This makes us more comfortable that China can achieve growth of about 6.5% in 2018.

Figure 1. Key regional economic data

	Real GDP (% YoY)	Current account (% of GDP)	Fiscal balance (% of GDP)	10yr govt yield (%)	Local currency (vs US dollar)
	2018F	2017F	2017F	Spot	2018F
Japan	1.5	4.0	-3.7	0.04	112.17
Australia	2.8	-2.0	-1.9	2.50	0.77
New Zealand	3.1	-3.0	0.9	2.72	0.71
Asia ex-Japan	5.9	1.8	-1.8	NA	NA
Hong Kong	3.0	4.2	1.4	1.90	7.82
Singapore	3.0	17.6	0.4	2.12	1.30
China	6.5	1.4	-3.0	3.97	6.75
Korea	2.9	4.7	0.8	2.48	1132
Taiwan	2.4	12.5	-0.7	1.03	30.32
India	7.6	-1.5	-6.0	7.06	65.17
Thailand	3.6	8.7	-2.8	2.30	32.60
Malaysia	5.1	2.2	-3.0	3.6	4.10
Indonesia	5.1	-1.7	-2.8	6.52	13455
Philippines	6.7	-0.5	-2.6	5.56	51.50

Source: Bloomberg, Citi Research, as of 24 Nov 2017. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Note: 10-year yields are actually 5-year yields for HK, Malaysia and Philippines.

We also see less Chinese political risk after President Xi solidified his core leadership position at October 2017's 19th Party Congress. There is a high probability that he may continue as leader after his second five-year term ends in 2022. We expect moves towards more inclusive urbanization to lift the incomes of rural and migrant households, which could further increase domestic consumption. We also look for ongoing efforts to reduce industrial overcapacity. Greater financial liberalization should enable more foreign capital to flow into Chinese onshore equities and fixed income, as well as directly into businesses.

And outside of China...

While reforms caused some pain to India in 2017, their benefits may begin to be felt in 2018. The implementation of the goods and service tax caused disruptions to the economy, but activity is now returning to normal. The government also announced plans to recapitalize the public banks, initiate a 6.9tn rupee (\$106bn) infrastructure investment program, and deploy fiscal resources to stimulate rural income and consumption. The 2.1tn Indian rupee (\$32bn) recapitalization is equivalent to more than 40% of the market capitalization of the publicly-listed banks and is an important source for credit supply

for proposed infrastructure projects, which aim to build 83,000km of roads over five years. While successful execution will be needed, we believe that the stage is set for growth potentially to return to above 7% in late 2017.

Despite facing near-term hurdles, Indonesia continues to offer a longer-term opportunity, driven by urbanization and industrialization potential. Investment growth is picking up to offset weakness in government spending and exports. Similar to India, the next stage of development depends on the authorities' ability to implement infrastructure investment. Ahead of the 2019 election, there could be further fiscal spending to fuel the economy. Growth may remain very close to 2017 levels at 5.1%, according to Citi Research. The Indonesian rupiah has performed less strongly than other regional currencies during rallies against the dollar, and also fared worse during the dollar's late-2017 rebound. This creates a challenge for tactical investors in Indonesia.

Japan may register another year of modest economic growth in 2018, assisted by a fiscal stimulus program and the build-up to the 2020 Olympic Games. Beyond then, structural issues including a rapidly aging population, persistently low return on equity, and a further hike in the consumption tax expected in October 2019 reduce our confidence in Japan's longer-term prospects.

Equities

EM Asian equities performed strongly in 2017, achieving a price gain of 33% in US dollar terms. Regional currency appreciation against the weakening US dollar was a contributor. Earnings growth and multiple expansion played a greater role. Earnings for Asia Pacific ex-Japan in 2017 is estimated to have increased by 23%, ahead of expectations. Even after the 2017 rally, Asia ex-Japan, ex-Australia, and ex-New Zealand trades at 13 times consensus 2018 earnings - **figure 2**, just slightly above the historical average. Based on 10-year average earnings, Asia ex-Japan still trades at a below-average valuation - **figure 3**.

The equity performance contribution from earnings multiple expansion was largest in China. Growth sectors were the main drivers of this re-rating, as IT and real estate rallied thanks to the boom in e-commerce and the housing market. As growth expectations moderate in 2018, there may be some rotation in performance. We believe that financials, and particularly banks, could potentially outperform - **figure 4**, as non-performing loans fall and net interest margins widen. Chinese banks still trade at 0.9 times book value even after this year's rally, while regional EM banks outside China trade at 1.3 times. We expect this gap to narrow in the coming year.

Figure 2. Asia valuations

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US\$bn	'18E	'19E	'18E	'19E	'17E	'17E	'17E	10yr
Japan	3,576	14.6	13.6	7.6	7.0	1.4	9.1	2.0	26.5
Asia ex-Japan	5,707	13.6	12.4	11.2	9.3	1.8	11.7	2.7	19.0
Australia	1,004	16.0	15.2	4.3	4.9	2.0	11.9	4.4	18.4
Hong Kong	524	16.3	14.9	6.9	6.2	1.4	8.0	3.2	21.6
Singapore	199	14.2	13.3	9.8	7.4	1.3	8.6	3.4	14.2
New Zealand	22	20.5	18.9	7.7	8.7	1.9	8.6	4.9	20.9
EM Asia	3,958	12.8	11.6	13.3	10.6	1.8	12.6	2.1	19.1
China	1,633	13.9	12.0	15.0	15.5	2.1	12.8	1.9	17.7
Korea	844	8.8	8.5	12.0	4.2	1.2	12.1	1.6	15.9
Taiwan	618	13.9	12.9	9.8	7.5	1.9	12.6	3.7	21.1
India	454	18.4	15.6	19.0	18.2	3.2	14.4	1.4	27.6
Thailand	116	15.0	13.2	8.1	9.0	2.0	12.6	2.8	19.7
Malaysia	115	15.4	14.4	12.0	7.3	1.6	9.3	3.0	18.0
Indonesia	117	16.1	14.2	13.6	12.9	2.9	15.8	2.4	24.5
Philippines	58	18.4	16.5	12.4	13.4	2.5	12.0	1.4	28.8

Source: Factset Consensus, MSCI, as of 24 Nov 2017. 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/10-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. Asia ex-Japan valuations below historical average



Source: MSCI, Bloomberg, as of 27 Nov 2017. CAPE is cyclically adjusted price to earnings: current price/10-year average real EPS. Std dev. = standard deviation, measuring the distance of valuations from their historical average. Past performance is no guarantee of future results. Real results may vary.

Figure 4. Our favored Asia sectors

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US\$bn	'18E	'19E	'18E	'19E	'17E	'17E	'17E	10yr
Consumer discretionary	439	15.8	13.6	22.2	15.6	2.0	10.2	1.8	17.6
Financials	1,457	11.0	9.8	7.6	9.1	1.4	11.8	3.7	16.0
Information technology	1,438	14.7	13.6	18.4	8.3	3.2	18.3	1.3	30.7

Source: Factset Consensus, MSCI, as of 24 Nov 2017. 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/10-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.

We also see South Korea as a market with substantial potential. Major political and corporate scandals, as well as an extended diplomatic spat with China weighed upon earnings in 2015 and 2016. But growth returned to South Korea in 2017, as political conditions calmed under the new president and the relationship with China began to improve. Tension with North Korea remains, but we expect neither resolution nor military escalation. As such, we believe that the South Korean economy is poised for higher growth. With the lowest valuation in the region, the country's equity market may have an opportunity to narrow its discount in 2018.

Indian and Indonesian equities were previously among our favored markets. While we continue to see long-term potential in these economies, their equity markets already reflect this. India, for example, has seen 2017 earnings growth forecasts revised down substantially from 17% to 9%, but equity prices surged 25%, as domestic investors remained focused upon the prospects for further reform under Prime Minister Modi. These hopes may be realized, but the consensus earnings growth forecast remains at 19% for 2018, which leaves limited room for positive surprises.

In Japan, sharp increases in corporate earnings in 2017 prompted analysts to raise their forecasts substantially. However, equity market performance did not strengthen until the US dollar started to rebound against the Japanese yen in early September. Possible short-term US dollar appreciation, a recently announced fiscal stimulus program, and preparations

for the 2020 Olympic Games could help drive this market higher in 2018. Beyond then, equity market gains look highly dependent on further dollar strength against the yen, for which we see only limited scope. As a result, we prefer to seek selective opportunities in Japan, such as in robotics, IT, and telecoms, where Japanese firms remain globally competitive.

Fixed income

Asia is likely to experience further monetary tightening in 2018, but less than the US. In 2017, certain regional central banks - notably China and South Korea - had a hawkish bias. Singapore, Malaysia and the Philippines are likely to tighten in 2018. India and Indonesia, on the other hand, still have room to ease policy. Overall, Asian central banks are likely to be more driven by local conditions, rather than by US monetary policy. This means investors have to be selective in their choice of fixed income markets across Asia.

Emerging Asian fixed income markets in 2017 benefited largely from attractive valuations, fading China risks, and a broadening improvement in global economic fundamentals. Moreover, an 8% drop in the US dollar provided an additional boost to local currency fixed income performance, fueling local Asia sovereign bonds to gain 11.5% as of 27 November. US dollar denominated debt also managed to gain by 8.5% through the same period.

In external Asian bond markets, valuations have now become much less compelling. Average sovereign spreads over US Treasury yields have compressed 150 basis points (bp) over the last two years, to their tightest levels since 2012. Even spreads on US dollar investment grade (IG) corporates have compressed to historical low levels. Although considered the highest quality emerging market region, Asia's external bond spreads appear rich to us.

Looking ahead, US dollar denominated Asian debt may be challenged by higher US Treasury yields. While this will likely weigh down on prices, improving fundamentals may drive spreads even tighter, providing some offset. Although Asian IG valuations appear relatively more attractive than US domiciled IG corporates, wider spreads in Asian high yield (HY) markets may provide more of a buffer. Indeed, Asia HY default rates have steadily declined over the last several years.

Look local

In our view, local Asian bond markets offer more compelling yield opportunities. The regional growth outlook is improving and lower inflation trends should allow central banks to maintain easy monetary policies. While nominal exchange rates have rallied for most Asian countries this year against the US dollar, our outlook remains positive. Return expectations should still be revised lower, but attractive carry and continued investment inflows may fuel further outperformance.

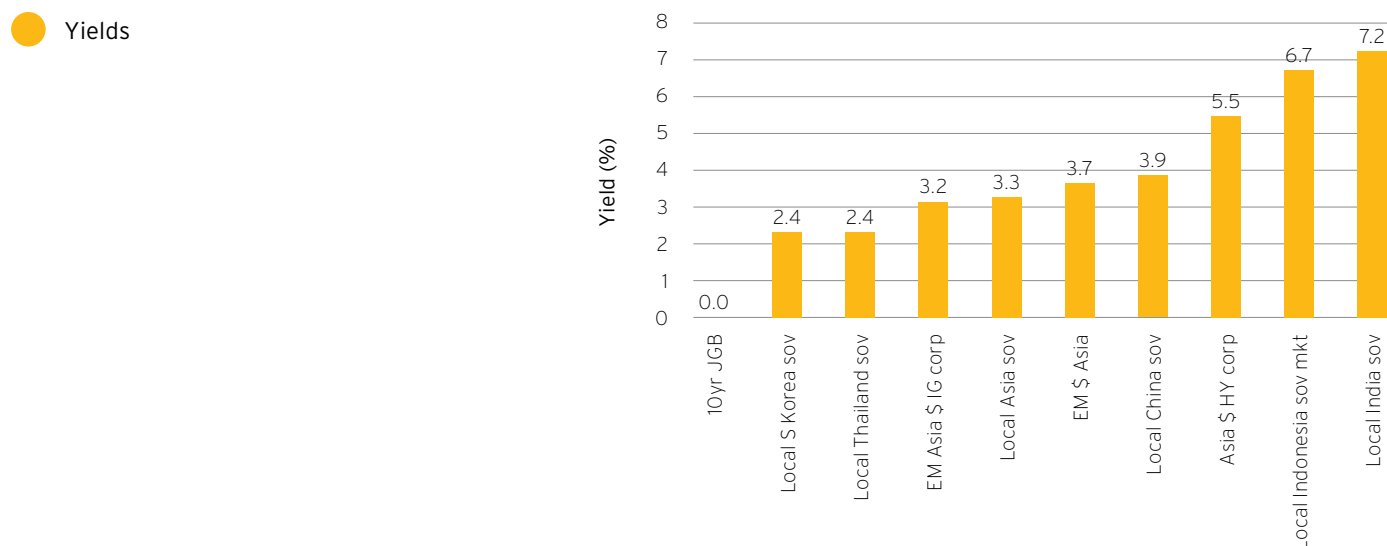
Our favored local markets include China, where higher yields have created an attractive opportunity. After rising 135bp over the last twelve months, 5-year sovereign bond yields have reached 3.9%, a three-year high. Rated A1/A+, real yields over 2.0% are some of the highest in the region - **figure 5**.

More notably, the launch of the 'Bond Connect' - a platform to provide access to local China bond markets through a Hong Kong exchange - is intended to open up China's onshore bond market to the world. Considering just 4% of Chinese government bonds are owned by foreign investors, we would expect demand for local markets to grow over time. In turn, an increase in inflows can boost the currency and support lower bond yields.

We also maintain our high conviction in local Indonesian bonds, despite 12% gains through November 2017. Though 5-year sovereign yields have dropped 150bp, yields around 6.0% remain some of the highest in the EM universe. With inflation under control, central bank policy should remain relatively dovish in 2018. As such, we expect the nominal exchange rate to remain stable.

Local Indian debt has lagged somewhat, as economic momentum slowed. Concerns over wider fiscal deficits and increased bond issuance have also weighed upon local yields. That said, 5-year yields at 7% still remain attractive and represent the highest real yields in the region, while the macroeconomic deterioration has reversed. The Indian rupee and local rates are likely to be relatively more volatile over the coming year, but we remain encouraged by India's longer term outlook and maintain our high conviction in the country.

Figure 5. Asian yields



Source: The Yield Book, as of 27 Nov 2017. Past performance is no guarantee of future results. Real results may vary.

Foreign exchange

Driven by US tax reforms, the US dollar could strengthen against EM Asian currencies for a time. In that scenario, the more sensitive currencies like the Indian rupee and Indonesian rupiah are likely to prove more vulnerable, while more managed currencies like the Chinese yuan, Taiwanese dollar, and Singaporean dollar are likely to show more resilience. In the longer term, EM Asian currencies may strengthen once more in the event of future weakness in the US dollar, solid external accounts, a stable to stronger yuan, and a relatively upbeat outlook for commodities.

The Chinese yuan was an anchor of stability for Asian currencies prior to 2015 and is likely to resume that

function in the coming years. We believe the Chinese authorities intend to continue moving towards more market-determined pricing of the yuan. However, we think they will move gradually, taking account of prevailing market conditions, so as to limit extended one-way moves. That said, we expect the weaker dollar and greater investor inflows to China to support a generally stronger yuan over the coming three years.

We have a relatively upbeat view on commodities for 2018, which would be supportive of the currencies of commodity-exporting emerging market countries, particularly the Malaysian ringgit.

Please see Glossary for bond rating equivalence.

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.

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.

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.



Europe: continued improvement

Jeffrey Sacks, Investment Strategist - Europe
Kris Xippolitos, Global Head of Fixed Income Strategy

While European political risks have eased and economic growth has broadened, investors should remain selective.

The economic and political backdrop for 2018 looks more encouraging for continental European assets than for UK assets. But even in continental Europe, we advocate selectivity, with an overall preference for equities over fixed income. Within equities, we favor the core European nations such as France and Germany over the peripheral countries such as Spain and Portugal. Within fixed income, we prefer high yield corporate credit to investment grade corporate credit.

European GDP growth is likely to be around 2.4% during 2018, driven by German growth of 2.7% but tempered by Italian growth - **figure 1**. The European Central Bank's (ECB) asset purchase program has started to provide a noticeable boost to credit growth. However, it has so far had only a muted effect on the core rate of inflation, which at 0.9% remains substantially below the ECB's 2% target. As a result, only gradual monetary tightening is likely. We expect the ECB to keep rates at their current record low levels through 2018 while also reducing its asset purchases.

Our favored markets

Equities

Markets: France, Germany

Sectors: Europe (ex-UK)
financials and energy

Figure 1. Key regional economic data

	Real GDP (% YoY)	Current account (% of GDP)	Fiscal balance (% of GDP)	10yr govt yield (%)	Local currency (vs US dollar)
	2018F	2017F	2017F	Spot	2018F
Euro Area	2.4	3.2	-1.2	0.50	1.14
Germany	2.7	7.7	1.1	0.33	1.00
France	2.0	-1.1	-2.9	0.64	1.00
Italy	1.6	2.6	-2.1	1.71	1.00
Spain	2.7	1.8	-3.2	1.41	1.00
Portugal	2.3	0.9	-1.5	1.88	1.00
Netherlands	2.6	9.5	0.6	0.42	1.00
Switzerland	1.7	9.5	0.3	-0.05	0.98
United Kingdom	1.5	-4.8	-2.9	1.28	1.31

Source: Bloomberg, Citi Research, as of 27 Nov 2017. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

European political risks are elevated, but are not as worrying as a year ago. Anti-immigration and populist sentiments persist, but there is little likelihood of any further referendums on EU or Eurozone membership being announced over the coming twelve months. The main challenge is that there are many weak ruling coalitions across Europe, which will probably make decisive policymaking and much-needed structural reform more difficult.

Italy is a prime example of this. Its populist Five Star Movement is not expected to win the general election of early 2018, but could form part of the governing coalition. In September 2017's German election, Angela Merkel won a fourth term but she will need to rebuild a coalition. Far-left and far-right parties won nearly a quarter of the seats. The reform drive favored by the leaders of France and Germany is likely to be more limited in scope than earlier envisaged, despite President Macron's proposed new French labor laws and his vision for Europe.

In Spain, the central government has imposed direct rule over the region of Catalonia, following the latter's unilateral declaration of independence, giving it control over all regional public institutions. It has also called regional elections for 21 December. Spanish assets are expected to experience ongoing short-term volatility until the tension subsides.

The UK

Citi Research forecasts that the UK will grow at only 1.5%. Consumer activity is likely to be held back by weakening real income growth, as wages continue to lag behind stubbornly high inflation. Spending has been supported by a notable rise in credit card borrowing, which cannot continue indefinitely. The Bank of England raised interest rates for the first time in more than a decade in November 2017 and may tighten further in 2018. In addition, corporate investment is sluggish, with foreign direct investment vulnerable owing to the uncertainty created by the slow progress of Brexit negotiations. The EU has the upper hand over the UK in those negotiations.

The UK is seeking a transitional trade arrangement of around two years starting in March 2019. To agree such an arrangement in principle, however, there first needs to be agreement on the amount of the UK's divorce bill, Irish border arrangements, and the rights of EU nationals living in the UK and UK nationals living in the EU. Prime Minister May's domestic vulnerability and her own party's lack of a parliamentary majority are likely to hinder the progress of the negotiations and make it harder to obtain eventual UK legislative approval. These political pressures may impact the British pound and UK government bonds, which are both expected to remain volatile within downtrends.

A further UK political risk is if the current minority Conservative government falls and another general election is held. Opinion polls since June's snap general election have suggested the opposition Labour Party might be able to form a government. International investors in Sterling assets would likely be unsettled by its left-wing leadership's agenda, which includes renationalization of privatized industries.

Equities

We are overweight Europe ex-UK equities for several reasons. Firstly, regional economic growth is expected to contribute to overall earnings growth of 10.2% in 2018 - **figure 2**, with healthy increases across a range of individual sectors. Secondly, the average European equity dividend yield of 3.1% is 2.4% above the average European investment grade bond yield. Thirdly, although the appreciation of the Euro has weighed upon exporters' earnings, this currency strength has been an important factor in encouraging inflows from overseas investors. Fourthly, contained European political risk should not dampen investor sentiment too much. We therefore see scope for further earnings multiple expansion from the current level of 15, which is around the historic average.

While we are bullish Europe ex-UK equities, three factors are becoming more important in managing European equity portfolios. Volatility is expected to rise gradually

from depressed levels as the ECB reduces easing in Europe. Total return expectations are likely still to be positive on a twelve-month view, but less positive than last year. Finally, selectivity is becoming more important at the sector, theme, and stock levels.

As the economic and market cycles mature in the region, portfolio construction and security selection are increasingly important. At the thematic level, we prefer high dividend yield and de-equitization - companies buying back their own shares. At the sector level, our bias is for cyclicals over defensives. We prefer financials and energy, which both benefit from a favorable combination of earnings growth, dividend yields, and undemanding valuations - **figure 3**. Sectors where revenue growth can be sustained should also do well, notably healthcare and information technology.

By contrast, we are neutral on UK large-cap equities. That is despite their average dividend yield of 4.2% and the boost to exporters' earnings from the slide in Sterling since the Brexit vote in June 2016. With forecast earnings growth of 5.4% in 2018, UK large-caps trade on a forward multiple of 14.2 times. Given this valuation as well as monetary tightening amid slower growth, the UK market looks vulnerable to any earnings disappointments. Small- and mid-cap equities are even more at risk, since such companies are typically more domestically-focused and thus exposed to the slowing UK economy. Greater volatility in UK equities as a whole is probable.

Figure 2. Europe valuations

	Mkt cap US\$bn	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE 10yr
		'18E	'19E	'18E	'19E				
Europe	9,387	14.8	13.6	8.8	8.8	1.9	11.6	3.4	18.8
United Kingdom	2,565	14.2	13.2	5.4	7.4	1.9	12.6	4.2	16.3
Europe ex UK	6,822	15.0	13.7	10.2	9.3	1.9	11.2	3.1	20.2
France	1,581	14.9	13.7	7.4	9.2	1.6	10.2	3.1	20.2
Germany	1,449	13.6	12.5	9.5	8.6	1.8	12.0	2.8	19.9
Switzerland	1,196	17.2	15.7	16.4	9.2	2.6	13.0	3.1	24.2
Spain	487	12.8	11.8	8.6	8.9	1.3	9.6	3.9	13.4
Italy	356	12.7	11.3	16.8	13.2	1.2	7.9	3.7	15.4
Portugal	23	17.1	15.7	5.1	9.3	1.9	10.7	4.2	11.2

Source: Citi Research, Worldscope, MSCI, Factset, as of 27 Nov 2017. *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 10-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.

Figure 3. Our favored European sectors

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US\$bn	'18E	'19E	'18E	'19E	'17E	'17E	'17E	10yr
Europe ex UK	6,822	15.0	13.7	10.2	9.3	1.9	11.2	3.1	20.2
Energy	282	14.7	13.6	2.9	8.1	1.3	8.5	4.7	11.6
Financials	1,403	11.5	10.5	13.8	9.7	1.0	7.6	4.2	14.4

Source: Citi Research, Worldscope, MSCI, Factset, as of 27 Nov 2017. *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 as current price divided by 10-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.

Fixed income

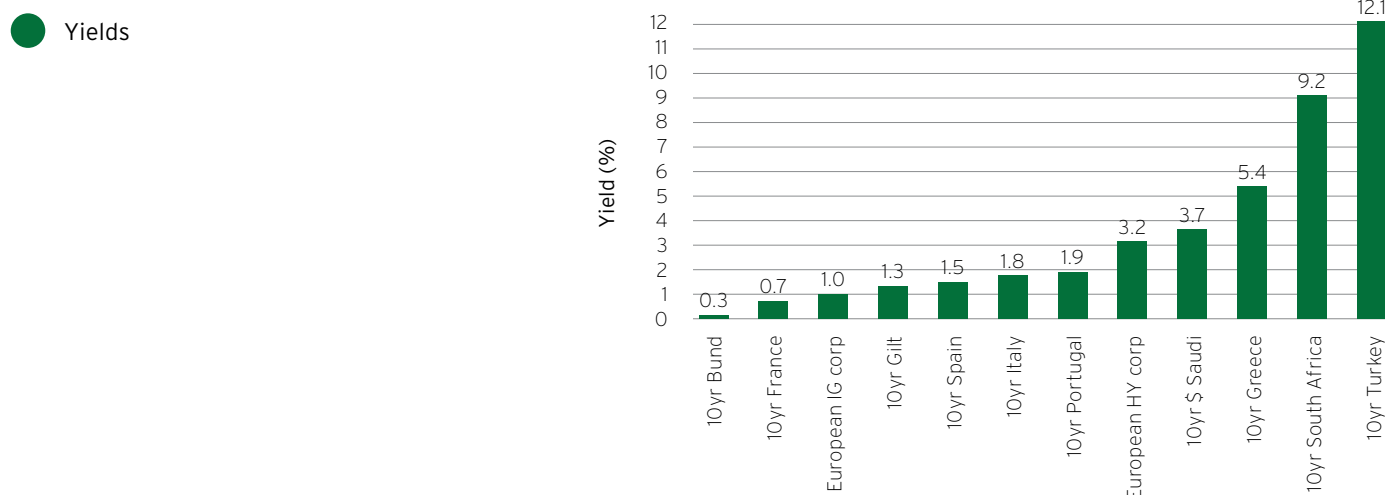
Valuations in European fixed income markets have been dominated by politics, quantitative easing (QE) and negative interest rate policies. In the Eurozone (EZ), deposit rates have been negative since 2014 and the European Central Bank (ECB) has accumulated €3.5 trillion in sovereign debt, covered bonds and investment grade (IG) corporates through its asset purchase program (APP).

With the ECB's balance sheet measured in US dollars now larger than that of the US Federal Reserve, the average regional IG bond yield is a meager 0.5%, with 30% of Euro-denominated sovereign debt yielding less than zero. We remain underweight Eurozone sovereign markets.

Low yields pose a significant risk for European bond markets over the coming year. Although the ECB had recently announced an extension to its APP through September 2018 - committing to a larger balance sheet - monthly purchases have been cut in half to €30 billion from €60 billion. This should provide some technical relief, as net supply grows and the private sector is required to absorb more duration risk. This will likely pressure yields to rise and curves to steepen.

That said, the ECB is still unlikely to raise policy rates until 2019, and the committee has strongly voiced the opinion that the current program is open-ended. Along with muted inflation, we see long-term German Bund yields contained below 1% next year.

Figure 4. European yields



Source: The Yield Book, as of 27 Nov 2017. Past performance is no guarantee of future results. Real results may vary.



Still, low yields offer very little protection against even the smallest rise in rates. Indeed, with 10-year Bund yields around 0.3%, a modest 10 basis point rise is all it would take to negate a whole year's worth of coupon payments.

Euro-denominated IG corporate bonds are not likely to fare much better - **figure 4**. Average yields are a dismal 0.65%, owing to a dearth of new supply and the ECB absorbing nearly €2 trillion of IG non-financial corporates through its APP. Like sovereign debt, this implies a similar lack of protection if interest rates move higher. More importantly, if the ECB no longer acts as an indiscriminate buyer, private investors may demand additional compensation before stepping in. Spreads could therefore follow yields higher, exacerbating poor performance.

European high yield (HY) may provide some solace, although average yields are now at a historically low 3.2%. While fundamentals are improving, performance may be challenged by an exodus of non-traditional buyers who had crossed over to HY for additional yield pick-up. If yields rise from declining ECB IG corporate bond purchases, these non-traditional buyers may move back up in credit quality, driving HY spreads wider. Still, default rates are expected to remain low. This could provide some comfort for local buy-and-hold investors, who are suffering from cash rates near 0%.

In the UK, the Bank of England raised benchmark rates for the first time in a decade in November 2017. Market implied probabilities are pricing in two rate hikes through 2018. That said, rising inflation pressures and Brexit negotiations are likely to create a challenging environment for UK Gilt yields. While tighter policy should pressure short rates higher and the curve flatter, a constrained growth outlook may amplify volatility on the long-end of the curve. We remain underweight UK fixed income markets, both in rates and corporate credit.

Foreign exchange

The Euro is well supported by the increasing likelihood of more aggressive ECB tapering of its asset purchase program. We see signs that Euro-buying is occurring because of longer-term investment inflows into the region rather than because traders are merely covering short positions. The single currency's upward momentum should therefore be maintained, albeit at a slower pace than during the early part of 2018, mainly because the ECB has an open-ended commitment to extend the quantitative easing program should the need arise due to disappointing economic data. Another crisis of confidence in the Euro's sustainability is not likely during 2018, helped by the strengthening French-German partnership within the European Union. We would therefore be buyers into any periods of weakness and envisage further gains next year against both the US dollar and the British pound.

Against the US dollar, the British pound is expected to trade in a wide range between \$1.28 and \$1.35 in 2018, driven mainly by political events within the UK and its dealings with the EU. Signs of progress in the Brexit negotiations could periodically trigger rallies in the pound. Further monetary tightening from the Bank of England could have the same effect. However, if investors perceive a rising risk of another general election or of the UK leaving the EU without a trade agreement, the currency could revisit its post-Brexit lows around \$1.20. A sustained breakout to the upside in 2018 would require much greater clarity on the UK's long-term post-Brexit roadmap.



Latin America: recovery continues

Jorge Amato, Investment Strategist - Latin America
Kris Xippolitos, Global Head of Fixed Income Strategy

Continuing regional economic recovery and moderating inflation underpin our positive view on Latin America for 2018.

Latin American economies look set to extend their cyclical recovery in 2018. A synchronized upturn in global growth, low inflation, and favorable global financial conditions are expected to propel this recovery. The major regional economies of Brazil, Mexico, Argentina, Colombia, Chile and Peru, are forecasted to experience an increase in GDP growth from 1.7% in 2017 to 2.5% in 2018 - **figure 1**.

The first stage of Latin America's recovery was driven by currency cheapness, a pick-up in exports, and stabilization of domestic economies. We expect the second stage in 2018 and 2019 to be driven by domestic aggregate demand, fueled by lower borrowing costs, declining inflation, and credit expansion.

Consensus forecasts point to further moderation in regional inflation from 6.3% in 2017 to 4.7% in 2018, allowing central banks to maintain easy monetary policies. While nominal exchange rates have appreciated, the region's currencies remain attractive in real effective terms. This should continue to draw in foreign capital and investment, thus providing the potential for further stability.

Although we have a positive outlook for regional economic activity, we would also highlight that this recovery is likely to be shorter-term and not reach 2002-2007 levels, when GDP growth was 6-8% regionally. Furthermore, we do not expect a repeat of the sustained increases in commodity prices that benefited the region during that period.

Our favored markets

Equities

Markets: Brazil

Sectors: consumer discretionary, financials, materials and energy

Fixed income

Local currency: Brazil, Colombia, Mexico

US dollar denominated: Argentina, Brazil, Colombia

Elections and trade

Idiosyncratic country risks are more likely to have a greater impact in 2018. Presidential and general elections in Colombia, Brazil, and Mexico are scheduled to take place in May, July and October respectively, with the potential to affect consumer and investor sentiment. However, we expect the final results to produce market-friendly administrations.

Colombian politics will be center-stage in March, with parliamentary elections, and then again in May and June with the first and second rounds of its presidential election. The 2017 peace treaty with the Revolutionary Armed Forces of Colombia (FARC) allows for the formal entry of that organization into the political sphere, which has displeased many Colombians. The result of the 2018 elections could impact local sentiment and growth.

Brazil's general election will take place in October. We expect President Temer to remain in office until then. The various charges against him over the year have delayed discussions over structural reforms - especially pension reform - but we expect progress in 2018. While it is still too early to have a proper sense of how the election might go, we would expect economic performance to have a significant bearing on the potential outcome. The risk of extreme candidates winning should be lower the better the economy does.

In Argentina, October 2017's mid-term elections yielded a significantly positive result for investors, pointing to encouraging prospects for reform and growth in 2018 and probably beyond. Indeed, the strong result in favor of President Macri should pave the way for further free-market tax, labor, and other reforms. The result may also raise the likelihood of Macri retaining the presidency in 2019.

Renegotiation of the North American Free Trade Agreement (NAFTA) is expected to come to a head in early 2018. However, it could very well drag on for several months and overlap with the Mexican presidential elections in July. Our base case is that NAFTA will be successfully renegotiated sometime late in the first quarter of 2018, with ratification by a new Mexican administration after the elections. If the US withdraws from NAFTA, however, we expect a period of high volatility and uncertainty for Mexican assets, but not a fatal long-term blow to the economy. It is still too early to form a decisive view on the outcome of the elections, but political uncertainty combined with NAFTA negotiations will likely make for a hectic first half to 2018 in Mexico.

Figure 1. Key regional economic data

	Real GDP (% YoY)	Current account (% of GDP)	Fiscal balance (% of GDP)	10yr govt yield (%)	Local currency (vs US dollar)
	2018F	2017F	2017F	Spot	2018F
Argentina	2.8	-3.9	-6.1	-	20.5
Brazil	2.4	-0.5	-7.7	9.79	3.22
Chile	3.2	-1.4	-3.0	4.55	617
Colombia	2.5	-3.8	-3.0	6.36	3025
Mexico	2.5	-1.8	-1.9	7.27	18.13

Source: Bloomberg, Citi Research, as of 28 Nov 2017. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Past performance is no guarantee of future returns. Real results may vary.

Equities

We enter 2018 overweight most Latin American equity markets. Following a 36% total return in 2016, the MSCI Latin America Index had produced a 21.5% total return in 2017, as of 30 November. For 2018, we expect more modest returns, with higher volatility and a greater impact from idiosyncratic risks. Based on valuations, Brazil looks well placed to outperform, along with the regional consumer discretionary, financials, materials and energy sectors.

Consensus expectations are for regional earnings per share growth (EPS) of 12% in 2018 and 17% in 2019, following 53% in 2017 and nearly 72% in 2016 – **figure 2**. The substantial total returns on regional equities have followed EPS growth closely – **figure 3**. With valuations still attractive, 2018 could see double-digit returns again, even without any increase in valuation multiples.

As well as the prospect of solid EPS growth, positive earnings revisions, and attractive absolute and relative valuation multiples, we see the likely continuation of the cyclical recovery as very supportive for equity markets. Lower domestic interest rates and strong credit growth have encouraged consumption and investment, improvements that have in turn benefited corporate balance sheets. The interaction of earnings growth, higher profit margins, operational leverage, and lower interest expenses has helped raise profitability and returns on equity. We expect these trends to continue in 2018.

Figure 2. Latin America valuations

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US\$bn	'18E	'19E	'18E	'19E	'17E	'17E	'17E	10yr
MSCI EM Latin America	637.1	13.8	12.0	11.4	14.6	1.9	12.0	2.7	18.8
Argentina	38.1	13.5	11.5	32.1	17.6	2.9	16.5	0.3	NA
Brazil	371.5	12.8	11.0	13.2	15.2	1.7	12.0	2.9	16.7
Mexico	163.3	15.9	14.1	2.0	12.9	2.3	14.2	2.3	27.3
Chile	60.3	17.2	15.0	19.1	14.3	1.8	8.8	2.5	20.9
Colombia	21.1	12.9	10.7	22.3	20.6	1.2	7.9	2.4	20.8
Peru	20.9	13.9	12.7	19.3	9.2	2.4	14.3	2.3	21.0

Source: Citi Research, Worldscope, MSCI, Factset, as of 24 Nov 2017. 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 10-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.



Figure 3. Returns tracking earnings growth



Source: Bloomberg, Citi Private Bank, as of 1 Dec 2017. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

Favored markets and sectors

Our most favored national market is Brazil. Its economy could further surprise to the upside in 2018 as domestic demand fuels growth and earnings. Election-related volatility should not have meaningful impact until well into the second quarter. EPS growth should moderate from around 73% in 2017 to around 12%. Chile - another of our top picks - also outperformed in 2017, with the MSCI Chile Index producing a total return of 25% as of 30 November. We believe that Chilean equities have got slightly ahead of earnings, while their forward earnings multiple is one of the highest in the region.

We also expect Argentina - another regional top performer in 2017 - to do well after President Macri's victory in the mid-term elections. Robust EPS growth could drive the local market even higher. In Mexico, meanwhile, we do not see serious economic damage resulting from the

renegotiation of NAFTA, even in a worst-case scenario. The country's real effective exchange rate (REER) remains significantly undervalued. So, we continue to suggest a more opportunistic approach in the face of the strong performance with periods of high volatility that we expect.

Given our expectations for another solid year of economic growth much like 2017, our favored sectors remain unchanged for 2018 - **figure 4**. Lower inflation and interest rates and improved credit growth and consumption should support consumer discretionary and financials. Meanwhile, stable commodities and a pick-up in private and public sector investment should be positive for materials and energy. On a relative basis we would expect utilities and consumer staples to present positive returns but underperform.

Figure 4. Our favored Latin American sectors

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US\$bn	'18E	'19E	'18E	'19E	'17E	'17E	'17E	10yr
Consumer discretionary	36.5	20.3	17.5	22.3	15.6	2.9	11.7	1.0	27.5
Financials	194.8	11.1	9.7	10.4	14.0	1.8	14.9	3.4	18.5
Materials	100.5	12.8	11.4	1.1	12.5	1.4	11.3	1.9	16.6
Energy	53.9	12.3	10.1	37.8	21.0	1.0	6.2	2.8	9.1

Source: Citi Research, Worldscope, MSCI, Factset, as 27 Nov 2017. *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 10-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.

Fixed income

Latin American fixed income markets have benefited from a 'perfect storm' of positive influences in 2017, which saw them generate equity-like returns. Hard currency – US dollar-denominated – sovereign bonds gained 10%, US dollar corporate bonds gained 11.5%, and local sovereign debt markets returned over 17% (unhedged to US dollars), through 27 November 2017.

Both regional fixed income assets and currencies had taken a fall in late 2016 owing to the surprise election of President Trump in the US. Subsequently, though, the improving macro environment, low developed market bond yields, and attractive regional valuations generated significant inflows into one of the few fixed income markets globally considered inexpensive. As a result, index spreads for both US dollar sovereign and corporate bonds tightened 50-100 basis points (bp), with yields dropping by an equal amount. Local currency bond yields fell nearly 130bp, as nominal exchange rates generally improved.

Although future performance will likely moderate, we believe improving fundamentals should support further inflows and outperformance over the coming year.

A compelling opportunity

Despite higher valuations, Latin America still offers some of the most compelling opportunities in global fixed income today. US dollar sovereign benchmarks yield near 6% on average – **figure 5** – with spreads over US Treasuries of roughly 370bp. Local sovereign bond yields are even more impressive at 7.8%.

Although future performance will likely moderate, we believe improving fundamentals should support further inflows and outperformance over the coming year. Indeed, some countries come with heightened credit risk – such as Venezuela – or political risk – Brazil, Colombia, and Mexico. However, we still advocate broad diversified exposure across the region. We remain overweight in both US dollar-denominated and local currency Latin American debt.

External debt opportunities across the region have become less apparent, as spreads across most Latin American countries and credit sectors have tightened. That said, relative value still exists, especially when compared to US high yield (HY) markets. While benchmark spreads between the two markets are roughly the same at around 340bp, Latin American spreads remain well above their tightest levels since the Global Financial Crisis of 2008-09. Moreover, we believe there is a major difference between sovereign and corporate risk. While future returns will likely be challenged by higher US Treasury rates, we believe there is room for additional spread compression.

Local Brazilian debt remains one of our highest conviction markets for 2018, as the momentum in fundamentals remain generally intact. Despite 16% gains through 27 November 2017 and significantly lower rates, 5-year sovereign bonds still yield over 9%. The central bank is expected to cut rates further, although the pace will likely slow in 2018. While elections later in the year could trigger market volatility, lower inflation and improving growth could support further outperformance, in our view.

Local Mexican sovereign debt has the potential to generate attractive returns in 2018. Rated A2/A, 5-year sovereign bonds yield near 7%. This makes Mexico the highest yielding, single-A rated issuer in the world. While the risks for a weaker peso are meaningful – especially in relation to NAFTA renegotiation – yields are clearly attractive. Even hedged, yields around 3.0% offer value. We remain overweight both local Mexican and Brazilian local bond markets.

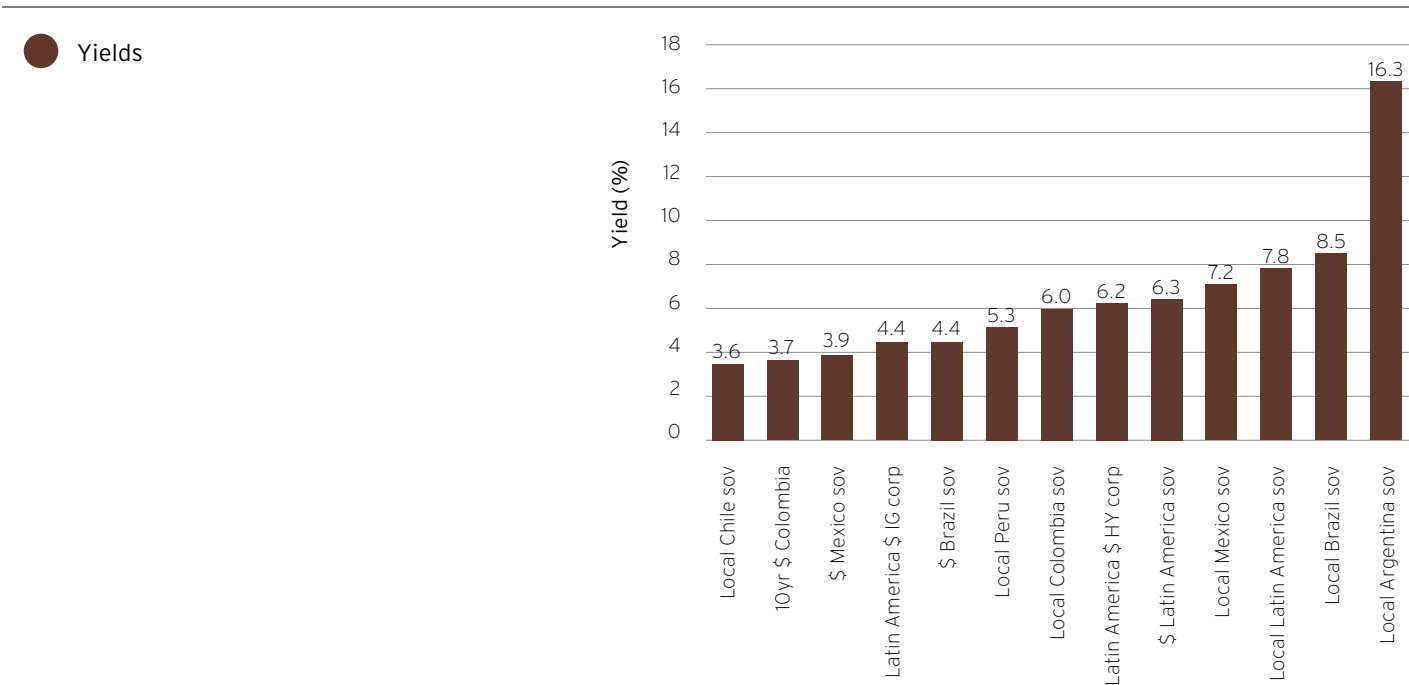
Foreign exchange

Latin American currencies continue to be supported by improving fundamentals and stable commodity prices. Real effective exchange rates (REER) have appreciated but remain below their long-term peaks of overvaluation. A virtuous circle is underway, with attractive REER attracting foreign capital inflows, stabilizing nominal exchange rates, reducing inflation expectations, allowing central banks to cut rates, and attracting further foreign capital inflows by way of high local real rates and attractive equity valuations. This positive dynamic is likely to persist in 2018, helped by stronger domestic demand and cheaper credit. We expect nominal exchange rates to stay mostly range-bound in 2018 but with risk of further appreciation. Pockets of volatility driven by country-specific risks - mainly electoral - are probable. Externally, the main driver could

be US economic policy, where stronger than expected fiscal stimulus or a more hawkish Fed could strengthen the US dollar and overall market sentiment towards risk, and/or an unexpected economic slowdown in China.

The Brazilian real has appreciated 27% since its lows of early 2016, but domestic aggregate demand should provide a further boost to 2018 growth. The Chilean peso and the Peruvian sol should benefit from stable commodity prices and strong growth. The Mexican peso seems the most undervalued currency in REER terms, but is also subject to high volatility due to the ongoing NAFTA renegotiation and presidential elections. We see the Argentine peso as overvalued in REER terms but we believe capital inflows will keep the nominal exchange rate well supported.

Figure 5. Latin American yields



Source: The Yield Book, as of 27 Nov 2017. Past performance is no guarantee of future results. Real results may vary.

Please see Glossary for bond rating equivalence.

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.



North America: expansion extended

Charles Reinhard, Investment Strategist - North America
Kris Xippolitos, Global Head of Fixed Income Strategy

Amid continuing economic growth and richly valued markets, we identify selective opportunities in equities and fixed income. US-centric investors may look to go global.

Our favored markets

Equities

IT

Healthcare

Energy

Industrials

Fixed income

US investment grade,
US high yield, and US
municipal bonds

The US economic expansion that began in mid-2009 looks set to continue through 2018. Leading economic indicators point to further growth accompanied by tame inflation. Citi Research forecasts that GDP will accelerate from 2.2% in 2017 to 2.7% in 2018, aided by tax cuts and hurricane-related government spending - **figure 1**. If it continues through 2018, as we expect, the current expansion will be the second longest on record, surpassed only by the ten-year expansion that ended in early 2001.

Of course, economic expansions do not die of old age. In the past, excessive monetary tightening in the face of rising inflation has more often than not helped bring about an economic downturn. There seems little prospect of this happening in 2018, however. Citi Research expects consumer price inflation to remain just under 2% in the year ahead. We expect the Federal Reserve to raise its policy rate three times, taking it to 2.25% by the end of the year, as well as gradually reducing its balance sheet of more than \$4 trillion, with newly appointed Fed Chair Jerome Powell continuing with a broadly similar approach to his predecessor.

We believe tax reform will more likely than not occur by early 2018. At the center of this legislation is a proposed corporate tax rate reduction from 35% to 20%. Other things being equal, such a cut would make US firms more competitive in the global marketplace. The reforms could also encourage repatriation of the substantial profits held abroad by US corporations. Firms operating near capacity with full order books could use this cash to increase their capital outlays, so we expect business investment to increase from 4.3% in 2017 to 4.7% in 2018. Others may opt to return incremental cash to shareholders or make acquisitions.

We also think it likely that the North American Free Trade Agreement (NAFTA) will be successfully renegotiated, with incentives to achieve this before Mexico's election in July and the US mid-term elections in November. The average foreign content of a 2016 model year GM-made car sold in the US is 55.4%, highlighting how much US firms depend on cross-border supply chains to offer products at competitive prices. The world economy is more interconnected than it ever has been and within this web of global trade, the linkages between the US, Canada, and Mexico stand out. Canada and Mexico are the US's two largest export markets, while the US is the largest export market for both Canada and Mexico. In the event a trilateral deal cannot be renegotiated, we expect bilateral agreements to take its place. We ultimately therefore expect a continuation of low tariffs and robust trade flows in the region.

In the eighteen US mid-term elections since World War II, the sitting President's party has lost an average of twenty-five seats in the House of Representatives and four seats in the Senate, with higher losses when the President's approval rating was below 50% on election day. However, this tendency may be less relevant in November 2018, as only nine of the thirty-four Senate seats to be contested are held by Republicans. The redrawing of electoral boundaries and the concentration of Democrat voters in cities may also help Republicans to an extent. We believe the elections may create some headline risk but, in the end, investment fundamentals will matter most for markets.

Powered by robust consumer spending, business investment, and government spending, Canada's economy is estimated to have grown at 3% in 2017. Citi Research expects this pace to slow to a still-respectable 2.1% in 2018, with inflation rising slightly from 1.6% to 2%. Consumer and housing activity is expected to cool somewhat following two rate increases in 2017 and the Bank of Canada is expected to raise rates three times in 2018 to 1.75%.

So far, Canada's economy has been little affected by the uncertainty over the renegotiation of NAFTA. Upside risks include a stronger than expected US economy, higher commodity prices, infrastructure stimulus, and cross-border projects with the US. Downside risks include softer trade, lower commodity prices, and a deeper slowdown in housing owing to higher rates.

Figure 1. Key regional economic data

	Real GDP (% YoY)	Current account (% of GDP)	Fiscal balance (% of GDP)	10yr govt yield (%)	Local currency
	2018F	2017F	2017F	Spot	2018F
US	2.7	-2.4	-5.0	2.37	88.9 ¹
Canada	2.1	-3.3	-1.3	1.96	1.2 ²

Source: Bloomberg, Citi Research, as of 24 Nov 2017. 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 US dollar index (DXY)

2 Canadian dollar/US dollar

Equities

We enter 2018 with US equities as the largest outright position in our Risk Level 3 benchmark allocations. They hit new record highs in 2017 and now appear richly rated - **figure 2**. The forward price/earnings ratio and cyclically adjusted price/earnings ratios of 17.9 and 27.8 are well above their long-term averages of 15.9 and 17.8 respectively. Compared to long-term US Treasury yields, however, US equities continue to look attractive. The forward earnings yield of the S&P 500 index is 5.5% over the 10-year Treasury note, versus an average of 6.5% since 1995.

Given valuations and the economic outlook, we expect single-digit returns for US equities in 2018. Between 2012 and 2015, expanding earnings multiples played an important role in driving US equity returns. Since 2016, however, earnings growth and dividends have been the main drivers, in line with the long-term trend. S&P 500 earnings could grow by 6 or 7% in 2018 - before

tax cuts - following their estimated 11% growth in 2017. Potential tax reform could boost the earnings outlook.

We recommend that investors accustomed to having a large US equity bias rethink their allocations. Being US-centric proved an advantage between 2011 and 2016, when US equities and the US dollar rose together. But with non-US equities and currencies - and particularly those in emerging markets - likely to continue making up lost ground over the coming year and beyond, we think that the benefits of global diversification are set to become more apparent.

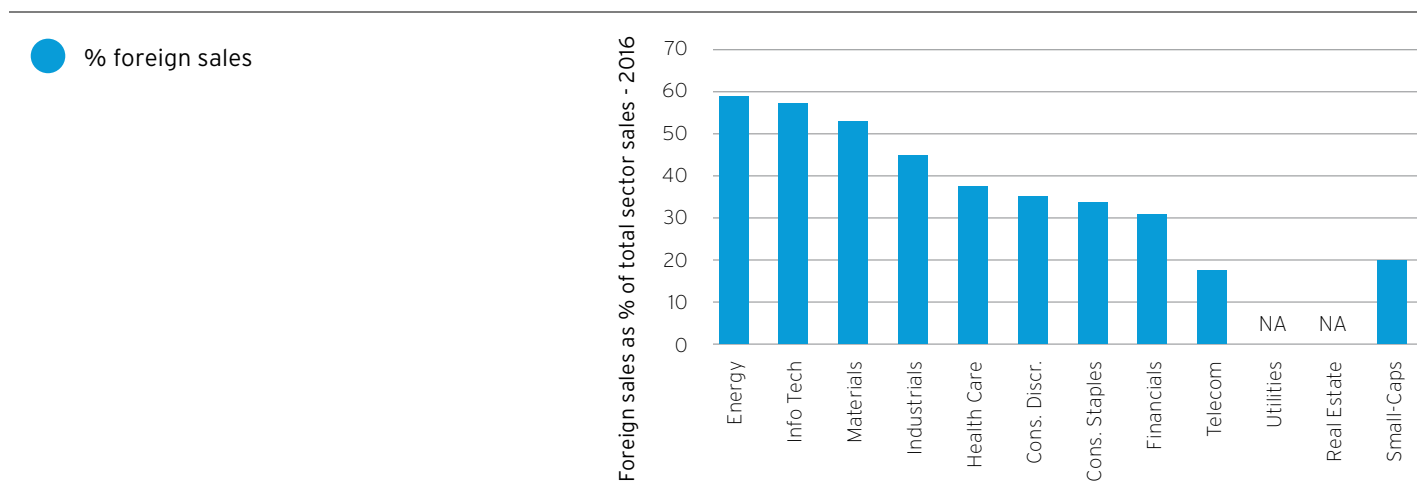
Although neutral on US equities overall, we favor selective segments of the market. A weaker US dollar helps firms that earn a large proportion of their revenues abroad by improving their international competitiveness - **figure 3**. Many of these can be found in the energy, information technology, materials, industrials and healthcare sectors.

Figure 2. North America valuations

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US\$bn	'18E	'19E	'18E	'19E	'17E	'17E	'17E	10yr
MSCI North America	24437.8	17.7	16.2	10.4	9.4	3.1	15.3	1.9	27.3
Canada	1853.6	15.3	15.7	8.4	-2.4	1.8	10.7	2.7	21.6
USA	22979.6	17.9	16.2	10.5	10.2	3.2	15.8	1.9	27.8

Source: Citi Research, Worldscope, MSCI, Factset, as of 27 Nov 2017. *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 10-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.

Figure 3. US exporters could benefit from the weaker dollar



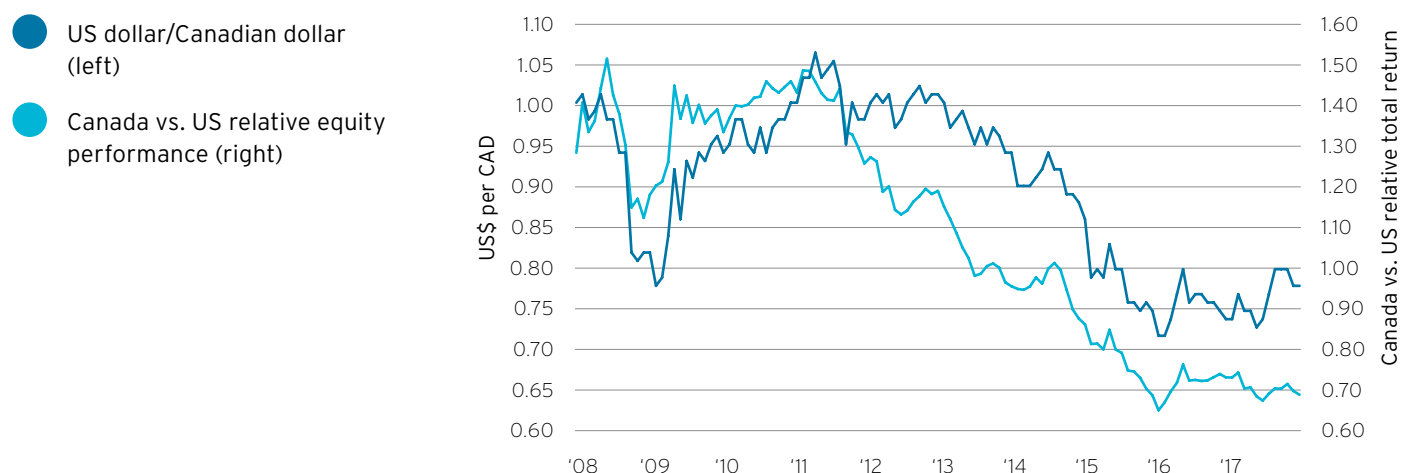
Source: Citi Research, Worldscope, MSCI, Factset, as of 27 Nov 2017. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Figure 4. Our favored North American sectors

	Mkt cap	P/E		EPS YoY (%)		P/B	RoE (%)	DY (%)	CAPE
	US\$bn	'18E	'19E	'18E	'19E	'17E	'17E	'17E	10yr
MSCI USA	22979.7	17.9	16.2	10.5	10.3	3.1	16.2	1.9	27.8
Energy	1357.6	25.6	20.6	41.9	24.3	1.9	6.9	2.8	14.9
Healthcare	3168.1	16.5	15.0	6.8	9.7	3.9	25.4	1.6	30.1
IT	5708.1	18.3	16.8	8.0	9.2	5.1	28.4	1.2	37.1
Industrials	2272.7	18.8	16.9	10.3	11.5	4.5	14.1	2.0	28.1

Source: Citi Research, Worldscope, MSCI, Factset, as 27 Nov 2017. *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 10-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.

Figure 5. Canada's equities and currency have often moved together



Source: Bloomberg, as of 27 Nov 2017. 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.

Although information technology was up 38% for the year through November, we still see further outperformance potential. Demand should remain strong for technologies such as smartphones, tablets, social media, robotics and artificial intelligence. Analysts expect low double-digit EPS growth for the information technology sector overall in 2018. While elevated, the sector's forward price-earnings ratio of 18.5 is lower than it has been for approximately half the last twenty years.

Healthcare looks well positioned to exploit the major demographic trend of an aging population – see [The transformation of healthcare](#). Rising incomes in emerging economies should provide further growth opportunities in the years ahead. Healthcare has returned 22% this year through November, but still trades at a forward P/E ratio of 16.4, lower than it has been for about half the time since 1997.

In contrast to many other income generating assets globally, Master Limited Partnerships (MLPs) offer dividend yields at the high end of their historical range. MLPs fell hard during the 2014-2016 energy price collapse. The survivors are of higher quality but they have yet to regain much of the lost ground. MLP distributions are poised to grow as the US energy renaissance continues.

We remain overweight Canadian equities which are barely above decade-ago levels. The Canadian equity market has historically outperformed the US market at times when the Canadian dollar has appreciated against the US dollar – **figure 5**.

We expect further Canadian dollar appreciation in 2018 – as we discuss in the Foreign exchange section below – which we think can again help Canadian equities outperform. What is more, we observe that Canadian equities are near their least expensive valuation relative to US equities during the current bull market, trading at a forward P/E ratio of 16 versus 18 for the US. This too should support performance.

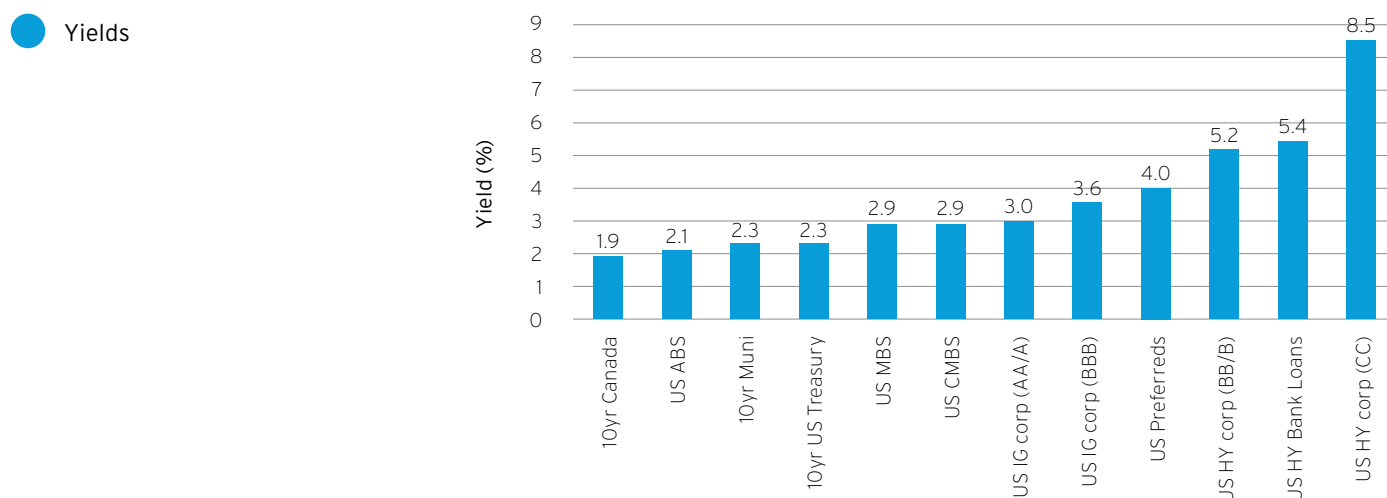
Fixed income

Owing to central banks' asset purchase programs, global fixed income markets have experienced substantial yield declines and thus rises in price. As a result, absolute value has become scarce, forcing investors to seek relative value. This has benefited US fixed income, whose relatively higher rates have attracted many yield-hungry investors from overseas.

Over the coming year, US yields are likely to be influenced by less monetary accommodation, both at home and abroad. Indeed, the Federal Reserve has already begun gradually to reduce its balance sheet, while the European Central Bank has halved its monthly bond purchases. The Fed is expected to raise policy rates perhaps three times more in 2018, and the Bank of Canada and Bank of England have also begun a hiking cycle.

However, geopolitical developments – such as tension over North Korea, Brexit negotiations, and NAFTA renegotiation – as well as benign inflation pressures are expected to persist across most developed economies. This will likely somewhat limit any rise in long-term rates. We expect 10-year Treasury yields to be contained below 2.75% in 2018, as the curve continues to flatten as a result of higher policy rates.

Figure 6. North American fixed income yields



Source: The Yield Book, as of 27 Nov 2017. Past performance is no guarantee of future results. Real results may vary.

Prepare for rising rates

Rising rates can create challenges for fixed income assets. In some higher quality US fixed income markets, positive performance may rely solely on the flow of coupon payments. That said, investment grade (IG) and high yield (HY) corporate bond markets continue to offer the most potential for relative outperformance next year - **figure 6**.

Unfortunately, spreads in both markets narrowed significantly in 2017, reaching their tightest levels since 2007. This is a reflection of many positive influences, such as stronger earnings and stabilizing leverage ratios. Low yields and strong demand have also allowed issuers to refinance existing debt and extend maturities. In turn, this helps enhance balance sheet liquidity and improves issuers' ability to service existing debt. HY default rates have dropped from 5.1% in December 2016 to 3.1% and may fall further.

In our view, IG corporate performance will likely suffer more from rising Treasury yields next year. While spreads should compress as equities and the economy improve, this may not completely offset price declines resulting from higher US rates. As such, we expect IG corporate returns to be near coupon, at best. Of course, this is still much better than the near-zero or even negative performance expected in European fixed income.

On the other hand, US HY markets are better placed to withstand higher rates. Although valuations are unattractive by past standards, relatively wider spreads should provide more of a buffer. Also, stronger correlations with equity markets should fuel additional spread tightening. While the outlook for HY fixed income may be more modest after a strong 2017, coupon-like returns between 5% and 6% are still expected over the coming year.

Our case for munis

For high-income earners in North America, US municipal bonds - munis - are likely to remain a core holding in fixed income portfolios. That said, similar to many other fixed income assets, valuations in munis have gone up. This is largely due to a significant imbalance of supply and demand, as new issuance of US munis has slowed substantially. As a result, yield ratios - or muni yields relative to US Treasury yields - have declined. Still, when compared to taxable bond yields, munis remain compelling for investors in high income tax brackets.

Proposed changes to the US tax system will need to be watched closely over the coming year. Although the

final tax bill is subject to change, certain factors could meaningfully impact muni investors. The reduction in corporate tax rates could impact demand from banks and insurers, as the benefits of owning tax-exempt bonds would be reduced. These investors typically focus on longer-dated maturities and make up nearly 25% of all muni-holders. Any forced selling could push longer-dated yields higher and steepen the muni curve.

On the other hand, the proposal to eliminate Federal deductions of state and local taxes would essentially raise individual's effective tax rates. In turn, this could make owning tax-exempt municipal bonds even more attractive for individuals, especially bonds issued by high tax states, like New York and California.

Other proposals, such as eliminating tax-exemptions for private activity bonds or advanced refundings, will likely further limit supply, exacerbating an already strong technical environment. While higher effective tax rates may limit a local government's ability to raise taxes in the future and thus impact credit quality, declining net supply of muni bonds will likely have a greater influence on the muni market over the coming year.

Foreign exchange

We believe the US dollar's third strongest bull market of the past forty years ended in 2017, as other currencies began the first stage of their recoveries. At its lows of 2017, the dollar had given back as much as one-third of the gains that it made since 2011. Many investors are now expecting the downtrend to persist in 2018. We think that consolidation may be a more likely outcome, followed by further declines in the subsequent years.

If correct, we believe investors with a US bias may benefit by going global now. Doing so might not only provide a return component from foreign currency appreciation but also tilt investors towards stock markets with lower price-earnings ratios and potentially higher dividend yields, improving the valuation and income characteristics of their overall portfolio. US large cap equities today yield 1.9% versus 2.8% in Canada, 3.4% in Europe, and 3.6% in Emerging Markets EMEA. Turning to Canada, once the clouds of uncertainty pass regarding NAFTA and US tax policy, we believe the Bank of Canada will resume its monetary tightening and the Canadian dollar will start to appreciate versus the US dollar. The fundamental outlook for the Canadian economy supports rate hikes.

Our themes

Our themes: a look-back and look-ahead

Steven Wieting, Global Chief Investment Strategist

We examine the performance of prior years' themes and their ongoing significance for 2018 and beyond.

The investment themes we present in Outlook each year are a focused selection of globally relevant and potentially game-changing trends that we believe may have lasting effects and impact most asset classes. Here, we take a look backwards and forwards, revisiting some of the key themes of recent years, how they have performed and their ongoing relevance.

Positioning for higher rates

We correctly expected the US yield curve to flatten in 2017 as the Fed tightened monetary policy. To position for higher rates, we suggested various allocations to higher-yielding segments of the fixed income market, including US high yield credit and Latin American sovereign debt. The nine fixed income recommendations from Outlook produced an average US-dollar denominated return of 9% gross of all fees by 27 November 2017 - **figure 1**. We expect the trend of US yield curve flattening to persist intermittently for the rest of the global expansion cycle. We continue to favor many of the same fixed income segments for 2018, as we set out in our regional asset class previews and in [Core income strategies](#). However, we do not expect the same extent of positive performance that we saw in 2017.

Figure 1. Performance of 2017 themes and ideas

		Local currency total return year-to-date	US\$ total return year-to-date
Investment themes	Allocating to infrastructure ¹	-	19.6%
	Positioning for higher rates ²	-	9.5%
	Robotics and automation equities ³	-	69.4%
	The liquidity trade-off	-	NA
World's dearest assets	Global retailing equity ⁴	-	-12.7%
	Monaco apartments	-	NA
	Swiss 10-year bond	-0.4% local	3.46% (unhedged US\$ return)
	Japan 10-year bond	0.4% local	5.0% (unhedged US\$ return)
World's cheapest assets	Brazil 1-year bond	13.3% local	14% (unhedged US\$ return)
	Argentina 2-year bond	17.0% local	8.5% (unhedged US\$ return)
	Europe ex-UK banks	12.4%	25.4%
	Middle East equities ⁵	-	-0.4%
	Russian equities ⁶	2.5%	6.2%
Benchmarks	S&P 500 Total Return	-	18.4%
	MSCI World Equity Total Return	-	22.1%
	Barclays Multiverse bond index	3.3% (hedged US\$ return)	7.5% (unhedged US\$ return)

Source: Citi Private Bank, Bloomberg, Haver, as of 27 Nov 2017.

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. 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.

1 S&P Global Infrastructure Index

2 Average of 9 Outlook 2017 Themes (High Yield Bonds, High Yield Bank Loans, US Preferreds, Emerging Market Debt (USD), LatAm Debt (USD), Brazilian Corporates (USD), Argentinian Quasi-Sovereigns (USD), Local Short-Term Brazilian Sovereigns and US TIPS)

3 A cap-weighted basket that includes ten of the largest robotics and automation companies' equities worldwide: ABB, Aerovironment, Daifuku, Fanuc, Faro Technologies, Intuitive Surgical, Irobot, Keyence, Omron, Yaskawa Electric. This should not be construed as an offer of, or recommendation of companies discussed.

4 S&P Global Internet Retail Index and S&P Global Department Store Index

5 Average of seven local national equity market indices

6 MSCI Russia



Allocating to infrastructure remains compelling

As we approach 2018, many of investors' hopes and concerns of early 2017 have been revived. The US Congress finally seems set to approve a 'late-cycle' stimulus to the economy by way of tax cuts by early 2018. That said, the likelihood of a large accompanying package of stimulative fiscal spending on infrastructure receded throughout 2017. The need for greater infrastructure spending – both in the US and worldwide – did not recede, however. Against this backdrop, many global infrastructure investments have performed strongly since we highlighted them, with the S&P Global Infrastructure Index rising 19.6% as of 27 November 2017. Given years of underinvestment in transportation, telecommunications and utilities across many countries, we believe that the long-term case for infrastructure remains compelling.

The liquidity trade-off pays off

According to Citi Private Bank's proprietary strategic asset allocation methodology – see [Building great portfolios](#) – Private Equity and Real Estate may deliver annualized returns over the coming decade of 10.3% and 10.1%. In 2017, we stressed the potential benefits of sacrificing liquidity for several years in selective areas within these asset classes. We explored the case for collateralized asset lending to commercial real estate and medium sized corporates, providing capital for growth to financially healthy energy companies, and investing in prime logistics real estate in certain European and Asian markets. For suitable investors who are prepared to commit capital for several years, we continue to believe that selected alternatives will provide diversification and return enhancement opportunities in 2018 and beyond.

Figure 2. The rise of the robot stocks in 2017



Sources: Citi Private Bank and Factset, as of 27 Nov 2017. *The chart shows the performance of a basket-cap weighted of ten of the largest robotics and automation companies' equities worldwide: ABB, Aerovironment, Daifuku, Fanuc, Faro Technologies, Intuitive Surgical, Irobot, Keyence, Omron, Yaskawa Electric. 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 should not be construed as an offer of, or recommendation of companies discussed.

Transforming commerce takes charge

We made the case last year that advances in robotics and automation were poised to have an increasingly important economic impact. In turn, we highlighted the potential investment implications of the robotics revolution, including for firms directly involved in the design and manufacture of robotic technologies, but also for those that may harness robotics to enhance their own businesses. Since we wrote, related equities have outperformed strongly, posting a gain of 69.4% – **figure 2**. We understand that some investors may be worried about this strong performance unraveling. But we would point out that this small industry group has only risen slightly more than the S&P 500 over the past five years, which could leave scope for further outperformance over time.

The e-commerce disruptors that we first discussed in Outlook 2015 outperformed global equities in 2017 as they continued to displace traditional retailers. In early 2017, we warned that traditional retailers still had too large a market capitalization. Subsequently, traditional retailers fell to lows not seen since 2010.

We continue to emphasize the theme of disruptive transformation of the economy and business for 2018 and thereafter. We reiterate the case for robotics and the advance of e-commerce at traditional retailers' expense, while also highlighting further opportunities in healthcare, financial technology, and alternative energy.

Core income strategies

Even after rising in 2017, global interest rates remain near multi-decade lows. This creates a significant challenge for investors seeking to generate yield.

We believe that potential yield opportunities still exist, however. In fixed income, they include US high yield bonds and variable-rate bank loans, securitized debt, and various emerging market assets.

For investors willing to sacrifice some liquidity, we also see potential in private equity and real estate.

Having exposure to such varied sources of potential yield may also help to enhance portfolio diversification.

Diversification does not ensure against loss.



Seeking yield in all the right places

Kris Xippolitos, Global Head of Fixed Income Strategy

Dan O'Donnell, Global Head of Private Equity and Real Estate Research and Management

Even in today's world of very low interest rates, there are potential opportunities to seek yield and diversification.

Earning yield has seldom been as difficult as it is today. Despite a small rise in 2017, global interest rates are still almost as low as they have been at any time in the last fifty years. In Europe, for example, some 30% of government bond yields remain in negative territory. Global investment grade fixed income assets as a whole present average yields of 1.6%.

In 2018, we believe there is a growing risk that yields in developed fixed income markets will rise, creating a further challenge for investors. In the past, when yields were higher, allocations to fixed income often helped to dampen overall portfolio volatility. Today, many fixed income assets no longer offer sufficient future cash flows to provide a meaningful offset to the decline that we expect in fixed income prices over the coming year.

We believe that potential opportunities for investors to generate yield, both in fixed income and beyond, remain available, but not plentiful. Earning positive real returns after inflation is still possible by seeking opportunities that have diverged from core fixed income markets. There is also the potential to earn higher yields by sacrificing liquidity and taking on more risk with investments in private equity and real estate. Having exposure to a range of these varied sources of yield may also help to enhance portfolio diversification.

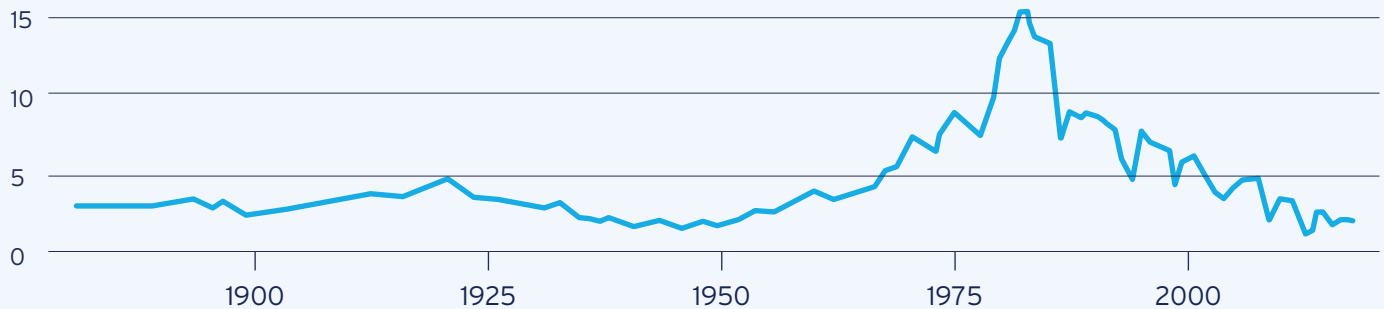
Core income strategies

Even in today's low-rate world, we see potential opportunities to generate yield

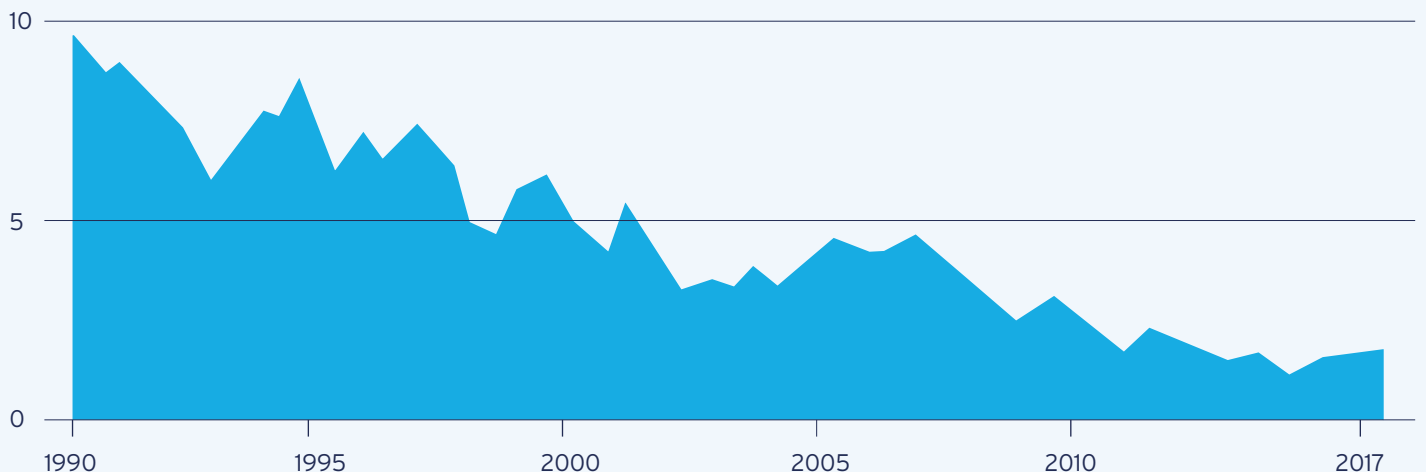
THE YIELD CHALLENGE

Global rates still around long-term lows¹

US long rates since 1871



DEVELOPED INVESTMENT GRADE FIXED INCOME YIELD NEAR HISTORIC LOWS³



EXPOSURE TO VARIED SOURCES OF YIELD MAY ENHANCE PORTFOLIO DIVERSIFICATION

US high yield fixed income

Default rates have fallen:⁴

We see return potential of 5-6% on a 12-month view

5.1%

Benchmark yields of 5.5%

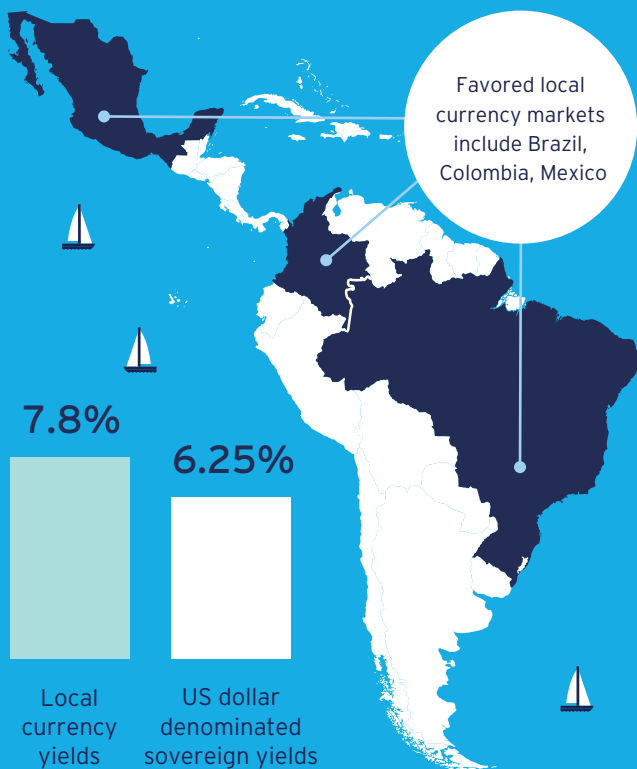
3.1%

December 2016

November 2017

Emerging market debt: underappreciated⁵

Latin America is the most attractive EM region



Securitized debt



Backed by assets such as mortgages, car or aircraft loans

Depending on underlying assets yields can range from



Typically have floating rate coupons, so can outperform when rates rise



Private equity



Providing growth capital to alternative investment managers

Potential to structure yields* of



Potential for high growth and profit margins



plus potential capital appreciation

Real estate



Providing private lending to commercial real estate borrowers



Diversified portfolios of loans backed by US real estate assets

We identify potential to generate yield in fixed income and beyond

Sources: 1. US long rates since 1871: Factset, as of 27 Nov 2017. 2. Negative interest rates: Bloomberg, as of 27 Nov 2017. 3. Average inv grade yield: The Yield Book, as of 27 Nov 2017. 4. Default rates: The Yield Book, as of 27 Nov 2017. 5. Emerging market debt: The Yield Book, as of 27 Nov 2017.

*Private Equity investments are illiquid and investors do not always receive the distribution of yield for several years when investing in these products

All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Past performance is no guarantee of future events. Real results may vary.

Strategies and investments mentioned in this document may not be suitable for all investors. Products, 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 objectives.

Diversification does not guarantee a profit or protect against loss.

Take the high road

Simply investing in the highest yielding assets without regard to other factors is not something we would advocate. But with economic growth and corporate earnings increasing across much of the world, we believe markets with higher embedded risks offer some of the more attractive fixed income opportunities.

The Citi Private Bank Global Investment Committee has held a high conviction positive view on US high yield (HY) corporates for some time. With only one year of negative performance since the Global Financial Crisis of 2007-09, US HY as an asset class has delivered a total return of 190% since January 2009, an annualized return of 12%.¹ After producing an additional 7.25% return through October 2017, valuations have become expensive. Today, spreads are tight and yields are almost as low at any time during the last thirty years. Indeed, at 5.5%, HY benchmark yields are only 60bp higher than its 2014 all-time low.

Nonetheless, we believe these high valuations reflect positive long-term forces and may persist. First, with global interest rates low, the demand for higher yield is likely to continue. Second, improving fundamentals have made investors more comfortable with below-investment grade issuers. While total debt has grown over the years, low interest rates have improved HY borrowers' ability to meet interest payments, while rising corporate earnings have helped stabilized leverage ratios. As a result, HY default rates have fallen from 5.1% in December 2016 to 3.1% in November 2017 and may well fall even further. If they do, further HY outperformance may follow.

Besides offering yields substantially above many other fixed income instruments, HY bonds display lower correlations to the higher quality fixed income assets, such as US Treasuries and US agency mortgage backed securities (MBS). Instead, they tend to perform more in line with other risky assets, such as equities. Given that we believe equities will outperform in 2018, there is scope for the spreads on HY bonds to narrow further. Spread narrowing may occur as yields move higher, which could somewhat limit overall returns. That said, we still believe US HY can generate between 5% and 6% over the coming twelve months.

A less volatile alternative to US HY fixed income are US HY variable-rate bank loans. Most commonly accessed through third-party portfolio managers, bank loans' coupon payments are variable, rising and falling with US LIBOR rates. In 2017, HY bank loans underperformed HY bonds by nearly 3.5%. This was a result of issuers taking advantage of strong demand for yield and improving credit quality by repaying their existing loans early and refinancing at lower spreads. As a result, loan investors' future cash flows have been reduced, despite rising short-term rates, limiting overall returns.

While we believe this trend may continue in 2018, HY bank loans still offer investors reasonably higher levels of income with relatively lower price volatility. More importantly, given that portfolio diversification has become ever important, bank loans are negatively correlated to US Treasury debt. In an environment where high quality fixed-rate bonds will struggle to produce positive performance, variable-rate bank loans should provide relative portfolio resilience.

Asset backed

Securitized debt - or structured credit - is another area of fixed income where there may be opportunities to achieve higher yield and greater diversification with potentially more risk. These securities are backed by assets such as residential mortgages, car loans, or aircraft loans. They generally are less liquid and offer varying degrees of yield and risk. Yields can range between 4% and 10%, depending on the underlying pool of assets. They also typically have floating-rate coupons, which can contribute to potential outperformance in periods of rising interest rates. Economic strength can also help drive their performance, as the original borrowers are less likely to default during such times.

Another securitized asset class is the US agency mortgage-backed securities (MBS) market. Issued by government sponsored enterprises (GSE), these securities are implicitly guaranteed by the US government. Although typically overlooked by many investors, they make up nearly one-third of the Bloomberg Barclays US Aggregate Bond Index.

While their nominal yields of around 2.7% are less attractive, US agency MBS can benefit when interest rates rise. This is because mortgage holders' ability to refinance at lower rates diminishes. As the risk of early repayment reduces, the future stream of cash flow increases. So, while rising rates would negatively impact MBS prices, the boost from increased future cash flows offsets some of this impact. In eight of the last nine periods of rising rates, US agency MBS have outperformed most investment grade fixed income markets - **figure 1**.

¹ Source: The Yield Book, as of 31 Oct 2017

Figure 1. US MBS outperformance in periods of rising rates

Periods of rising rates	Delta in 5yr US Treasury	US MBS	3-7yr US Treasury	Difference
	Basis points	Total return (%)	Total return (%)	(%)
Feb 1996 to Jun 1996	+125	-0.5	-1.8	1.3
Oct 1998 to Jan 2000	+260	1.9	-1.3	3.2
Nov 2001 to Mar 2002	+130	-0.2	-2.8	2.6
Jun 2003 to Jun 2004	+145	2.4	-1.3	3.6
Mar 2008 to Jun 2008	+90	0.0	-2.1	2.0
Dec 2008 to Jun 2009	+85	4.5	-1.3	5.7
Nov 2010 to Feb 2011	+100	-0.3	-2.8	2.4
May 2013 to Aug 2013	+95	-2.8	-2.9	0.1
Jul 2016 to Dec 2016	+90	-1.4	-3.0	1.5

Source: The Yield Book, as of 31 Oct 2017. Past performance is no guarantee of future returns. Real results may vary.

Under-appreciated emerging market debt

We also see a compelling opportunity in emerging markets (EM), a misunderstood and under-invested part of the fixed income universe. EM bond yields in both hard and local currency markets can offer more relative value. As with many other markets over the last year, valuations in EM fixed income have risen and are no longer considered cheap in absolute terms. That said, EM fundamentals may be consistent with further strong performance. Across EM countries, inflation rates have fallen, allowing central banks either to cut rates – as in Indonesia – or temper the pace of rate-rises – as in Mexico. More importantly, EM currencies are relatively underpriced after years of US dollar strength.

We see Latin America as the most attractive EM region. External – US dollar denominated – Latin America sovereign debt yields are around 6%. The average spread over US Treasury yields is 380bp, compared to US HY's spread of 360bp, despite sovereign issuers being considered more creditworthy than private issuers. Venezuelan political and economic turmoil could add to Latin American volatility in 2018, as Venezuela makes up 5% of the region's outstanding US dollar denominated debt. Nevertheless, we see regional performance of 5% to 6% over the coming twelve months.

We find local currency Latin American debt markets even more compelling. Average yields are around 7% and exchange rates in real terms are relatively cheap. A slow Fed rate-hiking cycle, stable commodity prices, low developed market yields and further US dollar weakness may fuel additional inflows to this asset class, driving prices and local currencies higher. Of course, these markets have also rallied significantly in 2017. But currency and price gains can continue in 2018, in our view. Returns will vary widely from country to country, but we believe there will be an average regional total return of around 6-7% in 2018. Our favored local markets include Brazil, Colombia and Mexico.

Despite tight spreads in external sovereign and corporate fixed income, Asia also offers compelling local EM opportunities. The real yields on China A1/A+ rated bonds are attractive, with 5-year yields around 2.2%, for example. Expectations of further currency strength should add to fixed income performances. The newly-introduced Bond Connect – a bond trading link that allows foreign investors to trade in China's debt markets without onshore accounts – is likely to encourage an increase in overseas demand. Further inflows should support bond prices and drive the Chinese yuan higher.

Five-year India real yields of near 4.5% are the most attractive in Asia. Indonesia is also still attractive, despite a strong rally in local yields and a stronger currency in nominal terms. Real yields are lower compared to peers like China and India, but absolute yields above 6% remain appealing. Though India and Indonesia bonds could both face near-term pressures from rising fiscal deficits, their favorable growth outlooks present a compelling longer-term opportunity.

Diverse opportunities exist across Central and Eastern Europe, the Middle East and Africa, but involve a wide range of geopolitical risks. Average yields are around 4.5%. Local Russia yields have generally fallen over the last three years, but remain elevated above 7.5%. Growth is modest, but the economy has benefited from stability in global oil prices.

Private equity

Alternative investment managers are experiencing the highest growth and profit margins in the asset management industry today. In order to take advantage of the ongoing growth potential, many of them are seeking outside capital funding. We believe that providing capital to fund the growth of alternative investment managers offers a potential opportunity to earn yield, so long as investors can accept diverse levels of illiquidity.

Investing in alternative managers could offer potential cash yields in the mid-teens dependent upon how each deal is structured within the fund portfolio. These yields are made up from three distinct cash return streams that alternative managers receive: management fees, profits participation, and equity returns. The management fees are regular, long-term, and contractual by nature. Not only do they contribute yield income, but they can also reduce the correlation of returns with private equity and real estate. By raising a number of funds with various different strategies, private equity firms could thereby create diversified annuity streams lasting eight to twelve years. It should be noted that not all of the income is paid to investors but can also be reinvested for the term of the fund.

One risk that private equity firms face is that today's high growth and profit margins attract more competition into the sector, putting downward pressure on fees and returns. Another risk is if investor appetite for private equity funds wanes, which could have similar negative effects. In addition, there are a limited number of exit options for these assets.

We also continue to explore opportunistic credit strategies that focus on under-served or capital constrained asset classes. These managers typically have flexible mandates with a bias towards capital preservation, while providing equity-like upside potential. These opportunities can range from non-control distressed investing during periods of market dislocation to growth-oriented structured equity. Credit and repositioned asset strategies have been a core part of the private equity and real estate platform for many years and are attractive in the current environment because of their structure and yield components. Private equity investments are illiquid and investors do not always receive the distribution of yield for several years when investing in these products.

Real estate

We currently see a potential opportunity in private lending to commercial real estate borrowers. As a result of new regulations and risk control measures, some property owners in the real estate sector are finding it hard to borrow because traditional lenders such as banks and insurance companies are reluctant to commit to junior loans - loans which rank lower for repayment in the event of default - where the loan-to-value amount is above 55%. With the demand for such loans exceeding the supply, we believe there is the potential to receive both current income and equity-like returns, but also receiving higher priority of repayment than equity holders if the borrower defaults.

Our preferred way of getting exposure to this opportunity is via private real estate lenders who create diversified portfolios of mezzanine loans and mortgage participations backed by US real estate assets. One risk involved in transactions such as this is if interest rate rises reduce demand for US commercial real estate purchases. Another is if competition among lenders picks up, which could also drive down potential returns.

In the real estate private equity space, we are evaluating value-add investment opportunities that have a current income component that may lower the risk profile of the investment and potentially provide a cash yield to investors in the long term. These strategies focus on transitioning assets from value-add to core and selling the assets to institutional investors. As with private equity, real estate investments are illiquid and investors do not always receive the distribution of yield for several years when investing in these products.

Jeffrey Locke, Stefan Backus, and Megan Malone also contributed to this article.

It should be noted that investing in either private equity or real estate may change the risk profile of your portfolio. There are also additional qualification requirements that need to be met prior to investing. Private equity and real estate are Alternative investments, they 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

Investments mentioned in this document may not be suitable for all investors. Before making any investment, each investor must obtain the investment offering materials, which include a description of the risks, fees and expenses and the performance history, if any, which may be considered in connection with making an investment decision. 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 investment objective(s) and risk tolerance. No guarantee or representation is given that any product will achieve its investment objectives.

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.

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.

ABS/MBS products

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.

Please read offering documents and/or prospectus information carefully for the risks associated with the particular MBS security you are purchasing.

High-Yield Bond

A bond with unfavorable credit characteristics that is typically non-rated or rated below investment grade. A high-yield bond trades at yields substantially higher than bonds with more favorable credit characteristics and often suffers from lack of liquidity and marketability.

Emerging opportunities

After the strong gains in emerging markets (EMs) in 2017, there may be a temptation to believe the best of the gains are already behind us.

Our view, though, is that EMs may offer long-term outperformance potential and that many investors may not have enough exposure to EMs.

Overall, EM equities and fixed income are cheap compared to their developed counterparts, as are the currencies in which they are denominated.

Our recommended approach is to have a broadly diversified allocation to EM securities, reflecting our overweight to all EM asset classes in every region.





Deep discounts in an expensive world

Steven Wieting, Global Chief Investment Strategist

Ken Peng, Investment Strategist - Asia

Jorge Amato, Investment Strategist - Latin America

We believe emerging markets may offer the potential for long-term outperformance.

We entered 2017 with a rather different view to many other investors. Early in the year, we argued that a peak in the US dollar's uptrend that had begun in 2011 might be near. Based on this view we recommended that investors shift more of their portfolios towards non-US dollar assets. Most notably, we went overweight both equities and fixed income across all emerging market (EM) regions worldwide in March 2017.

Our conviction has since been proved correct. The US dollar has continued to decline, reversing about one-third of the gains that it made between 2011 and 2016. Emerging market assets have also performed strongly. The MSCI Emerging Markets Index has delivered a total return in US dollar terms of 31.3%, outstripping the 18.1% gains in developed market (DM) equities, as measured by the MSCI World Index. Likewise, EM local currency government bonds have achieved a gain of 10% in US dollar terms while dollar-denominated EM bonds have returned 7.5%.

In the wake of such performance, there may be a temptation to believe that the best of the gains are already behind us. We do not share this view, however. Our conviction in EMs is much more than a near-term, tactical investment call. Instead, we believe that EMs may offer long-term outperformance potential. We also think that many suitable investors may have not appreciated this potential and do not have enough exposure to EMs.

Our conviction in EMs is much more than a near-term, tactical investment call. Instead, we believe that EMs may offer long-term outperformance potential.

Figure 1. EM equities' relative cheapness

● EM CAPE vs US CAPE



CAPE stands for cyclically-adjusted price/earnings ratio, which compares the present equity price with the ten-year average of inflation-adjusted earnings. Source: MSCI and Bloomberg, as of 27 Nov 2017. 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 not 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.

Figure 2. EMs' richer yields

● Basket of emerging local yields
less developed local yields



Source: Bloomberg, as of 28 Nov 2017. The EM basket is composed of traded debt from Brazil, China, Columbia, India, Indonesia, Mexico, Russia, South Africa, and Turkey. Past performance is not indicative of future returns. Real results may vary.

Identifying a relative bargain

Despite their powerful rally since the lows they reached in 2016, EM assets remain cheap. As a whole, EM equities trade on a multiple of 16 times their inflation-adjusted average earnings of the past decade. That represents a discount of around 40% to the valuation of US equities - **figure 1**. Only just after the Asian crisis of the late 1990s was the discount deeper. Back then, EM equities went on to outperform US equities over the next decade. Citi Private Bank's strategic asset allocation methodology suggests the same may occur over the next ten years. It points to annualized total returns

from EM equities of 8.4%, compared to 4.9% for DM equities over that period.

It is a similar story for emerging market fixed income. Even after a strong performance in 2017, a basket of EM local currency bonds still yields some 6% more than equivalent DM local currency bonds - **figure 2**. In a world where the opportunities for earning yield have seldom been scarcer - see [Core income strategies](#) - this is attractive.

Cheaper markets and cheaper currencies

Not only are EM equities and fixed income cheap compared to their DM counterparts, so are the currencies in which they are denominated. That is despite a 5.5% rally in a basket of EM currencies in 2017. This appreciation saw US dollar denominated investors who followed our EM overweight recommendation experience both price and currency gains. Over time, we believe this move likely has further to go. Real effective exchange rates across EMs – a measure of a currency's inflation-adjusted value against a basket of other currencies – are still generally below their long-term averages – **figure 3**.

The prospect of continuing cyclical recovery provides a compelling reason for adding exposure to EM assets.

Brightening fundamentals

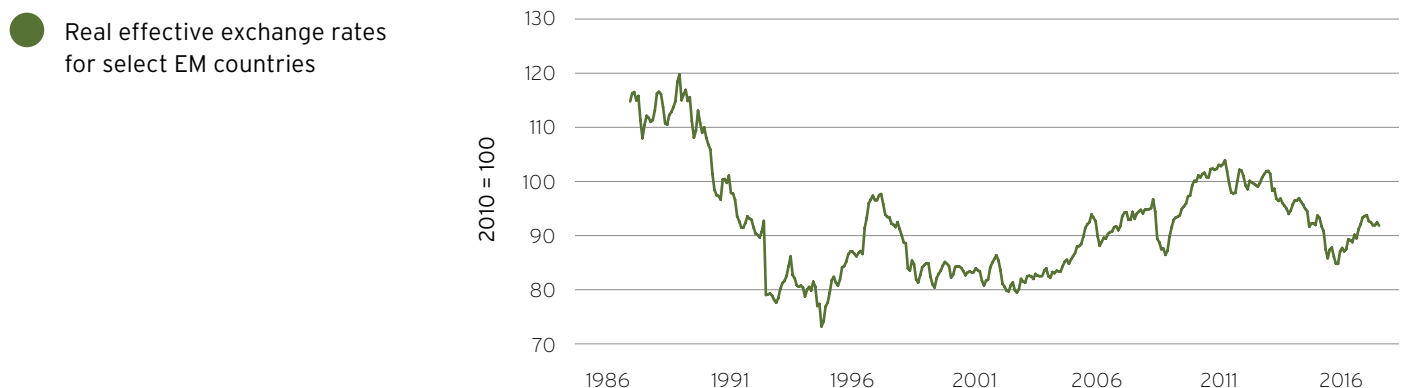
There is much more to our case for EMs than just attractive valuations. The fundamental outlook is also improving across many EMs. In 2017, Citi Research estimates that GDP growth for EMs as a whole accelerated from 3.9% to 4.7%. It now forecasts that growth will increase further to 4.8% in 2018 and maintain that pace in 2019. The prospect of continuing cyclical recovery provides a compelling reason for adding exposure to EM assets.

Faster growth is being driven by long-term, structural improvements occurring in EMs, as well as a cyclical uplift. In China, the world's largest EM of all, the economy is shifting towards a more sustainable model of growth, driven more by consumer spending and less by business investment. Innovation is also blossoming. With research and development spending second only to that of the US, China was the only emerging economy to be ranked among the world's top 20 most innovative nations in 2017. As well as attracting greater interest from foreign investors, such innovation should contribute to China's future growth.

We see similar signs of improvement in Brazil, Latin America's largest economy. The country's stubbornly high inflation has dropped from over 7% at the start of 2016 to around 3% recently. This creates scope for further cuts in Brazilian interest rates, which could stimulate more growth. Further benefits could be felt if the government succeeds in reforming the country's overly-generous public pension system. Overall, these factors point to a strengthening in Brazil's economy, currency and asset prices over coming years.

In 2018, we expect improving fundamentals across EMs to feed through into higher earnings. For EMs as a whole, Citi Research expects earnings per share (EPS) to expand at 12.3% in 2018 and 11.6% in 2019. It expects more rapid growth in China of almost 15% in 2018 and 10.7% in Brazil. By contrast, DM earnings growth is seen expanding at just 9.6% next year, reflecting the later stage of the economic cycle across these economies.

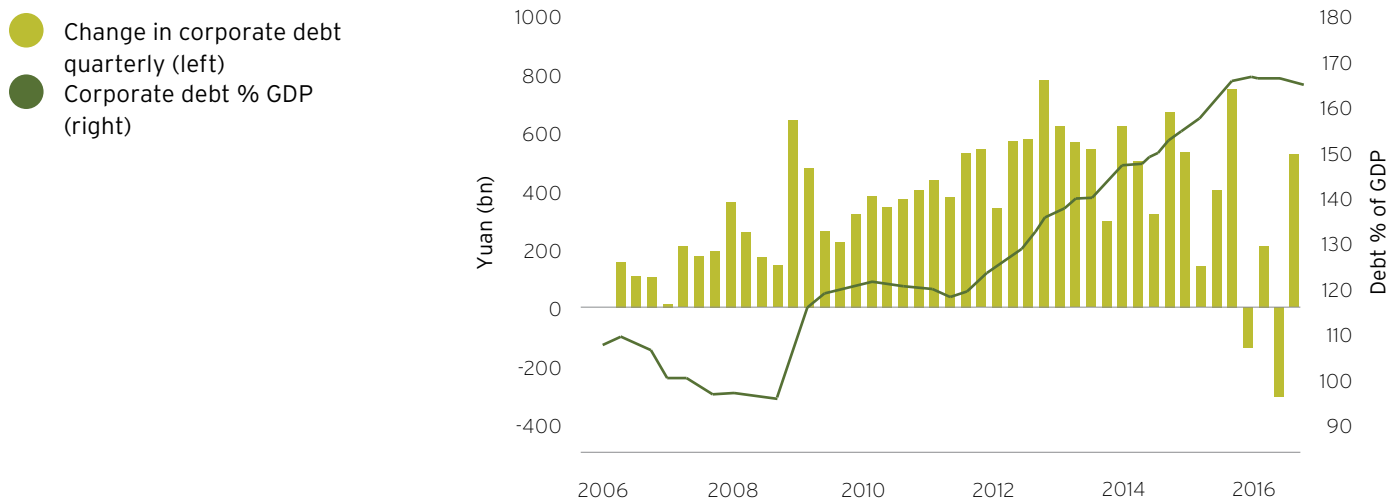
Figure 3. Select EM countries' real effective exchange rates



Real effective exchange rates (REER) measure a currency's inflation-adjusted value against a basket of other currencies. This chart is calculated as an average of the OECD-measured real exchange rates of Mexico, Brazil, China, South Africa, Russia, Chile, India, Indonesia, and Colombia.

Source: Haver, as of 30 Nov 2017. Past performance is no guarantee of future returns. Real results may vary.

Figure 4. Corporate debt growth reverses



Source: Haver, as of October 2017.

Addressing emerging market risks

Given the brighter fundamentals that we see in emerging markets, why do many investors maintain too little exposure to them? One possible explanation is that they see the high potential returns as reflecting significantly higher riskiness. EM assets have historically been more volatile and have suffered larger drawdowns during episodes of market stress than developed market assets. And there are certain risks today that appear to weigh heavily upon sentiment.

The greatest concern surrounds China. Many investors fret that Chinese corporate indebtedness is out of control, having reached \$18 trillion, or 170% of GDP. The borrowing has helped finance excessive investment in Chinese industry, leading to significant overcapacity. If this overcapacity results in excessive production, the worry is that it may unleash a wave of industrial price deflation, both in China and overseas.

Despite high corporate leverage, though, we would point out China is well placed to confront these and other challenges. Its economy generates some \$5.5 trillion of savings each year, while corporate debt has actually been falling since 2016 – **figure 4**. The authorities are restructuring the debts of state-owned enterprises, absorbing liabilities into provincial governments. Industrial overcapacity has also been reduced: steel producing capacity, for example, has been cut by 5% since 2015.

The complexity and opaqueness of the Chinese financial system is another often mentioned risk. Chinese savers have put \$4.2 trillion into ‘wealth management products,’

which some believe has helped disguise lending to riskier borrowers and which investors assume are implicitly guaranteed by the state. However, we note that appetite for these products has begun to wane, helping to ease banking sector risks.

Externally, China’s inclusion in the MSCI Indices and the opening up of its equity and fixed income markets to foreign investors have helped to attract capital inflows into the country once more. And we expect China’s currency to continue to strengthen in 2018.

For EMs more generally, the risk of greater international protectionism has also deterred investors. President Trump’s ‘America First’ agenda at the start of this year included potential new tariffs on imports and redrawing terms with key trading partners. Had they been pursued, such measures might have been highly detrimental to key EMs including Mexico, Malaysia, and Taiwan. So far, though, the Trump administration has proved pragmatic, such that trade risks have subsided somewhat.

A more traditional source of EM risk comes from politics. Political upheaval can undermine local economic growth and often unsettles foreign investors. By its nature, such upheaval tends to be unpredictable. But we would not be surprised if elections in 2018 in Mexico and Brazil led to volatility in those markets. Rather than being put off by political risk, however, we would stress trying to mitigate its effects by diversification, as we explain below.

The re-emergence of emerging markets

We see EMs as positioned for long-term outperformance – and we believe the risks are more contained than others do. However, we would also stress this will not be a ‘one-way trade.’ Instead, prospective gains will likely unfold over several years, with reversals and consolidations along the way. We would not be surprised to see some jagged activity in 2018 following 2017’s strong performance.

The expectation of further US dollar weakness has now become a consensus view, with shorter-term investors shifting sharply into EM currencies and shorting the US dollar. However, we believe the dollar may actually remain range-bound in 2018, resuming its downtrend thereafter. Having underestimated the likelihood of US tax cuts, investors may now be underestimating the probability of further monetary tightening, both of which developments could support the dollar. Periods of dollar strength have typically coincided with EM asset weakness over time.

We would likely recommend EM weakness as an opportunity for investors with too little exposure to add to their EM holdings. We currently see Asia as the most attractive regional investment opportunity, given the lack of understanding of China’s progress in making economic reforms. However, we do not suggest making concentrated allocations to particular countries, even where our outlook is especially favorable, owing to idiosyncratic local risks in EMs.

Don’t pick one, pick them all

Our recommended approach is to have a broadly diversified allocation to EM securities – see [Building great portfolios](#) – which reflects our overweight to all EM asset classes in every region. This allocation should include all of the large EMs – China, India, Indonesia, Brazil and Mexico – as well as many of the small EMs such as Peru, Taiwan, and Thailand – see [Asia](#) and [Latin America](#) asset class previews and [Our favored markets](#). We believe that the potential portfolio benefits of such an allocation may continue to surprise investors over the coming years just as they did in 2017.

We would also stress
this will not be a
‘one-way trade’. Instead,
prospective gains will
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along the way.

The opinions expressed in this article may differ from the opinions expressed by other businesses of Citigroup Inc., are not intended to be a forecast of future events or a guarantee of future results or investment advice and are subject to change based on market and other conditions.

Past performance is not a guarantee of future results.

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. 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.

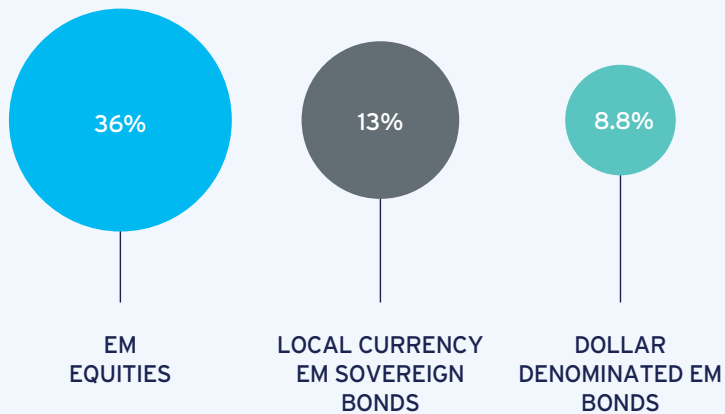
All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

Emerging opportunities

Although not a one-way investment, we believe emerging markets (EMs) offer the potential for long-term outperformance

EMERGING MARKET ASSETS HAVE PERFORMED STRONGLY IN 2017¹

% return (USD)



EMERGING RISKS

It seems that there are fears over potential risks, including:



INTERNATIONAL PROTECTIONISM



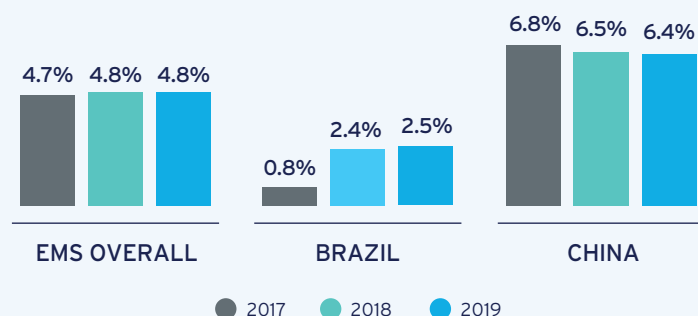
POLITICAL UPHEAVAL



CHINA'S CORPORATE INDEBTEDNESS

THE SHORT-TERM OUTLOOK FOR EM ECONOMIES SEEMS BRIGHT²

Real GDP forecasts 2017-2019



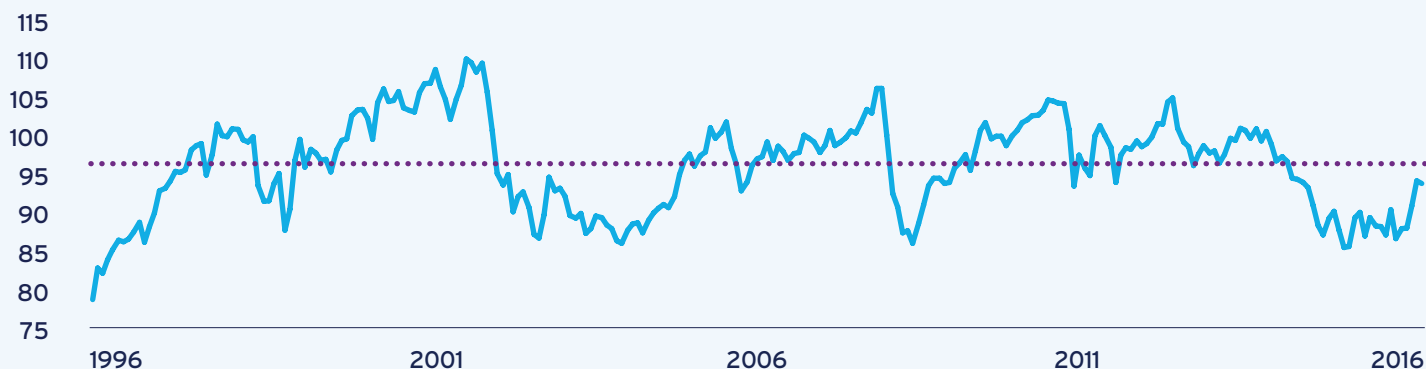
OVERWEIGHT ALL EMERGING REGIONS



POTENTIAL FOR OUTPERFORMANCE, AS EM EQUITIES TRADE ON A DISCOUNT TO US EQUITIES OF AROUND³

40%

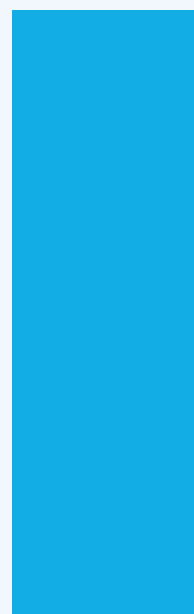
EVEN AFTER STRENGTHENING IN 2017, EM CURRENCY VALUATIONS REMAIN BELOW THEIR LONG-TERM AVERAGES PARTICULARLY IN LATIN AMERICA⁴



THE LONG-TERM OUTLOOK IS ALSO POSITIVE

EMs are forecast higher annualized equity returns over the next decade⁵

8.4%



4.9%

EMERGING
MARKETS

DEVELOPED
MARKETS

We recommend building a broadly diversified allocation to EM assets, reflecting our overweight stance to EM equities and fixed income in every region

Sources: 1. Bloomberg, as of 28 Nov 2017. 2. Citi Research, as of 28 Nov 2017. 3. Factset as of 27 Oct 2017. 4. Factset, as of 28 Nov 2017. 5. Citi Private Bank, as of 27 Oct 2017.

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Diversification does not guarantee a profit or protect against loss.

Exploiting volatility

Financial markets including US and European equities saw record low volatility in 2017, with others including emerging market equities experiencing falls in volatility.

In 2018, we believe volatility will start to rise from its lows, with gradual monetary tightening by central banks likely to be a key driver.

While bullish on equities' outlook for 2018, we think there is a case for hedging to help protect prior profits in case our view is wrong and significant downside occurs.

We also explore the potential portfolio benefits from hedge fund strategies once volatility returns.





Preparing for volatility's comeback

Steven Wieting, Global Chief Investment Strategist

After unusual calm in 2017, volatility could make a comeback in 2018. This creates new possibilities for preparing portfolios for the unexpected.

Financial markets displayed an unusual degree of calm in 2017. The implied volatility of US and European equities fell to record lows, as did expected US interest rate volatility. The volatility of emerging market equities also dropped sharply, while commodity price volatility retreated from elevated levels. These declines were driven by a combination of improving economic conditions and the effect of investors pursuing volatility-selling strategies.

In 2018, however, we believe volatility will start to rise from these historic lows. Gradual monetary tightening by central banks is likely to be a key driver of this shift. The Federal Reserve may raise interest rates three times during the year, and is shedding its bond holdings, gradually increasing the rate of reduction to \$50 billion per month. The European Central Bank will probably continue to ease monetary policy less before it ultimately begins to tighten. Every minor change in the Federal Reserve's policy regime in the past decade has resulted in a bout of higher volatility - see infographic - and we expect the same to happen this time.

Central bank tightening is not the only possible source of renewed market volatility in 2018. In emerging markets, political developments could trigger increases in market turbulence, as we discuss in [Emerging opportunities](#) and in our [Asia](#) and [Latin America](#) asset class previews. President Trump's recently nominated new Federal Reserve

chairman, Jerome Powell, takes office in February 2018. As our infographic also shows, history shows that new Federal Reserve chairmen have often experienced major tests early in their terms of office.

Given our outlook for volatility, we have decided to bring back our [Exploiting volatility](#) theme for 2018. We believe this is important because many investors have become accustomed to the low volatility environment of recent years. Some have been seeking to generate income by volatility-selling strategies, where the seller receives income and can make a profit if volatility falls or stays contained. But the income available from selling volatility has been declining. With today's record low prices, we recommend shifting away from strategies that generate income from falling or contained volatility to ones that hedge the risk of unusual price moves.

To be clear, we remain bullish on the outlook for equities in 2018. However, we think there is a case for hedging in case our view turns out to be wrong and significant downside occurs. Such hedging could be helpful for investors who have large cash holdings they would rather invest but who are nervous at buying at multi-year highs in the markets. Exposure to equity upside while shielding against downside has clear attractions - see [Building great portfolios](#). We also explore the potential portfolio benefits of hedge fund strategies once volatility returns.

Exploiting volatility

After unusual calm in 2017, volatility could make a comeback in 2018. This creates new possibilities for preparing portfolios for the unexpected.

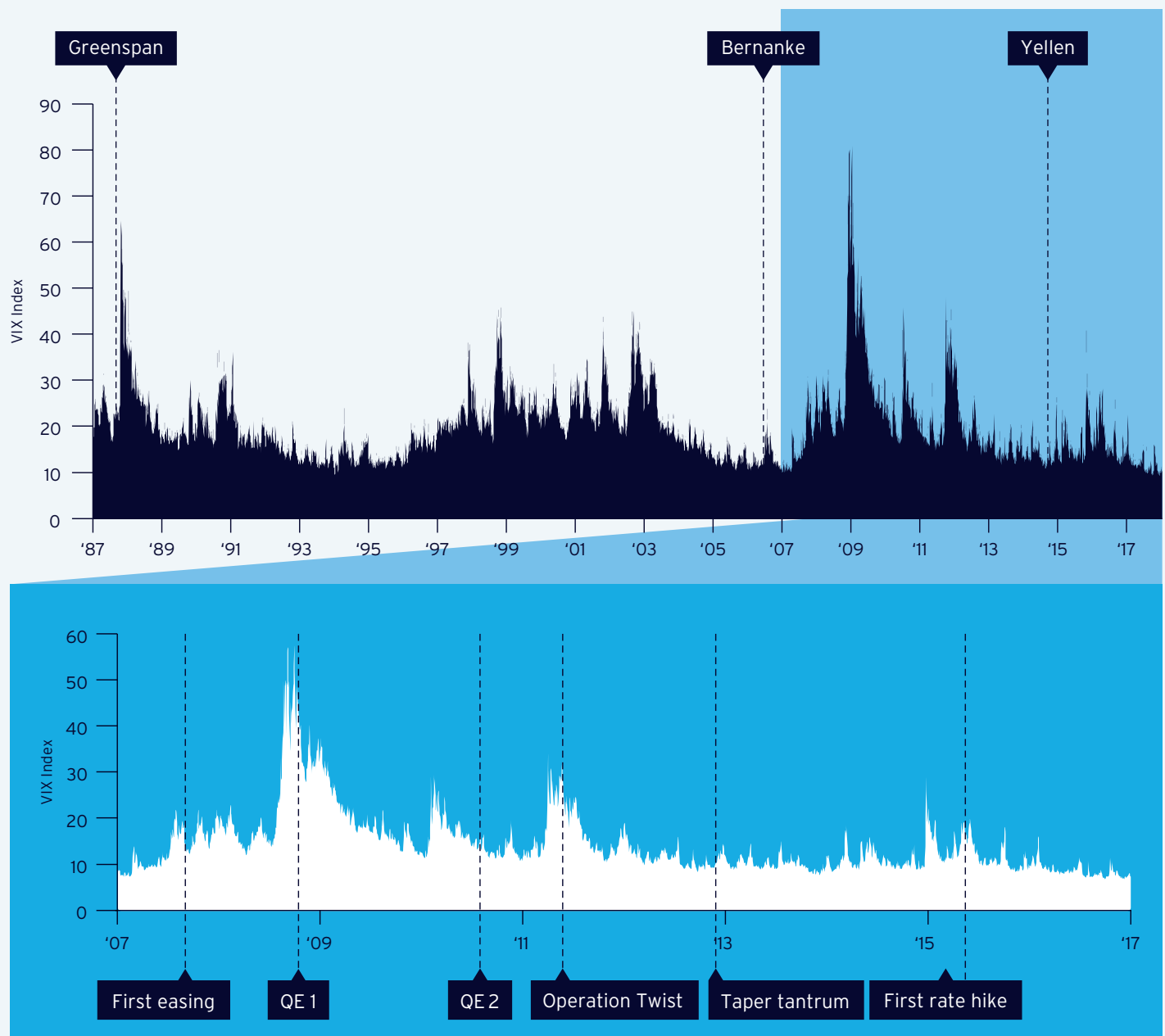
The implied volatility of US and European equities fell to record lows in 2017, as did expected US interest rate volatility.

CBOE Volatility Index (VIX) Jan 1999 to Oct 2017¹



In 2018 we believe volatility may begin to rise

The last three new US Fed chairmen have faced major tests early in their tenure¹ and Jerome Powell may prove no exception.



Additionally every change in US policy regime in the past decade has led to greater volatility².

HEDGE FUND STRATEGIES

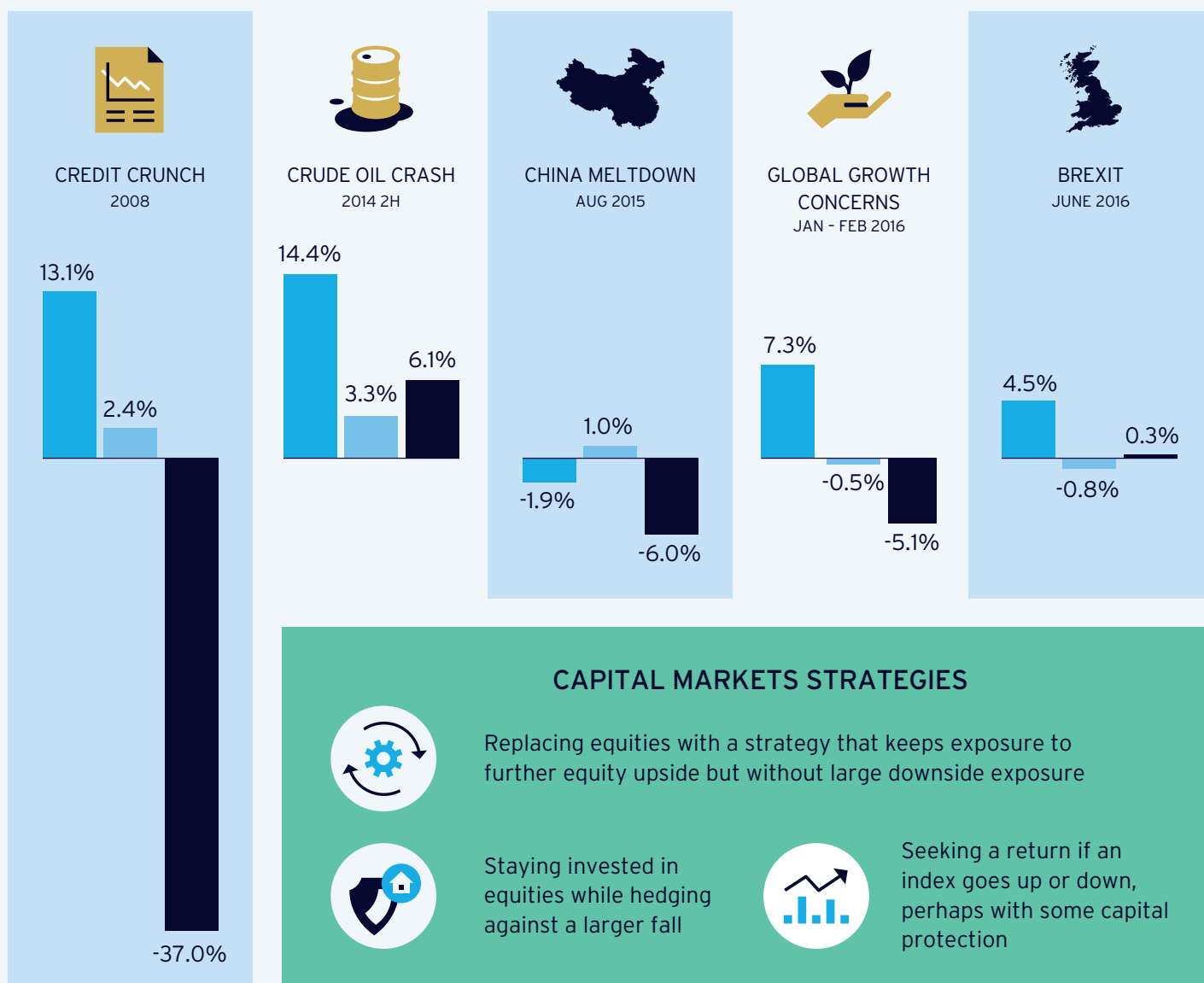
Diversifier* strategies typically seek to exploit the direction of assets - up or down. They have often done well during heightened market volatility and dislocations³:

● SG CTA (Quant) Index

● SG Macro Trading (Discretionary) Index

● S&P 500 Index (Total Return)

See Glossary for definitions



We remain bullish on the outlook for equities in 2018. However, we think there is a case for hedging in case significant downside occurs

Sources: 1, 2. Bloomberg, as of 28 Nov 2017. 3. Bloomberg, SocGen, as of 28 Nov 2017.

An investor cannot invest in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

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Diversification does not guarantee a profit or protect against loss.

Diversifier, Return Enhancer, and Volatility Dampener are internal descriptors based on a fund's strategy and objective that Hedge Fund Research Management has developed and uses to categorize hedge funds.



Using volatility and hedges to help sustain profitability

Iain Armitage, Global Head of Capital Markets
David M. Schnur, Head of Hedge Fund Research

We see a compelling case for preparing portfolios for future volatility while the cost of doing so remains cheap.

Exploiting volatility has been an investment theme of ours in years past. We did not feature it at the start of 2017, however, as we expected little opportunity to profit from volatility during the year, and this turned out to be correct. We believe it is now time to consider taking advantage of the unusually low volatility conditions to prepare portfolios for potential outbreaks of market turbulence and higher levels of volatility in the period ahead.

Continued equity exposure

Risky assets have been in a bull market for almost nine years. Equities in developed markets globally - as represented by the MSCI World Index - have risen 245% from their lows of 2009.¹ Valuations in many markets have reached multi-year highs. For example, US equities now trade on a multiple of ten-year average earnings that has only been exceeded twice in more than a century.

It remains our view that equities and other risky assets can rally further in 2018, as we set out in [Go global now: riding the global expansion's second wind](#) and in our regional asset class previews. However, we must also acknowledge that the global investment cycle is in its later stages. The gradual tightening of US monetary policy and the withdrawal of stimulus elsewhere raise the risks for markets, if only modestly. Geopolitical shocks, meanwhile, represent a wildcard that could destabilize markets.

¹ Source: Factset, as of November 2017. 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. Performance does not take into account taxes, sales charges, or fees.

Raise the shield

For investors who want to protect gains and take advantage of historically low volatility, we believe that it may be a good time to buy hedges against larger market drawdowns. For example, an investor could pursue a strategy that enables continued exposure to market upside, while protecting against a large sell-off over the next twelve months. So, if the market kept rising, the investor would experience positive returns, less the cost of the hedge. But if the market fell by more than, say, 10% to 20%, the hedge would come into effect, helping to offset losses on equity holdings.

The cost of this strategy could be reduced if the investor takes the view that any upside in the market is going to be modest. For example, the investor might agree to sell away any gains above 15%, while also hedging against a significant fall. The sale of any upside above 15% would help to reduce the price of the downside hedge.

Customized hedges can address an investor's particular needs or view of the market. For those worried about market timing, it is possible to adjust the terms of the strategy after entering it to make them more favorable to the buyer, albeit at additional cost.

Stock replacement

Many individual sectors and stocks have risen by much more than equity markets as a whole since 2009. US technology is a good example. The S&P Information Technology Index has exceeded the highs it reached at the peak of technology bubble of the late 1990s.² Investors may therefore have made significant gains and may now wish to mitigate their risk while retaining upside potential.

Rather than continuing to have direct exposure to a particular sector or company via the stock, it is possible to construct a 'stock replacement' strategy that maintains upside exposure if the stock rises. This involves paying a small amount compared to the total value of equity involved in the strategy. If the tech sector then rises over the strategy's lifetime, the investor participates in those gains. If the sector falls, the cost of the strategy is foregone, but the investor does not suffer the larger losses that would have been incurred via direct exposure to the sector.

Dual-directional strategy

Seeking to generate a return from a substantial fall in equity markets is only one of the possibilities for exploiting volatility. Another would be a strategy that gains either if a market rises or falls. This may be attractive for investors who share our view that volatility will rise in 2018 but who are unsure of the direction that equity markets may take.

For example, a position could be entered enabling the investor to make a positive return if an equity index such as the EuroStoxx 50 rose or fell by around 20%. The parameters of the strategy could be tailored to an investor's specific outlook for a particular market, including the timeframe and any element of capital protection.

Currency strategies

As we note in [Emerging opportunities](#), US dollar weakness has now become a consensus view. When the currency was at its peak in early 2017, more than 90% of speculative positions in futures markets were longs. As of early October 2017, a small majority was short. Our view is that the dollar is most likely to remain range-bound in 2018, before resuming its downtrend.

Although not our base-case, there is a risk that the US dollar defies the consensus view by appreciating in 2018. If US economic growth proved much stronger than is generally forecast or the Fed raised rates by more than markets expect, a rally in the dollar could ensue. Equally, a geopolitical shock or resumption of the Eurozone crisis could see investors seek out the perceived 'haven' of dollar assets.

Currently, foreign exchange volatility remains cheaply priced. For investors who believe a sharp, unexpected move in the US dollar in either direction could occur in 2018, now could therefore be a good time to prepare. For a relatively low cost, an investor could enter into a strategy that would benefit in the event of a sharp move in the dollar. If the dollar remained range-bound within the specified timeframe, the cost of the strategy would be lost. This kind of strategy could also be pursued for other currencies that an investor thought might move sharply in 2018.

² Source: Factset, as of 28 Nov 2017.

Figure 1. Higher volatility, hedge fund outperformance

	VIX level				
	<15	15-20	20-25	>20	>30
HFRI Equity Hedge (Total) Index	-0.8%	-0.3%	0.2%	0.7%	1.9%
HFRI Fund Weighted Composite Index	-1.0%	-0.4%	0.3%	1.0%	2.6%
HFRI Relative Value (Total) Index	-1.3%	-0.5%	0.6%	1.5%	3.4%
SG CTA Index	-1.5%	-1.0%	0.0%	1.7%	4.6%
SG Macro Trading (Discretionary) Index	-1.6%	-0.5%	1.1%	1.8%	4.1%

Source: Bloomberg, HFR, SocGen, as of 24 Oct 2017. The table represents the performance of each of the indices minus the performance of the S&P 500 Total Return Index at various VIX levels between Jan 2000 and Aug 2017. An investor cannot invest in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Hedge fund strategies re-energize

Historically, there has been a strong relationship between the level of market volatility and overall hedge fund performance compared to risk assets. Hedge funds have generally displayed positive outperformance when the VIX, a proxy for expected equity market volatility, has been above 20 while displaying underperformance when the VIX has been below 15 - **figure 1**. Over the past 20 years, the VIX has averaged about 20. More recently, volatility has been much lower. Over the past five years, the VIX has averaged under 15 and over the past year it has averaged under 12. An increase in volatility closer to historical averages could be beneficial to hedge fund returns while continued low levels of volatility could result in underperformance.

When volatility returns, we believe that many hedge fund strategies may be beneficiaries. In particular, we believe that fundamental stock pickers such as those typically found in long-short equity funds will be well positioned. As volatility increases, there is typically greater dispersion of returns: the performance gap between the best and worst performing equities widens. Equities also tend to become less correlated with one another. Such conditions offer more scope for long-short hedge fund managers to apply their security selection skills. If they do so, both their long and short positions can potentially profit and result in relative outperformance as compared to passive equity investments.

We would also expect increased volatility to provide potential opportunities for a category of strategies that we classify as 'Diversifiers.' Broadly speaking, Diversifiers generally include strategies such as global macro, managed futures/CTAs, systematic traders and volatility arbitrage. Typically, these strategies seek to identify and exploit the direction of asset prices. As such, they tend to exhibit a 'long volatility' profile, often performing well during periods of sustained heightened market volatility or dislocations.

Diversifier strategies are typically lowly or negatively correlated to traditional asset classes such as equities and fixed income over an investment cycle. However, they can be positively correlated at certain points of the investment cycle. For example, in 2010, Diversifiers generally started shifting exposures to take advantage of the rally in risk assets, driving their correlations to equities from negative to positive. Nevertheless, investors often overlook Diversifiers because they perceive them to be complex. However, we believe they may contribute positively to suitable investors' portfolios by dampening overall volatility and enhancing risk-adjusted returns. Aside from their ability to perform better during bouts of volatility and dislocations - **figure 2** - these strategies can achieve relatively uncorrelated returns in 'normal' market conditions. This is a valuable characteristic when compared to other 'long volatility' strategies such as buying put options and which carry an explicit cost.

Please see Glossary for the definition of terms.

Figure 2. Diversifiers during dislocations

Stress event	Period	SG CTA Quant Index	SG Macro Trading Discretionary Index	S&P 500 Total Return Index
Credit crunch	2008	13.1%	2.4%	-37.0%
Crude oil crash	H2 2014	14.4%	3.3%	6.1%
China meltdown	Aug 2015	-1.9%	1.0%	6.0%
Global growth concerns	Jan-Feb 2016	7.3%	-0.5%	-5.1%
Brexit	Jun 2016	4.5%	-0.8%	0.3%

Source: Bloomberg, SocGen, as of 24 Oct 2017. An investor cannot invest in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary. The SG Macro Trading Index is a broad based performance measure for constituents that trade Global Macro strategies. These managers may typically employ top-down fundamental research to forecast the effect of global macroeconomic and political events on the valuation of financial instruments and are frequently focused on a diversified basket of instruments. The SG CTA Index is a key managed futures performance benchmark. The index calculates returns for a pool of Commodity Trading Advisors selected from the largest managers open to new investment.

The case for exploiting volatility

Overall, given past experience, we believe that even modest increases in volatility from current levels should be positive for hedge funds. But even if low volatility persists and markets continue to grind higher, we still believe hedge fund strategies can achieve attractive returns. The HFRI index posted fifteen months of gains out of sixteen as of July 2017, its longest run of positive returns in thirteen years, despite persistent low volatility.

Rather than viewing hedge funds as aggressive short-term opportunistic investments, we think investors should focus on their contribution to a balanced asset allocation. This includes helping to mitigate the effects of volatility, enhancing risk-adjusted returns over time.³

We believe that the present makes an especially appropriate time for investors to consider using volatility and hedges to sustain profitability in the coming year. Rather than looking at such strategies in isolation, however, we would encourage using them as part of an overall portfolio approach – see [Building great portfolios](#). Given the relatively cheap cost of doing so, the time to prepare portfolios for future volatility is now.

Eric Siegel, Benjamin Garrity, and Julian Corney also contributed to this article.

³ Only for suitable investors. Adding hedge funds to a balanced portfolio could increase the risk portfolio of the portfolio.

Alternative investments 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.

*Diversifier, Return Enhancer and Volatility Dampener are internal descriptors based on a fund's strategy and objective that HedgeForum Research Management ('HFRM') has developed and uses to categorize hedge funds. Such descriptors have not been approved by the relevant portfolio managers. The internal classification noted above is subject to change without notice to investors. Many portfolio managers offer multiple products that could have a different objective or classification from that of the fund identified herein.

Diversification does not ensure against loss of principal invested. The investor must ascertain if they are suitable for each investment strategy based on their unique investment objectives and risk tolerances.

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Transforming commerce

Firms that disrupt markets often determine whether a particular industry grows or contracts, creating and destroying vast wealth in the process.

We appear to be in the early stages of various new multi-year disruptive transformations in industries including robotics and automation and healthcare.

We see opportunities to invest in 'personalized medicine' among other forms of healthcare technology in 2018.

Given the volatility and risks of investing in early stage disruptors, we believe that investment advice, industry research, and professional management can more than repay their cost.





Accelerating transformation

Steven Wieting, Global Chief Investment Strategist

Ongoing disruption across many industries continues to create investment opportunities, but also demands selectivity.

We invest in industry disruptors. Firms that disrupt markets are often the single force that determines whether an industry grows or contracts, creating and destroying vast wealth in the process. What is not widely appreciated is how long it can take before an industry's transformation is completely reflected in asset prices. Incumbents with obsolete or 'second-best' technology do not simply close their doors at first glimpse of a superior solution or better business model. Their loss of market share can easily take a decade or more. This means that the value of the disruptors may be underestimated, potentially creating an opportunity for investors.

We believe that the gradual demise of second-best industry incumbents is one of the main reasons why even average active equity managers have outperformed passive strategies when investing in the information technology sector over time. Passive strategies are required to hold both losers and winners. The victims of innovation seem to be just as identifiable as the victors, creating an opportunity for active managers. Today, we appear to be in the early stages of many new multi-year industry transformations in industries including robotics and automation and medicine. In our view, this could follow a parallel path to e-commerce's 'hostile takeover' of retailing, and social media's recent ascent to dominance in advertising at the expense of print and other traditional advertising.

Over the past year, robotics and automation equities have outperformed the S&P 500 Index by 24.2%. This is not the culmination of some long-recognized trend. Robotics equities only matched the S&P 500's performance over the past five years. If innovation in automation can drive outsized demand for robotics, history would suggest that outperformance can persist for more than a year.¹

Automation is a companion to e-commerce. It has helped e-commerce retailers achieve massive productivity gains. In the past year, e-commerce retailers distributed twelve times the dollar volume of merchandise to US consumers per employee that department stores did. They achieved this while also cutting consumer prices. This continues to have a dramatic impact on retailing and real estate, as we have regularly warned over recent years.² Automation and digital commerce sent US and global department store equities back to 2010 levels during 2017. Nevertheless, we believe many clients remain underinvested in automation because they believe that the trend is mature. In our view, there is much more disruption and profit potential in store.

Few would argue against the notion that medical technology has improved human lives. Spending to augment longevity and service a globally-rising elderly population represents a secular growth outperformer in our view. We see opportunities to invest in 'personalized medicine' among other forms of healthcare technology in 2018 - [The transformation of healthcare](#). Similar transformations may be imminent in the alternative energy industry and in finance, as we will explore on our Outlook homepage.

Investing in individual early-stage disruptors is a volatile, risky business. Of 35 public firms Citi Research now classifies as 'world champions,' nine have suffered share price declines of 80% or more during their existence, including, for example, Apple. With this in mind, we believe investment advice, industry research and professional management can more than repay their cost.

¹ [Transforming commerce: The robotics revolution](#), Outlook 2017

² [Victims and victors of transforming commerce](#), Outlook 2015

The transformation of healthcare

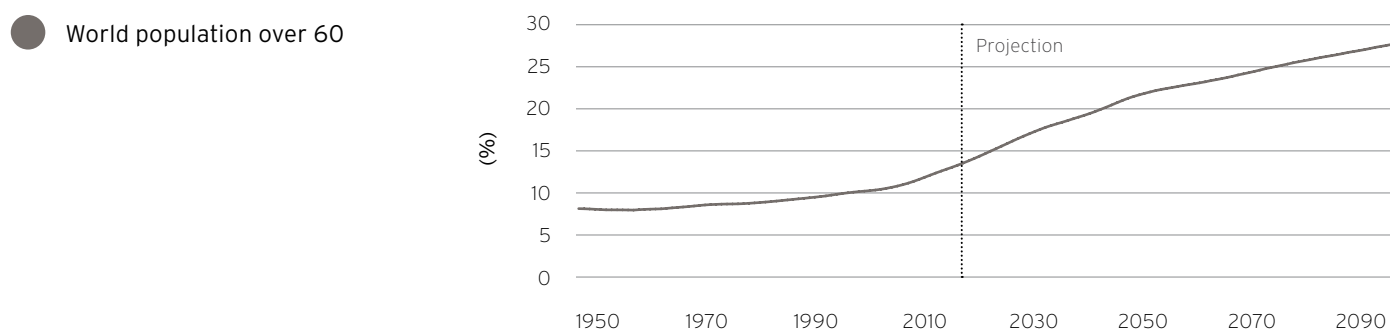
Joseph Cordi, Equity Research Analyst - Citi Investment Management
Diane Wehner, Senior Portfolio Manager, Equities - Citi Investment Management
Rob Jasminski, Head of Global Equities - Citi Investment Management

Disruptive treatments and technology could transform the healthcare industry and create opportunities for investors.

An unprecedented demographic shift is underway across the world. The global population is aging rapidly, and is already older than at any other time in history. This trend is expected to accelerate as life expectancy continues to rise and birth rates remain near historic lows in most developed countries. According to the United Nations, the number of people aged 60 and above is expected to grow from around 12.7% of the global population today to more than 21% by 2050 - **figure 1**.

The global population is aging rapidly, and is already older than at any other time in history.

Figure 1. Rapid aging process



Source: United Nations, via Haver, as of 24 Oct 2017. Covers period from Dec 1950 to Dec 2099. 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 aging of the world's population is set to have far-reaching effects on economic and business life. Older populations mean significantly higher demand for healthcare treatment, as elderly households account for a greater share of healthcare consumption - **figure 2**. The costs to society of meeting those needs could rise steeply, with healthcare spending accounting for an ever greater proportion of the economy. This could put a large strain on the public finances of already highly indebted nations around the world.

To address this unprecedented shift, a healthcare transformation will be required. New treatments will need to be discovered for previously incurable illnesses and improved treatments for other conditions. Innovative technologies and processes will be necessary to assist with everything from diagnosis to delivery of treatment. Efficiency gains will have to be made across the healthcare industry, thus helping to offset rising cost pressures.

The transformation of healthcare is underway. Medical breakthroughs have opened up the possibility of moving from 'one-size-fits-all' treatment of illnesses towards personalized solutions. New technologies are helping to identify potential health problems more effectively and at an earlier stage. The cost of supplying some of today's most expensive drugs could also be on the verge of a significant decline. We think that these and other developments could create meaningful opportunities for investors.

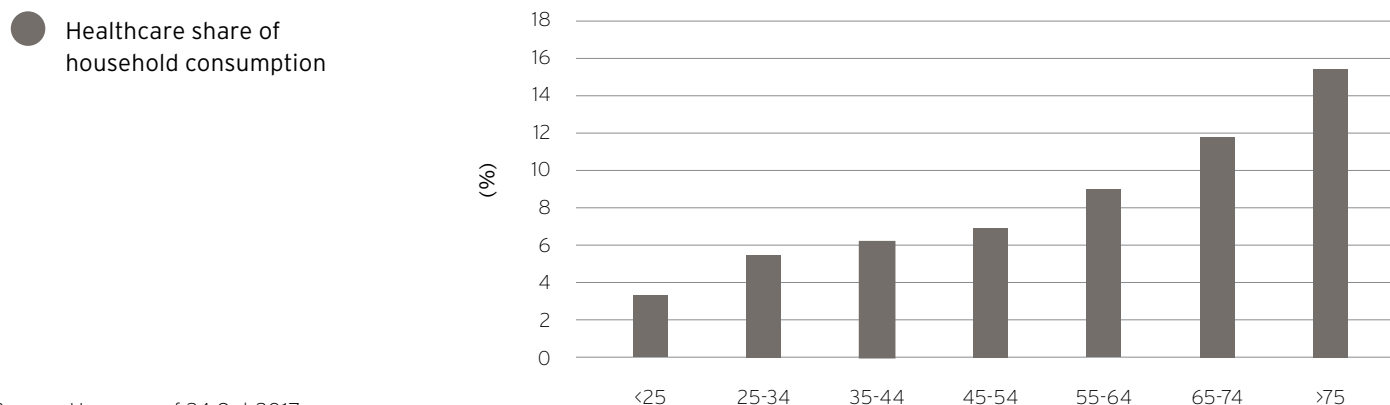
On the horizon: personalized medicine

The ancient Greek physician Hippocrates once remarked that 'it is far more important to know what person the disease has than what disease the person has.' Each human's DNA is unique and this influences the individual's susceptibility to disease, as well as subsequent development, diagnosis and treatment. Owing to the sequencing of the human genome in the early 21st century, precision medicine - personalized treatment of each patient's condition - is already a reality.

Genetic sequencing is currently being exploited in the diagnosis and treatment of illnesses including cancer. Immunotherapy harnesses a patient's own immune system to eliminate or slow the growth and spread of cancerous cells. Using the human body's own defense mechanisms in this way to treat cancer could significantly improve the outlook for many sufferers. The likelihood of the cancer returning after immunotherapy may also be lower than with the traditional treatments of surgery, radiotherapy and chemotherapy. This is because the body stores a memory of how to respond to cancerous cells.

According to Cancer Research UK, the rate of cancer incidence worldwide is forecast to increase from 14.1m new cases in 2012 to 23.7m by 2030. Aside from the human suffering, the cost of treating this upsurge would be heavy. In the US alone, the direct medical costs of treating cancer were estimated at \$87.8bn in 2014, according to the Agency for Healthcare Research and Quality. But this excludes the wider cost of cancer, such as the lost earnings of sufferers, which may be even greater than the medical costs.

Figure 2. Older consumers spend more on healthcare

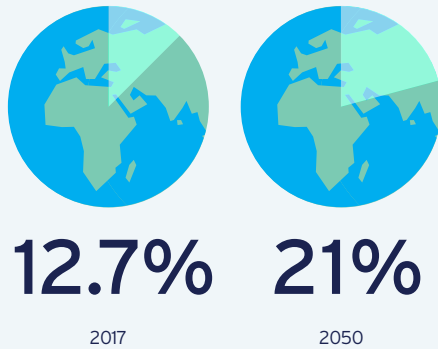


Source: Haver, as of 24 Oct 2017

The transformation of healthcare

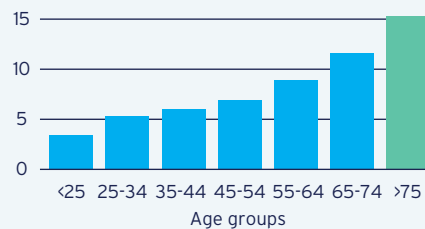
Disruptive treatments and technology could transform healthcare and create opportunities for investors

The percentage of over-60s worldwide is expected to grow rapidly¹



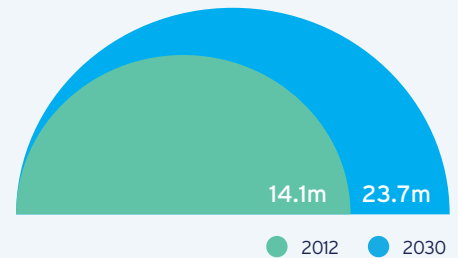
Older consumers spend more on healthcare, presenting an opportunity for new and improved health treatments

US healthcare share of household consumption, %²



And some diseases, like cancer, have a higher incidence rate in older people

New cases of cancer worldwide:³

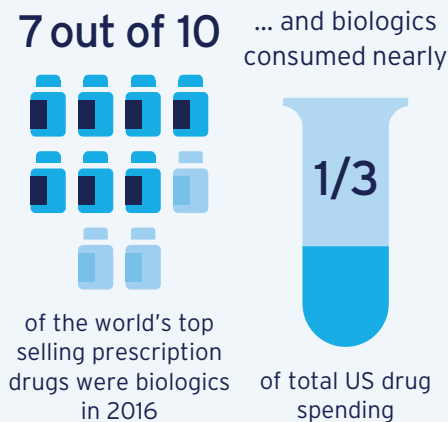


In the US alone, the direct medical costs of treating cancer were estimated at \$87.8bn in 2014⁴

WHAT ARE SOME OF THE AREAS OF POTENTIAL GROWTH?

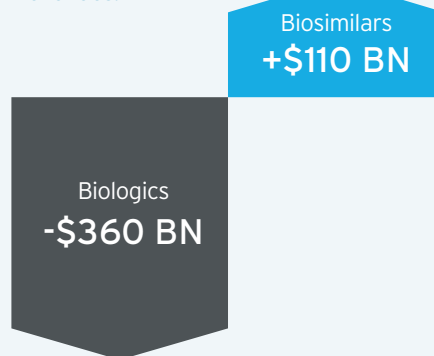
Biosimilars

Biologics are drugs made up of complex molecules manufactured from biological rather than chemical sources



Biosimilars - synthetic replicas of biologics - could take billions in revenue from biologics in the decade to 2025

Revenues:



Personalized medicine



Immunotherapy uses the body's own defenses to fight diseases like cancer, and could be worth \$35bn a year by 2025

Medical technology



Wearable devices

Early-stage disease detection



Artificial intelligence

Improving diagnosis and administration

Given our outlook for healthcare, we think that it can play a prominent role in diversified equity portfolios

Sources: All sources Citi Research or Citi GPS, unless otherwise stated. 1. United Nations, via Haver, as of 24 Oct 2017. 2. Haver, as of 24 Oct 2017. 3. Cancer Research UK, Worldwide cancer incidence statistics, as of October 2017. 4. Agency for Healthcare Research and Quality, as of Oct 2017.

Strategies and investments mentioned in this document may not be suitable for all investors. Products, 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 objectives.

Diversification does not guarantee a profit or protect against loss.

Against this backdrop, immunotherapy could have substantial potential benefits. In addition to the human benefit of saving and extending lives, immunotherapeutic treatments could help reduce the costs to healthcare systems and allow cancer sufferers to resume their careers. Citi Research expects such treatments to become the main way of addressing advanced cancer by 2025. For those involved in developing immunotherapeutic treatments, the growth could be substantial. Citi Research recently said that its initial forecast of \$35bn annual revenue potential was a clear underestimate. And immunotherapy's uses may extend to chronic infections such as HIV, malaria, and tuberculosis.

Cheaper blockbuster medicines

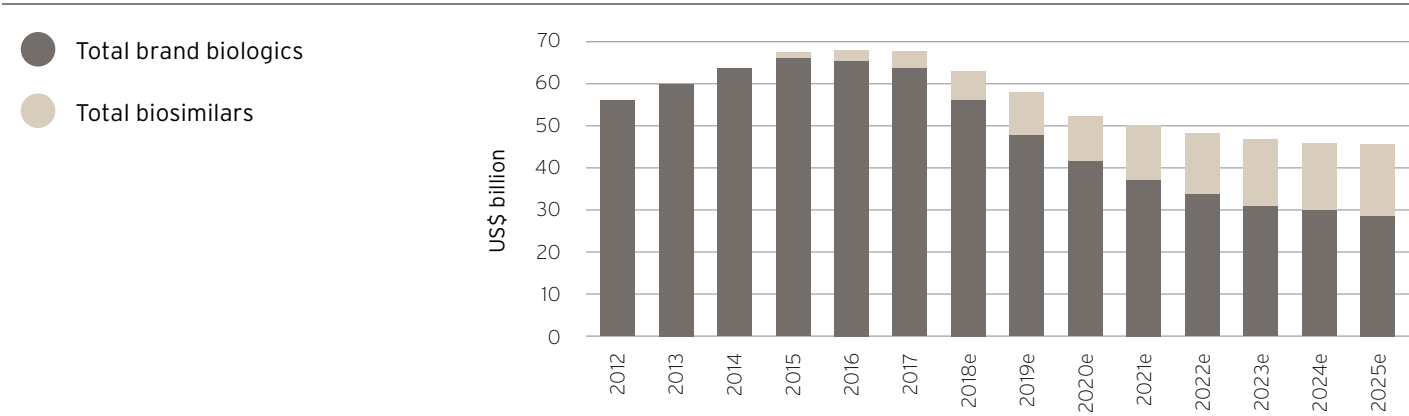
The treatment effectiveness for a wide range of conditions - including asthma, arthritis, cancer, and psoriasis - has already experienced a transformation in recent years. This is thanks partly to biologics, a class of drugs made up of complex molecules manufactured using plant cells, animal cells, or living microorganisms. Seven out of ten of the world's top ten best-selling prescription drugs in 2016 were biologics.¹

Despite their effectiveness, one drawback of biologics is their high cost, which results from the intensive spending required to research and develop them. In the US, a year's treatment with a biologic 'blockbuster' drug can cost a single patient several hundred thousand dollars. In 2016, we estimate that nearly a third of total US drug spending went on biologics. With demand for such treatments set to grow, the burden on healthcare budgets could be extremely heavy.

Biosimilars - cheaper imitations of biologics - offer a potential remedy to the pressing need for effective treatments at lower cost. These drugs closely replicate the structure and clinical effects of the originals, but typically cost a fraction of the price. The introduction of biosimilar versions of a branded drug could ultimately lower the pricing of the original molecule by more than 80%, as biosimilars are priced at a material discount.

At present, biosimilars remain a fairly new phenomenon. Only six have received regulatory approval in the US as of September 2017. However, this may grow considerably in the years ahead. If so, Citi Research believes that the companies that created the original biologics could lose revenues of \$360bn, with around \$110bn of that going to biosimilar makers - **figure 3**. So, biosimilars represent both a significant disruptive threat and a growth opportunity.

Figure 3. The opportunity for biosimilars



Source: Citi Research, as of Oct 2017. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future results.

1 Source: Bloomberg, as of 31 Oct 2017

Medical technologies accelerate transformation

Innovative treatments at cost-effective prices are only part of the coming transformation of healthcare that we expect. We also see medical technology playing an important role in many parts of the healthcare process, from disease prevention, diagnosis, delivery, through to recuperation. Such technology could help to reduce costs, speed up processes, and enhance the quality of patient care.

Wearable devices are one example of a technology that is in increasing use throughout the medical process. They already allow monitoring of risks such as congestive heart failure, diabetes, and high blood pressure. Not only can such devices enable early-stage detection of problems, but can then provide real-time information to healthcare providers about the evolution of the patient's condition. This could help shift the emphasis from treatment to prevention and from standardized to personalized medical care. Their importance should grow as their functionality continues to improve.

We also think that artificial intelligence (AI) will be increasingly deployed in healthcare. Currently, AI is helping to diagnose certain early-stage cancers, such as melanomas. We expect an increasing number of basic but also more sophisticated medical tasks to be undertaken by AI, either reducing or eliminating the need for the involvement of physicians, surgeons, nurses and pharmacists. More and more administrative work within healthcare systems could also be automated, saving labor costs and speeding up processing times.

Healthcare's investment prognosis

The ongoing transformation of healthcare that we expect over the coming years contributes to what we believe makes an attractive investment case for the industry overall. We see healthcare as well positioned to grow throughout economic cycles. In this environment, global large-capitalization pharmaceuticals companies may be able to grow their earnings per share at a compound rate of growth of 6-8% a year. However, particular segments of the industry may achieve more than this. For example, we think global medical technology companies could potentially achieve 10% annualized growth. Particular sub-sectors and companies in the areas we have discussed could achieve more still.

While our prognosis for healthcare investment is positive, we acknowledge that there are risks to this view. Increased government intervention and regulation of the industry in order to tackle rising medical costs is perhaps the biggest risk facing the industry. In the US, the world's largest healthcare market, healthcare spending is projected to grow at 5.6% a year between 2016 and 2025. The healthcare share of GDP could thus rise from 17.8% to 19.9% over the period. Federal, state and local government are projected to finance almost half of that spending, proving a major incentive for intervention on pricing but also to levels of access. Efforts to control prices and regulate the market are unlikely to be confined to the US.

External factors are not the only threats to the healthcare industry. Although we see potential from transformative healthcare technologies, we equally recognize the dislocation risks they pose. The possible revenue losses to the makers of biologics are a case in point. We therefore emphasize the need for careful selection among healthcare investments, seeking to avoid those that are most threatened by disruptive innovation and focusing instead on its potential beneficiaries.

Given our outlook for healthcare, we think that it can play a prominent role in diversified equity portfolios. The sector has historically proved defensive relative to the wider equity market, thanks to the robustness of its earnings through the economic cycle. But we think its potential portfolio benefits go beyond defensiveness. Depending on an investor's objectives, a selection of healthcare investments can be made that seeks growth or yield. In any event, we believe that carefully considered, bottom-up security selection is critical.

1 The Beginning of the End of Cancer T+4, Citi Research, March 2017

2 Citi Research, as of 31 Oct 2017

3 http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=169, as of July 2017

4 National Health Expenditure Projections 2016-2025, The Office of the Actuary in the Centers for Medicare & Medicaid Services, as of Feb 2017



The disruption of money and finance

Steven Wieting, Global Chief Investment Strategist

Robert Jasminski, Head of Global Equities – Citi Investment Management

While cryptocurrencies have dominated headlines recently, we believe the long-term disruptive opportunities in financial technology lie elsewhere.

Few areas of economic activity are immune from disruption nowadays – even closely-guarded state monopolies like money. Traditionally, governments have insisted on the exclusive right to issue currency, often severely punishing those who have tried to use rival means of payment. The advent of cryptocurrencies – digital currencies that allow private parties to transact with each other outside of centrally controlled banking systems – has created a challenge to this monopoly. While the overall value of transactions carried out this way remains a tiny fraction of overall payments globally, they have generated feverish public interest in 2017.

Traditionally governments have insisted on the exclusive right to issue currency, often severely punishing those who have tried to use rival means of payment.

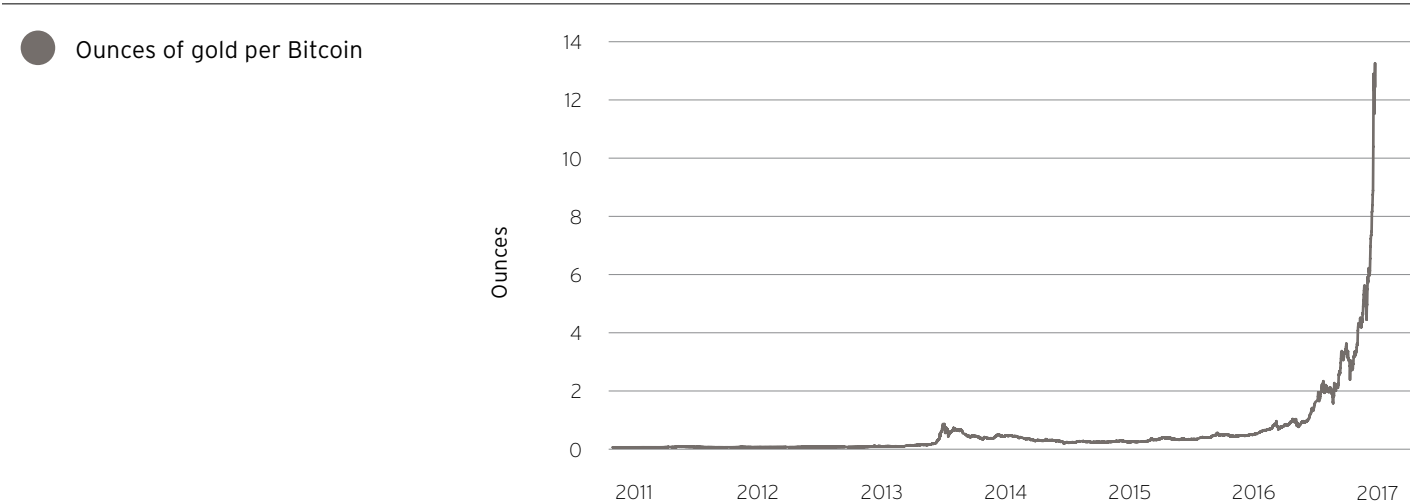
Bitcoin is just one of a growing number of cryptocurrencies or 'tokens' used to facilitate non-cash payments. While its intended use is to make payments, it has become the focus of intense speculative activity. Against the US dollar, Bitcoin has increased by as much as tenfold in 2017, and several times against gold, one of the oldest forms of money - **figure 1**. Many investors have bought it simply because they hope for yet more price gains. Media coverage has helped to fuel interest in Bitcoin and other cryptocurrencies. We see this behavior as the classic symptoms of an asset-price bubble.

It is unclear which, if any, cryptocurrency standard will achieve dominance in the future. The blockchain technology on which Bitcoin is based can be used to facilitate transactions in any currency, including traditional ones. The history of other technologies - from Sony's initial success with Betamax as a video machine standard to Myspace's initial but short-lived dominance in social media - argues against taking a strong view on the future price of Bitcoin or other cryptocurrencies. A further issue is the degree to which governments will tolerate the challenge to their monopoly over money. The authorities have a legitimate stake in preventing cryptocurrencies being used to circumvent international sanctions and capital controls, to facilitate money laundering, or to finance terrorism.

Certain governments have even themselves been the victims of cyber-attacks in which the hackers have placed ransomware on state computer systems and demanded payment in Bitcoin. Various governments are now responding to the challenge, with some seeking to regulate cryptocurrencies and others restricting or banning their use.

At Citi Private Bank, we see innovative financial technology as a critical and investible disruptive force. Society is becoming increasingly cashless, with payments increasingly being made via mobile devices. China - which invented paper money in the 7th century - appears to be leading the way once again. Strong first-mover advantage, the world's largest population, and a less developed traditional banking system have allowed Chinese e-commerce giants to achieve powerful growth in e-payments, diminishing the role of cash in China. In the US, we see potential financial technology beneficiaries among e-payment facilitators, incumbents in the credit card industry, and some technology hardware producers. In our view, such innovators may make somewhat more predictable long-term investment opportunities. In contrast, we see cryptocurrencies as highly speculative vehicles.

Figure 1. How many ounces of gold does a Bitcoin buy?



Source: Haver, as of 13 December 2017. For illustrative purposes only. Not deemed to be a recommendation. Past performance is not indicative of future returns. Real results may vary.

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.

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.

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 Preferreds are equity securities that have preference over common stock in the event of a corporate bankruptcy. Because these securities are considered higher-quality, they exhibit characteristics of debt instruments and often do not contain voting rights for their owners.

Index definitions

The Barclays Multiverse Bond Index is a broad fixed-rate multi-currency benchmark.

The CBOE Volatility Index (VIX Index) is a leading measure of market expectations of near-term volatility conveyed by S&P 500 Index option prices.

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 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'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, multi-currency benchmark which provides a measure of the global fixed income markets.

The MSCI Europe ex-UK Banking Industry index tracks the performance of major European depository institutions, excluding those domiciled in the United Kingdom.

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.

HFRI Equity Hedge (Total) Index is an equal weighted index if multiple equity hedge fund managers. Equity Hedge investing consists of a core holding of long equities hedged at all times with short sales of stocks and/or stock index options. Some managers maintain a substantial portion of assets within a hedged structure and commonly employ leverage. Where short sales are used, hedged assets may be comprised of an equal dollar value of long and short stock positions. Other variations use short sales unrelated to long holdings and/or puts on the S&P 500 index and put spreads. In addition to equities, some funds may have limited assets invested in other types of securities.

The HFRI Fund Weighted Composite Index is a global, equal-weighted index of over 2,000 single manager funds.

The HFRI Relative Value (Total) Index is an equal weighted index that maintains positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

The Korea Composite Stock Price Index or KOSPI is the index of all common stocks traded on the Stock Market Division.

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

The MSCI Asia ex-Japan index has large and mid-cap representation across 2 of 3 Developed Markets countries and 8 Emerging Markets countries in Asia. It captures approximately 85% of the free float-adjusted market capitalization in each country.

Chilean large and mid-cap companies are represented by the MSCI Chile Index. With 19 constituents, the index covers approximately 85% of the Chile equity market.

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 MSCI Kuwait Index is designed to measure the performance of the large and mid cap segments of the Kuwait market. With 8 constituents, the index covers approximately 85% of the Kuwait equity universe.

The MSCI Jordan Index is designed to measure the performance of the large and mid cap segments of the Jordan market. With 4 constituents, the index covers approximately 85% of the Jordan equity universe.

The MSCI Lebanon Index is designed to measure the performance of the large and mid-cap segments of the Lebanese market. With 4 constituents, the index covers approximately 85% of the Lebanon equity universe.

The MSCI Russia Index is designed to measure the performance of the large and mid cap segments of the Russian market. With 22 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Russia.

The MSCI North America Index is designed to measure the performance of large and mid-cap segments of the US and Canada markets with 725 constituents.

The MSCI Qatar Index is designed to measure the performance of the large and mid cap segments of the Qatari market. With 12 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Qatar.

The MSCI Turkey Index is designed to measure the performance of the large and mid cap segments of the Turkish market. With 25 constituents, the index covers about 85% of the equity universe in Turkey.

The MSCI United Arab Emirates (UAE) Index is designed to measure the performance of the large and mid cap segments of the UAE market. With 10 constituents, the index covers approximately 85% of the UAE equity universe.

The MSCI USA Index represents more than 600 constituents and approximately 85% of the free float-adjusted market capitalization in the US.

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.

SG CTA Index is a benchmark of major commodity trading advisors and calculates the daily rate of return for a pool of CTAs selected from the larger managers that are open to new investment.

SG Macro Trading (Discretionary) Index represents the performance of all the trading strategies, whether available through either onshore or offshore fund structures, as well as managed accounts that are reported to SG Alternative Investment Solutions.

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.

The S&P Global Infrastructure Index is designed to track 75 companies from around the world chosen to represent the listed infrastructure industry while maintaining liquidity and tradability. To create diversified exposure, the index includes three distinct infrastructure clusters: energy, transportation, and utilities.

S&P Global Internet Retail Index, shorthand for the S&P Global 1200 Internet & Direct Marketing Retail sub industry, is an index of companies that market and sell products to customers directly over the internet. This sub industry is a part of the Consumer Discretionary sector of the S&P Global 1200 index.

S&P Global Department Store Index, shorthand for the S&P Global 1200 Department Stores sub industry, is an index of companies that sell products in a physical retail establishment that offers a wide range of consumer goods from different product categories known as 'departments'. This sub industry is a part of the Consumer Discretionary sector of the S&P Global 1200 index.

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.

Diversifiers are hedge funds that typically are expected by HFRM to display low or negative correlation and/or beta to traditional asset classes though they may display significant degrees of market correlation at certain points of the investment cycle. The portfolio managers of such funds are often long volatility and generally may provide attractive diversification benefits to a client's portfolio though returns are often 'unpredictable' and can be volatile. This internal classification is based on the analysis and subjective views of HFRM. The internal classification is subject to change without notice to investors and there is no guarantee that the funds will perform as described above. It is important to note that the market strategy described above may not completely eliminate market risk. There is no guarantee that hedge funds classified as 'Diversifiers' will perform as described above. Hedge funds should not be invested in based on their classification as 'Diversifiers' and other assets in a client's overall portfolio should be taken into consideration before an investment is made.

Extreme Downside Risk (EDR) is a measure used to estimate the risk of an asset allocation. EDR seeks to estimate the typical type of loss, over a 12-month time horizon, that an asset allocation may experience in a period of extreme market stress. It is calculated using

a proprietary methodology and database. For a given asset allocation, this approach estimates the loss, over a 12-month time horizon, that the asset allocation may have experienced during historical periods of extreme market stress. EDR is calculated by taking the average loss in the worst 5% of this historical periods of extreme market stress. EDR does not estimate the maximum possible loss. Potential losses for a given asset allocation may exceed the value of the EDR.

Global macro hedge fund strategies are generally fundamental and discretionary. Managers of these strategies analyze large quantities of macroeconomic data across markets and regions. Those managers try to identify large imbalances in the risk premiums relating to major asset classes, such as fixed income, equities, commodities and currencies. This top-down process helps them to identify potential directional and tactical opportunities.

Managed futures/CTA hedge fund strategies are generally systematic and technical (i.e., quant-driven). Many trade a large number of futures and forwards markets (often 100+) and take positions in response to systematic buy and sell signals generated by computer models that attempt to identify or anticipate market trends. Many of their inputs are price-based indicators, and most models are derived from proprietary trend-following algorithms.

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 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.

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

Volatility arbitrage hedge fund strategies typically attempt to exploit differences between the forecasted future volatility of an asset and the implied volatility of options based on that asset.

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.

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		
	Moody's ¹	Standard and Poor's ²	Fitch Ratings ²
Credit risk			
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.

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- Concentration Risk. Investment in a basket of Energy Related MLPs may expose the investor to concentration risk due to industry, geographical, political, and regulatory concentration.
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- Changes in tax or other laws affecting MLPs generally;

- Regulatory changes affecting pipeline fees and other regulatory fees in the energy sector;
- The effects of political events and government regulation;
- The impact of direct government intervention, such as embargos;
- Changes in fiscal, monetary and exchange control programs;
- Changes in the relative prices of competing energy products;
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- The impact of environment laws and regulations and technological changes affecting the cost of producing and processing, and the demand for, energy products;
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