

Steven Wieting Global Chief Investment Strategist +1-212-559-0499 steven.wieting@citi.com

Malcolm Spittler Maya Issa Global Investment Strategy

**Ken Peng** Asia Investment Strategy

Jeffrey Sacks Shan Gnanendran EMEA Investment Strategy

Jorge Amato Latin America Investment Strategy

Charles Reinhard Joseph Fiorica North America Investment Strategy

Kris Xippolitos Joseph Kaplan Fixed Income Strategy

Wietse Nijenhuis Equity Strategy

### The Price for Peace in the US Bond Market

- As in early 2016, we expect financial market confidence to recover once more, once investors focus anew on solid near-term economic fundamentals. This is even as history suggests the next US recession is not merely some hypothetical for the far-distant future.
- Early 2016 saw a greater challenge to the global expansion from the highly concentrated threat to energy-producer solvency and fears over China. Today, we see less slack in the US economy, greater monetary headwinds, but brighter growth prospects across the world. We expect global earnings per share to grow at a low, double-digit pace into early 2019.
- As such, we have maintained our overweight in Global Equity of 4%, and our underweight to Fixed Income of 4%, amid fast-moving markets. With valuations significantly lower and economic recovery less advanced outside the US, we retain our equity overweights in non-US markets.
- After the latest spike in correlations across asset classes, regions, and sectors, we expect a
  wider dispersion of returns in the coming year and stronger overall returns for our asset
  allocation than we did just a month ago.
- Amid tentative signs of stabilization in markets, our biggest outstanding question is the
  extent of the weakness in US bond markets, including any collateral damage to credit. Thus
  far, credit market volatility has been below that of equities.
- The tell-tale sign of US dollar weakness amid rising relative US interest rates has received too little consideration by the markets. The US is stepping up borrowing just as the Fed is reducing its bond portfolio. This competition for savings to fund bond markets is set to be a countervailing influence on returns amid strongly rising corporate profits.
- The US dollar's behavior suggests foreign investors are demanding a higher price from the
  US to attract savings. As equity volatility subsides, it is not entirely clear what impact the US
  savings thirst will have on global markets. Even at low historic yield levels and structural
  problems with hedging currency risk, we see the rise in long-term US bond yields remaining
  fairly limited in the year ahead.
- At both a country and sector level, the anatomy of the recent sell-off shows that investors
  are not worried about economic growth. Instead, it shows worries about interest rates.
- We present some performance charts across Developed Markets (DM), Emerging Markets (EM) and sectors before and after the recent sell-off.

# GIC - February 14<sup>th</sup>

The Citi Private Bank Global Investment Committee today left its asset allocation unchanged. We remain 4% overweight Global Equities, with US Equities still at a full - or neutral - allocation. We also remain 4% underweight Fixed Income, with non-US Developed Markets the largest underweight. With a rapid, but historicallymoderate equity market correction unfolding in early February, we expect stronger returns from our positions over the next 12-18 months than we did one month ago. We recommend clients with abnormally high cash allocations take advantage of lower valuations in equities and certain bonds to allocate fully.

Our global economic outlook has not changed in the last two months, except that we now look for somewhat stronger corporate earnings and slightly higher-than-expected US interest rates. We see a rise in US wage growth and the modest rise in inflation as "later cycle" signals, but the slow pace of the increases is unlikely to cause the Federal Reserve to move to a significantly restrictive monetary policy.

Equity markets rallied very sharply on signs of stronger growth in the first four weeks of 2018, leaving them vulnerable to short-term profit taking. However, particular strategies speculating upon persistently low volatility suffered a severe shock when related investment products failed to perform as some users had expected. This created a technical cascade of equity weakness that was isolated to this asset class. While there are some uncertainties for equity investors as to interest rates, the recent market dislocation is likely to reverse over time.

We actively expected a new regime of higher volatility in 2018 due to the changing monetary policy landscape. The Fed is shrinking its balance sheet by \$400 billion in 2018, reducing monetary stimulus, while the US Congress has added fiscal stimulus to the US Economy by approving tax cuts and spending increases. The decline in the US dollar in recent months even as US interest rates have risen suggests the US is not attracting foreign savings as easily as it once did.

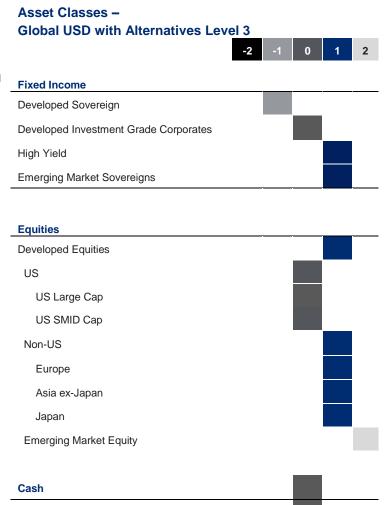
The decline in the US dollar largely benefits our positions in non-US equities in our current allocation. While global diversification is proven to be effective for long term investors, in the past two weeks we have seen fears within the equity asset class can spread across regions over the short-term. We see an elevated risk of foreign exchange and interest rate volatility rising.

Over the coming year, we look for a wider dispersion of regional equity returns owing to the differing stages of economic and monetary policy cycles internationally. This may allow us to make further allocation changes, probably taking somewhat less US dollar risk and greater international asset market risk. However, the full implications of the rise

in US interest rates and the declining dollar may not have been fully felt in global asset markets in the near-term.

The US expansion cycle is both strengthening and likely to endure through 2019. We see rising profits as a reason to allocate fully to US equities, despite their relatively high valuation. However, the extended nature of the economic cycle and tighter US monetary policy keep us from overweighting the asset class relative to global benchmarks at present.

Commodities



#### Allocations as of February 14, 2018

-2 = very underweight; -1 = underweight; 0 = neutral 1 = overweight; 2 = very overweight Arrows indicate changes from previous GIC meeting

#### The Price for Peace in the US Bond Market

Faster economic growth and competition for savings are "dueling" forces, driving the fate of markets, and boosting volatility. In these early days of 2018, global financial markets are already feeling the impact of the two dueling factors that we expect to drive investment returns this year: 1) faster economic growth and 2) competition for savings (see <a href="Outlook 2018">Outlook 2018</a> for discussion). The latter is the increased funding needed to finance governments in a post-quantitative easing (QE) world.

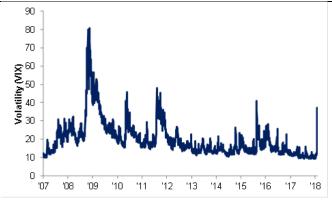
The "duel" seems sure to single-handedly drive up financial market volatility. The historic abnormality of record low market volatility amid a variety of catalysts inspired us late last year to recommend cheap hedges as one of our four investment themes for 2018 (see <a href="Exploiting Volatility">Exploiting Volatility</a>, Outlook 2018).

Of course, that was based on market pricing *then*. After a 10% decline in equities globally and an outsized spike up in implied volatility, brave souls might even begin to consider certain yield enhancing strategies by selling fully covered equity volatility. The term structure of volatility now points to a market correction that has fully unfolded **figures 1-2**. Higher trend volatility is, however, likely here to stay. A variety of fundamental questions – most importantly, about the cost of borrowing - must be answered before a true "all-clear signal" can be issued.

Figure 1: Term Structure of US Equity Volatility



Figure 2: "Pent-Up Mayhem" – Volatility Had Been at Record Lows



Source: Bloomberg as of February 5, 2018.

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

Source: Haver Analytics as of February 12, 2018.

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A \$1.5T tax cut and \$300B spending package have Treasury markets exploring the highest yields in years.

The Federal Reserve has changed its game plan, and will no longer seek to forcibly push down the inflation rate.

US Treasury markets are probing five-year highs in long-term yields and its new trading range has yet to be fully clarified. With a 10.4% decline in the US dollar (DXY Index) over the past twelve months barely considered, the US Congress and Trump administration just passed another \$300 billion spending driven fiscal expansion over the next two years. This comes on the heels of a \$1.5 trillion tax cut over the next decade. Suddenly, many emerging markets might seem like the outliers on fiscal rectitude. (Brazil, take note.)

Some aspects of the recent fiscal measures, such as the lowering of the US corporate tax rate, appear unusually "supply friendly." However, it appears likely that increased deficit spending will still contribute to a worsening of US external accounts on a long-term basis. While budget and current account deficits are more "cousins" then "twins," lower taxes and spending still tend to boost demand less than supply. This results in larger external trade deficits and reduced purchasing power.

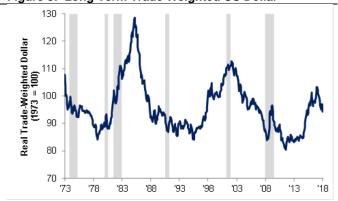
Inflation is still below the Federal Reserve's target, and especially the level it says it would temporarily tolerate, 2.5% on its "preferred measure<sup>1</sup>. After four decades of actively trying to drive down the trend rate of inflation, using every recession to lock in a lower rate, the US

<sup>&</sup>lt;sup>1</sup> The Federal reserve focuses on personal consumption expenditure prices (PCE) as its preferred metric for inflation. In recent years PCE inflation has averaged roughly 0.5% below the better known CPI inflation metric. The key difference in the two is the PCE measure reflects a changing basket of consumer products, as consumers shift purchases to lower priced products.

central bank says its game has changed. Thus, we expect real US interest rates will stay below long-term historical averages relative to other currency zones. This—along with a wide current account deficit—should weaken the US dollar further over time **figures 3-4**.



Figure 4: Real 5-Year Treasury Yields





Source: Haver Analytics as of February 5, 2018.

Source:

As **figure 5** shows, certain foreign exchange hedging costs are high at the moment, making hedging currency risk in some bond portfolios uneconomical. Thus, many international investors in US bonds must accept US currency risk when evaluating the merits of lending to the US.

The past two months' decline in the US dollar amid rising US rates – at a faster pace than those abroad – tells a tale of global savers voting with their feet. **Figure 6** illustrates the US dollars sharp drop even as relative US rates have risen and US corporate tax cuts provide (at minimum) a one-off improvement on returns for certain types of US investment. Prior to the last two weeks of gains, recent data suggested some decline in US bond market participation by foreign central banks **figure 7**.

Figure 5: German and US Yields hedged into Euros



Source: Bloomberg as of February 12, 2018.

The US dollar is a telling factor in the current market turmoil, and getting too little consideration.

Why didn't US bonds rally during the equity correction? Foreign savers aren't snatching up the enhanced supply.

Figure 6: US Dollar Index vs US Rate Premium to G7



'17

3.7

'18

Note: The Group of 7 (G7) is a group consisting of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

Source: Bloomberg as of February 12, 2018.

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Source: Haver Analytics as of February 12, 2018.

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So, what stands out as unusual during the past two weeks is the weakness in the US Treasury market, where yields continued to be under upward pressure in the face of an equity market correction. A correction, at other times, would boost the US bond market as a "safe haven" asset. With a strong fundamental growth outlook for the US economy and other technical factors, it is increasingly hard to assume the US bond market would be at peace with rising equities. And it is difficult to assume that equities will once again breeze right along as though bonds don't matter.

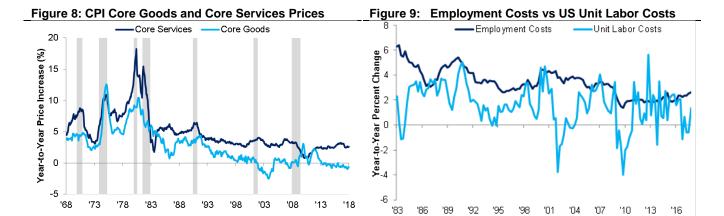
# Don't Cry INFLATION in a Crowded Theater

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Hawkish eyes are required to spot the recent rise in inflation on a long-term chart.

We have suspicions, however, about those screaming "inflation" in the US after a nine-year expansion a microscope would be needed to discern a pickup on a long-term chart even after the surprise January increase **figure 8**. Yes, the best measures of US employee compensation show a convincing "tilt" higher. But unit labor costs are unlikely to even breach 2% in the 2018 **figure 9**. While some worry about corporate margin pressures after reaching lofty levels, the current economic environment suggests a fairly steady savings rate. This means employee compensation gets recycled into consumer spending. In turn, this means greater corporate profits for other firms.



Source: Haver Analytics as of February 15, 2018.

Source: Haver Analytics as of February 12, 2018.

Dedicated volatility selling funds faced forced deleveraging, exacerbating the recent equity market declines. What does seem probable is that certain investment strategies became vulnerable to profit taking, imbalancing certain complacent and often leveraged investors.

According to Citi trading desks and media reports, dedicated volatility-selling funds— and other investors following similar strategies— were forced to deleverage in recent days, buying back positions in securities and derivatives that others would use to hedge declines in share prices. Trading relationships (algorithms) based on a wide range of prices resulted in a rapid liquidation of cash equities, likely at prices some owners never would have expected.

As discussed in our recent bulletins (Feb 2, Feb 5, Feb 6 and Feb 9), the severity of the equity market pullback has been far in excess of moves seen in credit markets **figure 10**. Credit, to be clear, did not enjoy the exuberance that equities did in early 2018. The absence of volatility across other asset classes of the same scope suggests that equity markets were the exuberant anomaly **figure 11**.

Figure 10: S&P 500 Volatility (VIX) vs High Yield

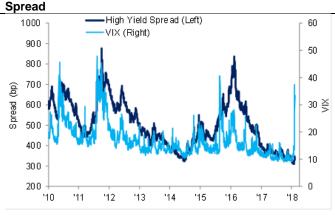
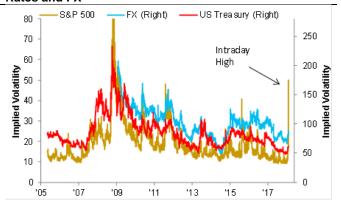


Figure 11: Cross Market Volatility: US Equities, Interest Rates and FX



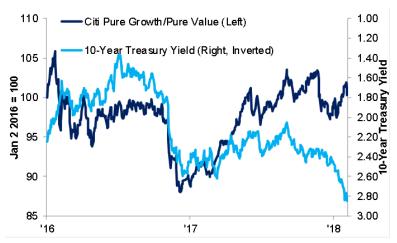
Source: The YieldBook and Haver Analytics, as of February 12, 2018. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only.

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An extended rally in rate sensitive growth stocks increased vulnerability to even small changes in the US rate outlook.

Moreover, a long-running rally in so-called "growth stocks" –those with above-average valuations– left many portfolios vulnerable to underperformance on relatively insignificant changes in the US rate outlook see **figure 12** and Quadrant special below "What Worries Drove the Correction?"). In our view, the market capitalization for key "growth stock" constituents is not a lasting problem so long as their EPS outperformance continues and markets discern between winners and losers rather than inflate the entire sector. Such was the case in the late 1990s bubble period **figures 13-14**.

Figure 12: Citi Pure Growth/Pure Value vs 10-year US yield



Note: The S&P 500/Citigroup Pure Growth Index is narrow in focus, containing only those S&P 500 companies with strong growth characteristics as selected by S&P.

Source: Bloomberg and Haver Analytics as of February 12, 2018.

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Figure 13: Tech Sector Revenue Divergence

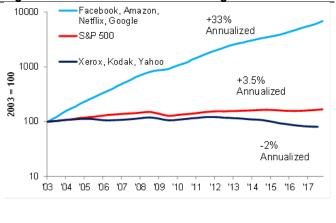
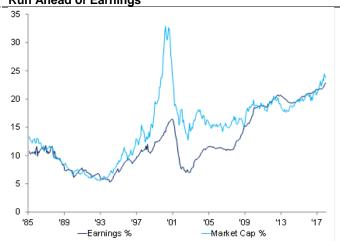


Figure 14: S&P 500 Tech Sector Valuations Have Not Run Ahead of Earnings



Note: Select firms are bundled equally weighted, with 2003 = 100.

Source: Factset and Haver Analytics as of February 12, 2018.

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Source: Factset as of February 12, 2018.

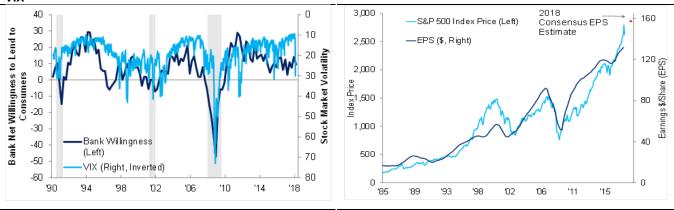
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# Can Growth Endure At an Advanced State of US Recovery?

Importantly, the US economic expansion survived 2015-2016 with a far more significant retrenchment in credit, albeit one concentrated in the booming energy sector. In essence, declines in other asset classes that are central to economic functioning would be a key ingredient for a financial trigger to sink the US economy. A new recession now likely requires that credit conditions weaken and impair economic growth. This is not just a task for riskier elements of credit markets, but also of bank lending, which tends to be less prone to volatility figure 15.

In the absence of such a self-reinforcing downturn, the evidence suggests corporate earnings will rise solidly in the period ahead, and drive a recovery in share prices **figure 16**. Investors should be clear that market corrections tend to be far swifter than recoveries. It is far easier to demolish a building than construct one.

Figure 15: Banks Willingness to Lend to Consumers and Figure 16: S&P 500 Operating EPS and S&P 500 Y/Y% VIX



Source: Haver Analytics as of February 12, 2018.

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Source: Haver Analytics as of February 12, 2018.

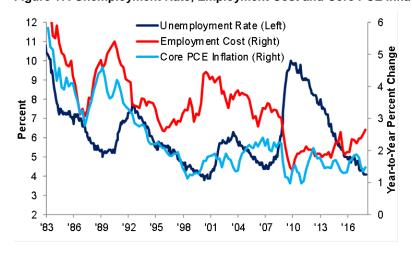
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Despite near-record low unemployment, signs of inflation are few, and employment costs are still rising below historical norms. While the US unemployment rate has fallen to lows that would argue for peak-like economic conditions, both US wage growth and inflation have never simultaneously been so low **figure 17**.

As in early 2016, we expect financial market confidence to rise once more, focused on near-term economic fundamentals. Despite history suggesting a US recession is *not* only off in the distant future.

In the early 2016 period, we saw larger fundamental challenges to the global expansion from the highly concentrated threat to energy-producer solvency and fears about China's financial sustainability. This time, we see less slack in the US economy, greater monetary headwinds, but somewhat brighter growth prospects across the board.

Figure 17: Unemployment Rate, Employment Cost and Core PCE Inflation



Source: Haver Analytics as of February 12, 2018.

While it is early to judge, the decline in the US dollar of late is signaling that the "toll" foreign savers will demand for their capital might be higher than we expected. However, as this feeds back into other asset classes, we suspect the rise in US yields will become self-limiting.

Our key questions are: 1) what "toll" will foreign investors charge the US for Borrowing.

2) what impact, if any, would a rising toll have on others?

Citi Private Bank's AVS model had already lowered the benchmark strategic allocation for US equity holdings at the start of the year.

Meanwhile, as discussed in last month's Quadrant, the US yield curve has flattened in every single historic Fed tightening cycle, and this flattening trend is another powerful, but separate influence limiting the rise in long-term US yields.

With the US equity bull market and US economic recovery approaching a ninth year, our proprietary asset allocation methodology (AVS) has already reduced our benchmark strategic allocation to US equities at the start of the year figure 18. Less mature economic recoveries, lower valuations, and the US dollar itself suggest that non-US equities deserve a higher longterm allocation figure 19. With all this in mind, the Citi Private Bank Global Investment Committee thought it premature and imprudent to alter asset allocations amid unsettled financial markets that differed quite little from the fundamental outlook we expected this year.

As is typical during rapid, intense correction phases, US shares have pulled down other regions of the world. As US interest rate pressures rise further, this may still negatively impact other regions. However, it is also typical for correlation between regions to fall significantly following corrections as time passes see figure 19 and Outlook 2018 for details.

Lately we have suspected the rise in US yields would drive a reprieve from US dollar declines, and perhaps a phase of outperformance for US assets. The sharp rise in bond yields in early 2018 might finally achieve that. Still, the accumulated evidence reinforces our view that stronger long-term returns will be earned in non-US markets, particularly emerging markets that were never the subject of central bank QE.

Figure 18: AVS Strategic Asset Changes for 2018

	Strategi	c Asset /	Allocation
	2017	2018	Change
Developed Market Equities	53.6%	52.9%	-0.7%
Emerging Market Equities	7.4%	7.5%	+0.1%
Investment Grade Bonds	33.1%	33.2%	+0.1%
High Yield Bonds	2.0%	2.0%	0.0%
Emerging Market Fixed Income	2.0%	2.4%	+0.4%
Cash	2.0%	2.0%	0.0%
Commodities	0.0%	0.0%	0.0%

Figure 19: Private Bank 10-Year Annualized Strategic Return Estimates.

Asset class	Strategic Return Estimate
Global Developed Equity	4.9%
Global Emerging Equity	8.4%
Global Developed Investment Fixed Income	2.3%
Global High Yield Fixed Income	4.1%
Global Emerging Market Fixed Income	4.1%
Cash	2.3%
Hedge Funds	5.7%
Private Equity	10.3%
Real Estate	10.1%
Commodity	1.9%

Source: Citi Private Bank Global Asset Allocation Team as of January 2018.

Source: Citi Private Bank Global Asset Allocation Team as of November 2017. All forecasts are expressions of opinion and are subject to change without notice. Past performance is no guarantee of future results. Real results may

Note: Strategic Return Estimate (SRE) is CPB's forecast of returns for specific asset classes over a 10yr time horizon.

# Market moves point to 'benign' causes for the correction, with China and Energy oversold

#### Wietse Nijenhuis Global Equity Strategist

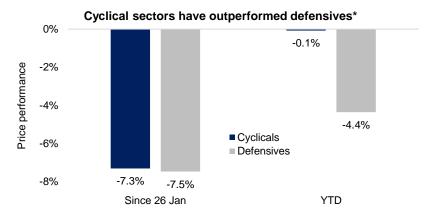
#### Steven Wieting Global Chief Investment Strategist

#### Shan Gnanendran **EMEA Investment Strategy**

#### Joe Fiorica North America Investment Strategy

We present some performance charts across Developed Markets (DM), Emerging Markets (EM) and sectors before and after the recent sell-off.

- At both a country and sector level, the anatomy of the recent sell-off shows that investors are not worried about economic growth. Instead, it shows worries about interest rates.
- Had growth worries been the catalyst for the correction, we would have expected defensive markets and sectors to outperform (they haven't).
- Rather, investors are repositioning for higher US rates. Growth-oriented Technology and Health Care initially sold off the most (along with energy). Although Technology has since rebounded.
- However, Consumer Discretionary, another growth sector (but also a beneficiary of wage rises) has been one of the most resilient sectors.
- Within EM, the countries most negatively impacted by higher Treasury yields have underperformed this year.
- Energy has seen the biggest pull-back over the past week, despite the fact that the sector has seen the strongest earnings revisions of late.
- By country, China stands out as oversold. The market is the worst performer among both EM and DM markets since the 26 January peak, yet recent earnings revisions have been strong.

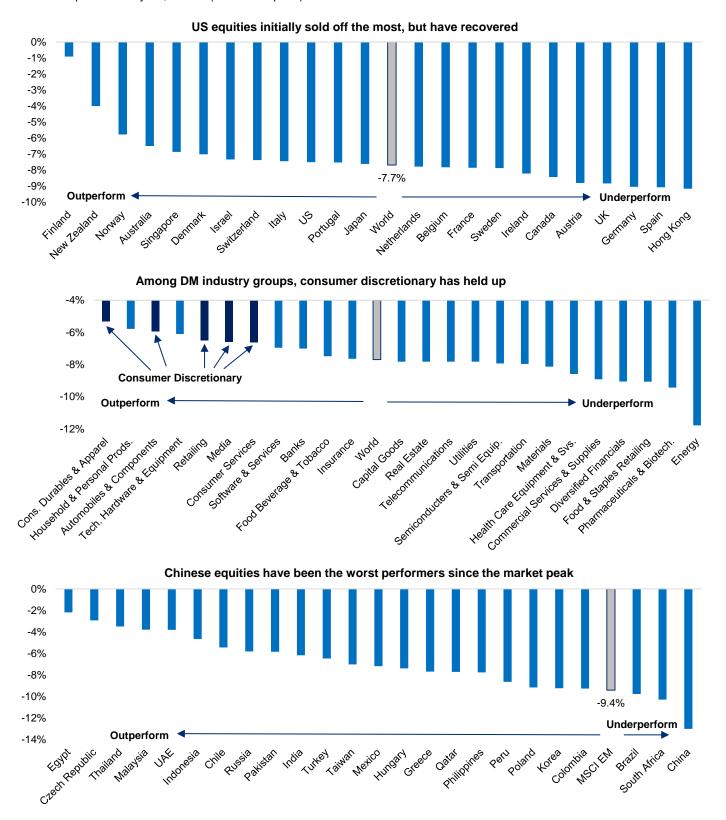


\*Cyclicals includes Consumer Discretionary, Materials, Technology and Industrials. Defensives includes Utilities, Telecoms, Health Care and Consumer Staples. Source: MSCI, Bloomberg. Data as of 12 February 2018 All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future

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

## De-constructing this year's rollercoaster equity market moves

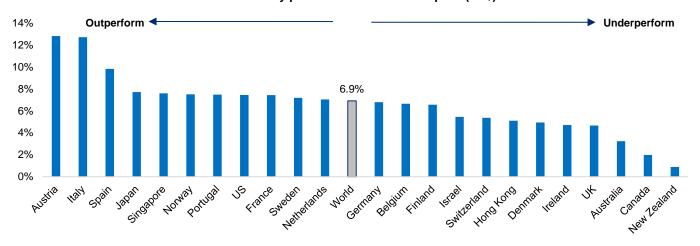
The charts below show the performance of Developed Markets, Developed Markets' industry groups and Emerging Markets over two distinct periods this year; 26 Jan (the market peak) – 12 Feb and 1 Jan – 26 Jan.



Source: MSCI, Bloomberg. Data as of 12 February 2018. 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. For illustrative purposes only.

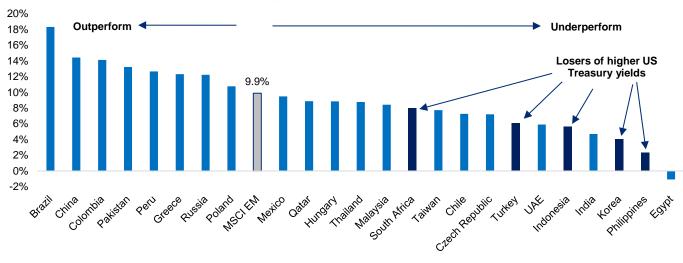
#### Performance from 1 January until the 26 January peak in global equities

#### MSCI DM country performance until 26 Jan peak (US\$)



#### MSCI DM industry group performance until 26 Jan peak (US\$) 16% Underperform Outperform 14% 12% 10% 8% 6% 4% 2% 0% Household & Personal Products Serticonducters of Serti Edillo. Tech. Hardwale & Edilipheth Commercial Sass of Supplies. Clarify Stables Retailing Lood Beneaus & Tolkers Health Case Edity, & Sas. Dweished Francials -2% Autos & Components Phatita & Hoteli. cons Durables & Apparel Capital Goods Materials Media

#### MSCI EM country performance until 26 Jan peak (US\$)



Source: MSCI, Bloomberg. Data as of 12 February 2018. 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. For illustrative purposes only.

## Country and sector performance relative to fundamentals

The tables below show MSCI All Countries World Index (ACWI) countries and sectors. We show the performance since the 26 January peak in global equity markets, as well as relative performance. In order to assess which countries and sectors have sold off the most relative to fundamentals, we take account of 3-month earnings revisions (the extent to which the consensus has revised earnings expectations over the past 3 months). The final column shows relative price performance relative to earnings revisions. The more negative the number, the more disconnected the sell-off is vis a vis fundamentals. For example, Chinese equities have seen earnings revised up 10.3% over the past 3 months, nevertheless, the market has underperformance by a relative 5.1% since January 26.

			PE	(x)	EPSg (	% y-o-y)		Price perf
	Perf. from Jan 26 peak	Relative performance (a)	2018e	2019e	2018e	2019e	3m change to 12m fwd EPS (b)	relative to earnings revisions (a-b)
China	-13.0%	-5.3%	12.7	11.0	19.6%	15.6%	10.3%	-15.6%
EM	-9.4%	-1.7%	12.2	10.9	15.2%	11.1%	8.3%	-10.0%
Russia	-5.8%	1.9%	6.4	6.2	13.4%	3.4%	11.7%	-9.8%
DM	-7.7%	0.0%	15.8	14.4	14.0%	9.5%	7.8%	-7.8%
US	-7.5%	0.2%	17.2	15.5	18.4%	10.7%	7.9%	-7.7%
South Africa	-10.3%	-2.6%	16.1	13.7	18.9%	17.1%	4.5%	-7.1%
Canada	-8.4%	-0.7%	14.3	13.0	11.2%	9.6%	4.6%	-5.3%
Hong Kong	-9.2%	-1.5%	15.4	14.4	8.7%	6.8%	3.8%	-5.3%
Japan	-7.6%	0.1%	13.9	12.9	9.7%	7.6%	5.0%	-4.9%
Korea	-9.2%	-1.5%	8.2	7.8	14.2%	4.7%	3.3%	-4.8%
Italy	-7.4%	0.3%	12.0	10.7	16.5%	12.0%	4.7%	-4.4%
Germany	-9.0%	-1.3%	12.7	11.7	8.3%	8.5%	2.7%	-4.0%
Spain	-9.1%	-1.4%	12.4	11.4	6.5%	9.1%	1.7%	-3.1%
UK	-8.8%	-1.1%	13.4	12.5	7.4%	6.6%	1.5%	-2.6%
Brazil	-9.7%	-2.0%	13.4	11.7	18.2%	14.1%	0.3%	-2.3%
India	-6.2%	1.5%	18.7	15.7	17.9%	18.5%	3.7%	-2.2%
France	-7.9%	-0.2%	14.1	13.0	10.0%	9.0%	1.7%	-1.9%
Switzerland	-7.4%	0.3%	16.2	14.8	16.7%	9.5%	2.1%	-1.8%
Australia	-6.5%	1.2%	15.3	14.7	6.8%	4.1%	2.6%	-1.4%
Taiwan	-7.0%	0.7%	13.3	12.4	8.5%	7.3%	1.4%	-0.7%
Mexico	-7.2%	0.5%	15.8	14.0	6.5%	13.4%	0.3%	0.2%

Source: Bloomberg, MSCI, Factset, Citi Research. Data as of 12 February 2018. 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. For illustrative purposes only.

	D 44	Relative	PE	(x)	EPSg (%	% y-о-у)	3m change	Price perf relative to
	Perf. from Jan 26 peak	performance (a)	2018e	2019e	2018e	2019e	to 12m fwd EPS (b)	earnings revisions (a-b)
Energy	-11.4%	-3.7%	15.0	13.8	36.5%	8.8%	20.7%	-24.4%
Materials	-8.3%	-0.6%	14.1	13.3	13.6%	6.0%	10.5%	-11.1%
Financials	-7.6%	0.1%	11.9	10.8	15.7%	9.7%	9.2%	-9.1%
Telecoms	-7.2%	0.5%	12.7	11.6	10.4%	9.3%	8.0%	-7.5%
Real Estate	-8.6%	-0.9%	19.3	17.9	1.4%	7.9%	6.6%	-7.5%
Industrials	-7.9%	-0.2%	16.4	14.8	14.1%	10.6%	7.0%	-7.2%
IT	-7.7%	0.0%	17.3	15.6	16.9%	10.9%	6.2%	-6.2%
Health Care	-9.2%	-1.5%	16.2	14.7	8.5%	9.7%	4.6%	-6.1%
Cons. Discr.	-6.6%	1.1%	16.7	15.0	11.7%	11.6%	7.1%	-6.0%
Cons. Staples	-7.4%	0.3%	18.41	16.86	10.0%	9.2%	5.5%	-5.2%
Utilities	-6.0%	1.7%	14.07	13.26	5.4%	6.1%	2.1%	-0.4%

Source: Bloomberg, MSCI, Factset, Citi Research, Data as of 12 February 2018, 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. For illustrative purposes only.

#### Portfolio allocations

This section shows the strategic and tactical asset allocations. The Quant Research & Global Asset Allocation (QRGAA) team creates strategic asset allocations using the CPB Adaptive Valuations Strategy (AVS) methodology on an annual basis. Global Investment Committee (GIC) provides underweight and overweight decisions to AVS's Global USD without Hedge Funds Risk Level 3 portfolio. QRGAA then creates tactical allocations for risk levels 1,2,4 and 5. These are included below. Also included below are Global USD with Hedge Funds and 10% illiquids PE & RE (Private Equity and Real Estate) for risk levels 2,3,4 and 5. The below strategic/tactical allocations are reflective of the February 14, 2018 GIC meeting.

## Global USD with Hedge Funds and 10% illiquids (PE & RE): Risk Level 2

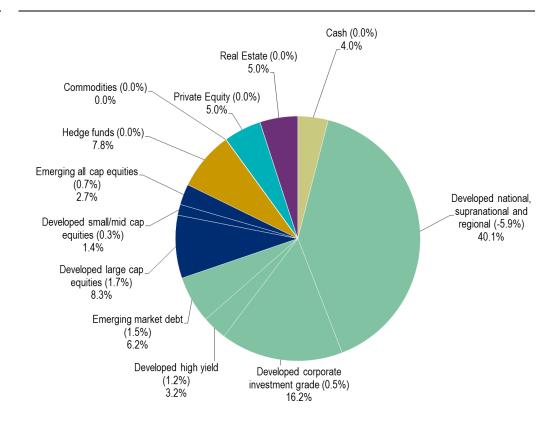
Risk Level 2 is designed for investors who emphasize capital preservation over return on investment, but who are willing to subject some portion of their principal to increased risk in order to generate a potentially greater rate of return on investment

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	4.0	4.0	0.0
Fixed Income	68.4	65.8	-2.7
Developed Investment Grade	61.8	56.3	-5.5
Developed National, Supranational and Regional	46.1	40.1	-5.9
Americas	17.4	18.4	1.0
EMEA	19.3	15.6	-3.8
UK	3.4	2.9	-0.5
Core Europe	8.8	7.2	-1.6
Peripheral Europe	6.5	5.0	-1.4
Others	0.6	0.5	-0.2
Asia	9.3	6.1	-3.2
Asia (ex Japan)	0.3	0.3	0.0
Japan	9.0	5.8	-3.3
Supranational	0.0	0.0	0.0
Developed Corporate Investment Grade	15.7	16.2	0.5
Americas	10.4	11.4	1.0
US	9.9	10.9	1.0
Canada	0.5	0.5	0.0
EMEA	5.2	4.7	-0.6
Europe (ex UK)	4.3	3.9	-0.3
UK	1.0	0.7	-0.2
Asia	0.1	0.1	0.0
Developed High Yield	2.0	3.2	1.2
Americas	1.5	2.6	1.1
EMEA	0.5	0.6	0.1
Emerging Market Debt	4.7	6.2	1.5
Americas	1.6	2.1	0.5
EMEA	2.3	2.6	0.3
Asia	0.8	1.5	0.8
Hybrid Investments	7.8	7.8	0.0
Hedge Funds	7.8	7.8	0.0
Real Assets	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Private Equity	5.0	5.0	0.0
Real Estate	5.0	5.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	9.8	12.5	2.7
Developed Equities	7.8	9.7	1.9
Developed Large Cap Equities	6.6	8.3	1.7
Americas	4.2	5.2	0.9
US All	4.0	4.8	0.9
Canada	0.2	0.3	0.1
EMEA	1.5	2.0	0.5
UK	0.4	0.5	0.1
Germany	0.2	0.3	0.1
France	0.2	0.3	0.1
Switzerland	0.2	0.3	0.1
Benelux	0.1	0.2	0.0
Scandi	0.1	0.2	0.0
Spain	0.1	0.1	0.0
Italy	0.1	0.1	0.0
Others	0.0	0.0	0.0
Asia	0.9	1.2	0.3
Australasia	0.2	0.2	0.0
Far East ex Japan	0.1	0.2	0.1
Japan	0.6	0.8	0.2
Developed Small/ Mid Cap Equities	1.2	1.4	0.3
Americas	0.6	8.0	0.1
EMEA	0.3	0.4	0.1
Europe (ex UK)	0.3	0.4	0.1
UK	0.1	0.1	0.0
Asia	0.2	0.2	0.0
Asia (ex Japan)	0.0	0.1	0.0
Japan	0.1	0.2	0.0
Emerging All Cap Equities	2.0	2.7	0.7
Americas	0.2	0.3	0.1
Brazil	0.1	0.2	0.1
Mexico	0.1	0.1	0.0
Other	0.0	0.1	0.0
EMEA	0.2	0.3	0.1
Turkey	0.0	0.0	0.0
Russia and Eastern Europe	0.1	0.1	0.0
South Africa	0.1	0.1	0.0
Other	0.0	0.0	0.0
Asia	1.5	2.1	0.6
China	0.6	0.8	0.2
India	0.2	0.3	0.1
South Korea	0.3	0.4	0.1
Taiwan	0.2	0.3	0.1
Other Emerging Asia	0.2	0.2	0.1
Total	100.0	100.0	0.0

## Global USD with Hedge Funds and 10% illiquids (PE & RE): Risk Level 2 - Tactical Allocations





Figures in brackets are active allocations. All allocations are subject to change at discretion of the GIC of the Citi Private Bank.

#### **Core Positions**

Global equities have an overweight position of +2.7%, global fixed income has an underweight of -2.7%. Cash and gold are both neutral.

Within equities, developed small/mid cap equities have the smallest overweight of +0.3% followed by emerging market equities at +0.7% while developed large cap equities have the largest overweight at +1.7%.

Within fixed income, developed government debt remains the largest underweight at -5.9%, with US government debt at an overweight position. Emerging market debt has the largest overweight at +1.5% followed by developed high yield bond at +1.2%.

EM fixed income has a small overweight position of +1.5% driven by overweights in both Latin America and Asia debts.

Private Equity and Real Estate are both neutral, each with 5% allocation.

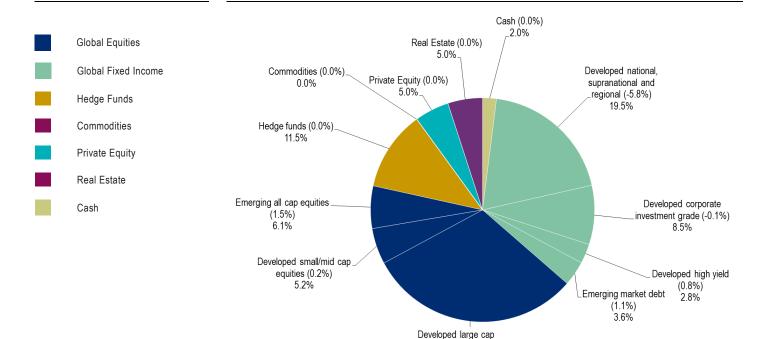
# Global USD with Hedge Funds and 10% illiquids (PE & RE): Risk Level 3

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.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	2.0	2.0	0.0
Fixed Income	38.4	34.4	-4.0
Developed Investment Grade	33.9	28.0	-5.9
Developed National, Supranational and Regional	25.3	19.5	-5.8
Americas	9.5	9.7	0.2
EMEA	10.6	7.3	-3.4
UK	1.9	1.4	-0.5
Core Europe	4.8	3.4	-1.5
Peripheral Europe	3.6	2.3	-1.3
Others	0.3	0.2	-0.1
Asia	5.1	2.5	-2.7
Asia (ex Japan)	0.2	0.2	0.0
Japan	5.0	2.3	-2.7
Supranational	0.0	0.0	0.0
Developed Corporate Investment Grade	8.6	8.5	-0.1
Americas	5.7	6.2	0.5
US	5.4	5.9	0.5
Canada	0.3	0.3	0.0
EMEA	2.9	2.3	-0.6
Europe (ex UK)	2.4	1.9	-0.4
UK	0.5	0.3	-0.2
Asia	0.0	0.0	0.0
Developed High Yield	2.0	2.8	0.8
Americas	1.5	2.4	8.0
EMEA	0.5	0.5	0.0
Emerging Market Debt	2.5	3.6	1.1
Americas	8.0	1.2	0.4
EMEA	1.2	1.3	0.1
Asia	0.4	1.0	0.6
Hybrid Investments	11.5	11.5	0.0
Hedge Funds	11.5	11.5	0.0
Real Assets	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Private Equity	5.0	5.0	0.0
Real Estate	5.0	5.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	38.1	42.1	4.0
Developed Equities	33.4	35.9	2.5
Developed Large Cap Equities	28.4	30.7	2.3
Americas	18.1	18.9	0.8
US All	17.0	17.6	0.6
Canada	1.1	1.2	0.2
EMEA	6.4	7.4	1.0
UK	1.9	2.0	0.1
Germany	0.9	1.1	0.2
France	1.0	1.3	0.3
Switzerland	0.9	1.0	0.1
Benelux	0.5	0.6	0.1
Scandi	0.6	0.6	0.0
Spain	0.3	0.4	0.1
Italy	0.2	0.3	0.1
Others	0.1	0.1	0.0
Asia	3.9	4.5	0.5
Australasia	0.8	8.0	0.1
Far East ex Japan	0.5	0.7	0.2
Japan	2.7	2.9	0.2
Developed Small/ Mid Cap Equities	5.0	5.2	0.2
Americas	2.7	2.8	0.1
EMEA	1.5	1.5	0.1
Europe (ex UK)	1.2	1.3	0.2
UK	0.3	0.2	-0.1
Asia	0.8	0.8	0.0
Asia (ex Japan)	0.2	0.2	0.0
Japan	0.6	0.6	0.0
Emerging All Cap Equities	4.6	6.1	1.5
Americas	0.5	0.8	0.2
Brazil	0.3	0.5	0.1
Mexico	0.1	0.1	0.0
Other	0.1	0.2	0.1
EMEA	0.6	0.7	0.1
Turkey	0.0	0.1	0.0
Russia and Eastern Europe	0.3	0.3	0.0
South Africa	0.2	0.3	0.0
Other	0.0	0.0	0.0
Asia	3.5	4.7	1.2
China	1.5	1.9	0.4
India	0.5	0.7	0.2
South Korea	0.6	0.9	0.2
Taiwan	0.5	0.7	0.1
Other Emerging Asia	0.4	0.6	0.2
Total	100.0	100.0	0.0

## Global USD with Hedge Funds and 10% illiquids (PE & RE): Risk Level 3 - Tactical Allocations



Figures in brackets are active allocations. All allocations are subject to change at discretion of the GIC of the Citi Private Bank.

equities (2.3%) 30.7%

#### **Core Positions**

Global equities have an overweight position of +4.0%, global fixed income has an underweight of -4.0%. Cash and gold are both neutral.

Within equities, developed small/mid cap equities have the smallest overweight of +0.2% followed by emerging market equities at +1.5% while developed large cap equities have the largest overweight of +2.3%.

Within fixed income, developed government debt remains the largest underweight at -5.8%, with US government debt at an overweight position. Emerging market debt has the largest overweight at +1.1% followed by developed high yield bond at +0.8%.

Within EM fixed income, Latin America, EMEA and Asia debts are all in overweight positions with Asia highest at +0.6%.

Private Equity and Real Estate are both neutral, each with 5% allocation.

# Global USD with Hedge Funds and 10% illiquids (PE & RE): Risk Level 4

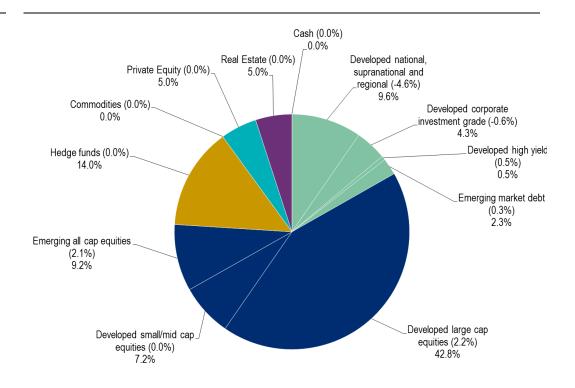
Risk Level 4 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. They are willing to subject a large portion of their portfolio to greater risk and market value fluctuations in anticipation of a potentially greater return on investment. Investors may have a preference for investments or trading strategies that may assume higher-than-normal market risks and/or potentially less liquidity with the goal (but not guarantee) of commensurate gains.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	0.0	0.0	0.0
Fixed Income	21.1	16.8	-4.3
Developed Investment Grade	19.1	13.9	-5.2
Developed National, Supranational and Regional	14.3	9.6	-4.6
Americas	5.4	4.9	-0.5
EMEA	6.0	3.6	-2.4
UK	1.1	0.7	-0.4
Core Europe	2.7	1.7	-1.1
Peripheral Europe	2.0	1.1	-0.9
Others	0.2	0.1	-0.1
Asia	2.9	1.2	-1.7
Asia (ex Japan)	0.1	0.1	0.0
Japan	2.8	1.1	-1.7
Supranational	0.0	0.0	0.0
Developed Corporate Investment Grade	4.9	4.3	-0.6
Americas	3.2	3.2	-0.1
US	3.1	3.0	0.0
Canada	0.1	0.1	0.0
EMEA	1.6	1.1	-0.5
Europe (ex UK)	1.3	1.0	-0.4
UK	0.3	0.2	-0.1
Asia	0.0	0.0	0.0
Developed High Yield	0.0	0.5	0.5
Americas	0.0	0.5	0.5
EMEA	0.0	0.1	0.1
Emerging Market Debt	2.0	2.3	0.3
Americas	0.7	0.8	0.1
EMEA	1.0	0.8	-0.2
Asia	0.3	0.7	0.4
Hybrid Investments	14.0	14.0	0.0
Hedge Funds	14.0	14.0	0.0
Real Assets	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Private Equity	5.0	5.0	0.0
Real Estate	5.0	5.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	54.9	59.2	4.3
Developed Equities	47.8	50.0	2.2
Developed Large Cap Equities	40.7	42.8	2.2
Americas	25.9	26.2	0.4
US All	24.3	24.5	0.2
Canada	1.5	1.7	0.2
EMEA	9.2	10.4	1.2
UK	2.7	2.7	0.0
Germany	1.3	1.6	0.3
France	1.5	1.8	0.3
Switzerland	1.2	1.4	0.2
Benelux	0.7	0.8	0.2
Scandi	0.8	0.8	0.0
Spain	0.5	0.6	0.1
Italy	0.3	0.4	0.1
Others	0.1	0.2	0.0
Asia	5.6	6.2	0.6
Australasia	1.1	1.2	0.1
Far East ex Japan	0.8	1.1	0.3
Japan .	3.8	4.0	0.2
Developed Small/ Mid Cap Equities	7.2	7.2	0.0
Americas	3.9	3.9	0.0
EMEA	2.1	2.1	0.0
Europe (ex UK)	1.6	1.9	0.2
UK	0.5	0.3	-0.2
Asia	1.1	1.1	0.0
Asia (ex Japan)	0.3	0.3	0.0
Japan	0.8	0.8	0.0
Emerging All Cap Equities	7.1	9.2	2.1
Americas	0.8	1.2	0.4
Brazil	0.5	0.7	0.2
Mexico	0.2	0.2	0.0
Other	0.1	0.3	0.2
EMEA	0.9	1.0	0.1
Turkey	0.1	0.1	0.0
Russia and Eastern Europe	0.4	0.4	0.0
South Africa	0.4	0.4	0.0
Other	0.0	0.0	0.0
Asia	5.4	7.0	1.6
China	2.3	2.8	0.5
India	0.8	1.1	0.3
South Korea	1.0	1.3	0.3
Taiwan	0.8	1.0	0.2
Other Emerging Asia	0.6	0.9	0.3
Total	100.0	100.0	0.0

## Global USD with Hedge Funds and 10% illiquids (PE & RE): Risk Level 4 - Tactical Allocations





Figures in brackets are active allocations. All allocations are subject to change at discretion of the GIC of the Citi Private Bank.

#### **Core Positions**

Global equities have an overweight position of +4.3%, global fixed income has an underweight of -4.3%. Cash and gold are both neutral.

Within equities, developed small/mid cap equities are neutral while emerging market equities have an overweight at +2.1%.

Within fixed income, developed government debt has the largest underweight at -4.6% and developed high yield bond has the largest overweight at +0.5%.

Private Equity and Real Estate are both neutral, each with 5% allocation.

# Global USD with Hedge Funds and 10% illiquids (PE & RE): Risk Level 5

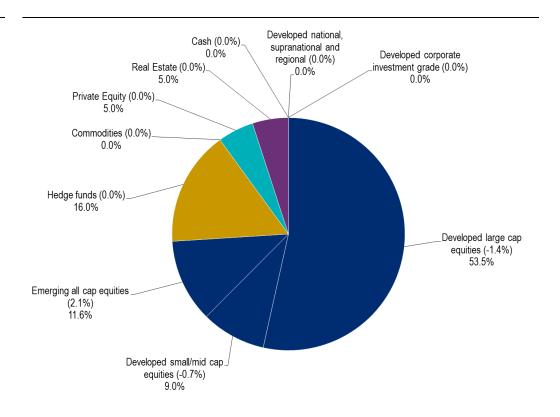
Risk Level 5 is designed for investors who emphasize return on investment. They are willing to subject their entire portfolio to greater risk and market value fluctuations in anticipation of a potentially greater return on investments. Investors may have a preference for investments or trading strategies that may assume higher than-normal market risks and/or potentially less liquidity with the goal (but not guarantee) of commensurate gains. Clients may engage in tactical or opportunistic trading, which may involve higher volatility and variability of returns.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	0.0	0.0	0.0
Fixed income	0.0	0.0	0.0
Developed Investment Grade	0.0	0.0	0.0
Developed national, supranational and regional	0.0	0.0	0.0
Developed Corporate Investment Grade	0.0	0.0	0.0
Americas	0.0	0.0	0.0
EMEA	0.0	0.0	0.0
Europe (ex UK)	0.0	0.0	0.0
UK	0.0	0.0	0.0
Asia	0.0	0.0	0.0
Asia (ex Japan)	0.0	0.0	0.0
Japan	0.0	0.0	0.0
Developed high yield	0.0	0.0	0.0
Americas	0.0	0.0	0.0
EMEA	0.0	0.0	0.0
Asia	0.0	0.0	0.0
Emerging market debt	0.0	0.0	0.0
Americas	0.0	0.0	0.0
EMEA	0.0	0.0	0.0
Asia	0.0	0.0	0.0
Equities	74.0	74.0	0.0
Global Developed Equities	64.5	62.4	-2.1
Developed Large Cap Equities	54.9	53.5	-1.4
Americas	34.9	32.6	-2.3
US All	32.8	30.5	-2.4
Canada	2.1	2.2	0.1
EMEA	12.4	13.1	0.7
UK	3.7	3.4	-0.3
Germany	1.7	2.0	0.3
France	2.0	2.3	0.3
Switzerland	1.7	1.8	0.1
Benelux	0.9	1.1	0.2
Scandi	1.1	1.0	-0.1
Spain	0.6	0.7	0.1
Italy	0.4	0.5	0.1
Others	0.2	0.2	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Asia	7.6	7.8	0.2
Australasia	1.5	1.4	0.0
Far East ex Japan	1.0	1.3	0.3
Japan	5.1	5.0	-0.1
Developed Small/Mid Cap Equities	9.7	9.0	-0.7
Americas	5.3	4.9	-0.4
EMEA	2.9	2.7	-0.2
Europe (ex UK)	2.2	2.3	0.1
UK	0.7	0.3	-0.3
Asia	1.5	1.4	-0.1
Asia (ex Japan)	0.4	0.3	0.0
Japan	1.1	1.0	-0.1
Emerging all Cap Equities	9.5	11.6	2.1
Americas	1.1	1.5	0.4
Brazil	0.6	0.9	0.2
Mexico	0.3	0.2	0.0
Other	0.2	0.4	0.2
EMEA	1.2	1.2	0.0
Turkey	0.1	0.1	0.0
Russia and Eastern Europe	0.5	0.5	0.0
South Africa	0.5	0.5	0.0
Other	0.0	0.0	0.0
Asia	7.2	8.9	1.6
China	3.0	3.5	0.4
India	1.0	1.4	0.3
South Korea	1.3	1.6	0.3
Taiwan	1.1	1.3	0.2
Other Emerging Asia	0.8	1.1	0.4
Hybrid Investments	16.0	16.0	0.0
Hedge Funds	16.0	16.0	0.0
Real Assets	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Private Equity	5.0	5.0	0.0
Real Estate	5.0	5.0	0.0
Total	100.0	100.0	0.0

## Global USD with Hedge Funds and 10% illiquids (PE & RE): Risk Level 5 - Tactical Allocations





Figures in brackets are active allocations. All allocations are subject to change at discretion of the GIC of the Citi Private Bank.

#### **Core Positions**

Global equities, global fixed income, cash and commodities are all at neutral position.

Within global equities, developed equities have an underweight position of -2.1% with developed small/mid cap equities contributing at -0.7% while emerging equities have an overweight position of +2.1%.

Private Equity and Real Estate are both neutral, each with 5% allocation.

# Global USD without Hedge Funds: Risk Level 1

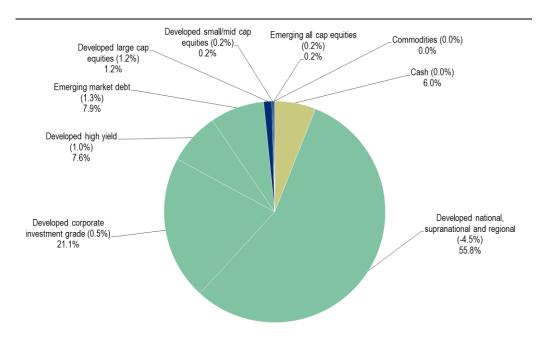
Risk Level 1 is designed for investors who have a preference for capital preservation and relative safety over the potential for a return on investment. These investors prefer to hold cash, time deposits and/or lower risk fixed income instruments.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	6.0	6.0	0.0
Fixed Income	94.0	92.4	-1.6
Developed Investment Grade	80.8	76.9	-4.0
Developed National, Supranational and Regional	60.3	55.8	-4.5
Americas	22.7	23.8	1.1
EMEA	25.3	22.4	-2.9
UK	4.5	4.1	-0.4
Core Europe	11.6	10.3	-1.3
Peripheral Europe	8.5	7.3	-1.1
Others	0.8	0.7	-0.1
Asia	12.2	9.6	-2.6
Asia (ex Japan)	0.4	0.4	0.0
Japan	11.8	9.2	-2.6
Supranational	0.0	0.0	0.0
Developed Corporate Investment Grade	20.6	21.1	0.5
Americas	13.6	14.5	0.9
US	13.0	13.9	0.9
Canada	0.6	0.6	0.0
EMEA	6.9	6.5	-0.4
Europe (ex UK)	5.6	5.4	-0.2
UK	1.3	1.1	-0.2
Asia	0.1	0.1	0.0
Asia (ex Japan)	0.1	0.1	0.0
Japan	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Developed High Yield	6.6	7.6	1.0
Americas	5.1	6.0	1.0
EMEA	1.5	1.5	0.0
Emerging Market Debt	6.6	7.9	1.3
Americas	2.2	2.7	0.5
EMEA	3.3	3.6	0.3
Asia	1.1	1.7	0.6
Equities	0.0	1.6	1.6
Developed Equities	0.0	1.4	1.4
Emerging Equities	0.0	0.2	0.2
Hybrid Investments	0.0	0.0	0.0
Hedge Funds	0.0	0.0	0.0
Real Assets	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Total	100.0	100.0	0.0

# Global USD without Hedge Funds: Risk Level 1 - Tactical **Allocations**





Figures in brackets are active allocations. All allocations are subject to change at discretion of the GIC of the Citi Private Bank.

#### **Core Positions**

Global equities have an overweight position at +1.6% with global fixed income underweight at -1.6%. Cash and gold are both neutral.

Within fixed income, developed government debt has a large underweight postion at -4.5%. Emerging market debt has the largest overweight position at +1.3% followed by developed high yield bond at +1.0%.

Within EM fixed income, Latin America, EMEA and Asia debt are all in overweight positions with Asia highest at +0.6%.

# Global USD without Hedge Funds: Risk Level 2

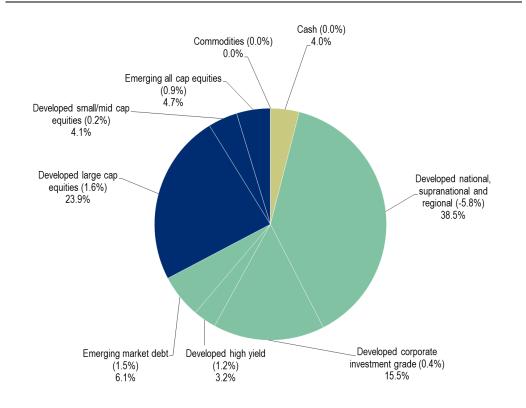
Risk Level 2 is designed for investors who emphasize capital preservation over return on investment, but who are willing to subject some portion of their principal to increased risk in order to generate a potentially greater rate of return on investment.

Classification	Strategic (%)	Tactical* (%)	Active (%)	
Cash	4.0	4.0	0.0	
Fixed Income	66.0	63.3	-2.7	
Developed Investment Grade	59.3	54.0	-5.3	
Developed National, Supranational and Regional	44.2	38.5	-5.8	
Americas	16.7	17.7	1.0	
EMEA	18.6	14.9	-3.6	
UK	3.3	2.8	-0.5	
Core Europe	8.5	6.9	-1.6	
Peripheral Europe	6.2	4.8	-1.4	
Others	0.6	0.4	-0.1	
Asia	9.0	5.9	-3.1	
Asia (ex Japan)	0.3	0.3	0.0	
Japan	8.7	5.5	-3.1	
Supranational	0.0	0.0	0.0	
Developed Corporate Investment Grade	15.1	15.5	0.4	
Americas	10.0	11.0	1.0	
US	9.5	10.5	1.0	
Canada	0.5	0.5	0.0	
EMEA	5.0	4.5	-0.5	
Europe (ex UK)	4.1	3.8	-0.3	
UK	0.9	0.7	-0.2	
Asia	0.1	0.1	0.0	
Developed High Yield	2.0	3.2	1.2	
Americas	1.5	2.6	1.1	
EMEA	0.5	0.6	0.1	
Emerging Market Debt	4.6	6.1	1.5	
Americas	1.6	2.1	0.5	
EMEA	2.3	2.5	0.2	
Asia	0.7	1.5	0.7	
Hybrid Investments	0.0	0.0	0.0	
Hedge Funds	0.0	0.0	0.0	
Real Assets	0.0	0.0	0.0	
Commodities	0.0	0.0	0.0	

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	30.0	32.7	2.7
Developed Equities	26.2	28.0	1.8
Developed Large Cap Equities	22.3	23.9	1.6
Americas	14.2	14.9	0.7
US All	13.3	13.9	0.6
Canada	0.8	0.9	0.6
EMEA	5.0	5.6	0.6
UK	1.5	1.6	0.1
Germany	0.7	0.8	0.1
France	0.7	1.0	0.1
Switzerland	0.8	0.8	0.2
Benelux	0.7	0.6	0.1
Scandi	0.4	0.4	0.0
Spain	0.3	0.3	0.0
Italy	0.3	0.3	0.0
Others	0.2	0.2	0.0
Asia	3.1	3.4	0.3
Australasia	0.6	0.6	0.0
Far East ex Japan	0.6	0.5	0.0
Japan	2.1	2.2	0.1
Developed Small/	2.1	2.2	0.2
Mid Cap Equities	3.9	4.1	0.2
Americas	2.2	2.2	0.1
EMEA	1.2	1.2	0.1
Europe (ex UK)	0.9	1.0	0.1
UK	0.3	0.2	-0.1
Asia	0.6	0.6	0.0
Asia (ex Japan)	0.1	0.1	0.0
Japan	0.5	0.5	0.0
Emerging All Cap Equities	3.8	4.7	0.9
Americas	0.4	0.6	0.1
Brazil	0.3	0.3	0.1
Mexico	0.1	0.1	0.0
Other	0.1	0.1	0.1
EMEA	0.5	0.5	0.1
Turkey	0.0	0.0	0.0
Russia and Eastern Europe	0.2	0.2	0.0
South Africa	0.2	0.2	0.0
Other	0.0	0.0	0.0
Asia	2.9	3.6	0.7
China	1.2	1.5	0.2
India	0.4	0.5	0.1
South Korea	0.5	0.7	0.1
Taiwan	0.4	0.5	0.1
Other Emerging Asia	0.3	0.4	0.1
Total	100.0	100.0	0.0

## Global USD without Hedge Funds: Risk Level 2 - Tactical **Allocations**





Figures in brackets are active allocations. All allocations are subject to change at discretion of the GIC of the Citi Private Bank.

#### **Core Positions**

Global equities have an overweight position of +2.7% with global fixed income underweight at -2.7%. Cash and gold are both neutral.

Within equities, developed small/mid cap equities have the lowest overweight at +0.2% while developed large cap equities have the highest overweight at +1.6%.

Within fixed income, developed government debt has a large underweight position at -5.8% and emerging market debt has the largest overweight at +1.5% followed by developed high yield bond at +1.2%.

Within EM fixed income, Latin America, EMEA and Asia debt are all in overweight positions with Asia highest at +0.7%.

# Global USD without Hedge Funds: Risk Level 3

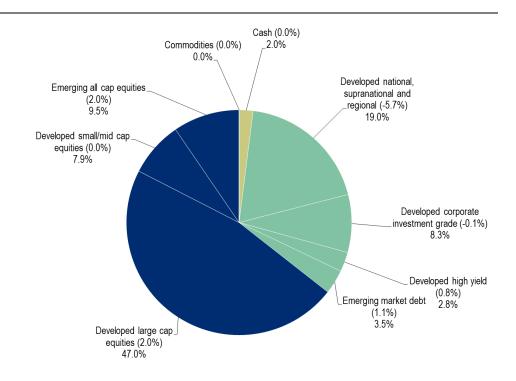
Risk Level 3 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. Risk Level 3 may be appropriate for investors willing to subject their portfolio to additional risk for potential growth in addition to a level of income reflective of his/her stated risk tolerance.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	2.0	2.0	0.0
Fixed Income	37.6	33.6	-4.0
Developed Investment Grade	33.2	27.3	-5.9
Developed National, Supranational and Regional	24.7	19.0	-5.7
Americas	9.3	9.5	0.2
EMEA	10.4	7.1	-3.3
UK	1.8	1.3	-0.5
Core Europe	4.7	3.3	-1.4
Peripheral Europe	3.5	2.2	-1.2
Others	0.3	0.2	-0.1
Asia	5.0	2.4	-2.6
Asia (ex Japan)	0.2	0.2	0.0
Japan	4.8	2.2	-2.6
Supranational	0.0	0.0	0.0
Developed Corporate Investment Grade	8.4	8.3	-0.1
Americas	5.6	6.0	0.5
US	5.3	5.8	0.5
Canada	0.3	0.3	0.0
EMEA	2.8	2.2	-0.6
Europe (ex UK)	2.3	1.9	-0.4
UK	0.5	0.3	-0.2
Asia	0.0	0.0	0.0
Developed High Yield	2.0	2.8	0.8
Americas	1.5	2.3	0.8
EMEA	0.5	0.5	0.0
Emerging Market Debt	2.4	3.5	1.1
Americas	0.8	1.2	0.4
EMEA	1.2	1.3	0.1
Asia	0.4	1.0	0.6
Hybrid Investments	0.0	0.0	0.0
Hedge Funds	0.0	0.0	0.0
Real Assets	0.0	0.0	0.0
Commodities	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	60.4	64.4	4.0
Developed Equities	52.9	54.9	2.0
Developed Large Cap Equities	45.0	47.0	2.0
Americas	28.6	28.8	0.2
US AII	26.9	26.9	0.0
Canada	1.7	1.9	0.2
EMEA	10.1	11.3	1.2
UK	3.0	3.0	0.0
Germany	1.4	1.7	0.3
France	1.6	2.0	0.3
Switzerland	1.4	1.6	0.2
Benelux	0.7	0.9	0.2
Scandi	0.9	0.9	0.0
Spain	0.5	0.6	0.1
Italy	0.4	0.4	0.1
Others	0.1	0.2	0.0
Asia	6.2	6.8	0.6
Australasia	1.2	1.3	0.1
Far East ex Japan	0.8	1.1	0.3
Japan	4.2	4.4	0.2
Developed Small/ Mid Cap Equities	7.9	7.9	0.0
Americas	4.3	4.3	0.0
EMEA	2.4	2.4	0.0
Europe (ex UK)	1.8	2.0	0.2
UK	0.5	0.3	-0.2
Asia	1.2	1.2	0.0
Asia (ex Japan)	0.3	0.3	0.0
Japan	0.9	0.9	0.0
Emerging All Cap Equities	7.5	9.5	2.0
Americas	0.9	1.2	0.4
Brazil	0.5	0.7	0.2
Mexico	0.2	0.2	0.0
Other	0.2	0.3	0.2
EMEA	0.9	1.0	0.1
Turkey	0.1	0.1	0.0
Russia and Eastern Europe	0.4	0.5	0.0
South Africa	0.4	0.4	0.0
Other	0.0	0.0	0.0
Asia	5.7	7.3	1.6
China	2.4	2.9	0.5
India	0.8	1.1	0.3
South Korea	1.0	1.3	0.3
Taiwan	0.8	1.0	0.2
Other Emerging Asia	0.6	0.9	0.3
Total	100.0	100.0	0.0

## Global USD without Hedge Funds: Risk Level 3 - Tactical **Allocations**





Figures in brackets are active allocations. All allocations are subject to change at discretion of the GIC of the Citi Private Bank.

#### **Core Positions**

Global equities have an overweight position of +4.0% and global fixed income has an underweight of -4.0%. Cash and gold are both neutral.

Within equities, developed large cap equities have an overweight at +2.0% and emerging market equities also have an overweight of +2.0%.

Developed small/mid cap equities is neurtral with overweight in continental Europe and underweight in UK.

Within fixed income, developed government debt has a large underweight position at -5.7%. Emerging market debt has the largest overweight at +1.1% followed by developed high yield bond at +0.8%.

Within EM fixed income, Latin America, EMEA and Asia debt are all in overweight positions with Asia highest at +0.6%.

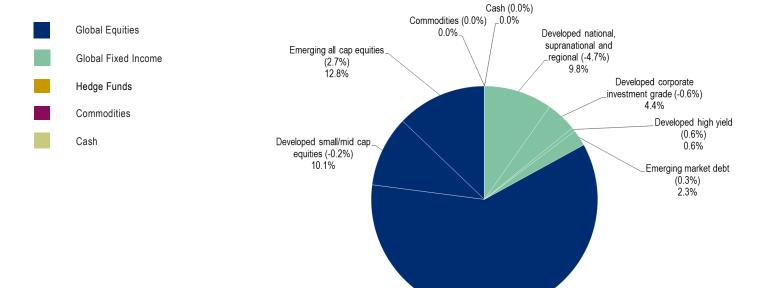
# Global USD without Hedge Funds: Risk Level 4

Risk Level 4 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. They are willing to subject a large portion of their portfolio to greater risk and market value fluctuations in anticipation of a potentially greater return on investment. Investors may have a preference for investments or trading strategies that may assume higher-than-normal market risks and/or potentially less liquidity with the goal (but not guarantee) of commensurate gains.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	0.0	0.0	0.0
Fixed Income	21.3	17.0	-4.3
Developed Investment Grade	19.3	14.1	-5.2
Developed National, Supranational and Regional	14.4	9.8	-4.7
Americas	5.4	5.0	-0.5
EMEA	6.1	3.6	-2.5
UK	1.1	0.7	-0.4
Core Europe	2.8	1.7	-1.1
Peripheral Europe	2.0	1.1	-0.9
Others	0.2	0.1	-0.1
Asia	2.9	1.2	-1.7
Asia (ex Japan)	0.1	0.1	0.0
Japan	2.8	1.1	-1.7
Supranational	0.0	0.0	0.0
Developed Corporate Investment Grade	4.9	4.4	-0.6
Americas	3.3	3.2	-0.1
US	3.1	3.1	0.0
Canada	0.2	0.1	0.0
EMEA	1.6	1.1	-0.5
Europe (ex UK)	1.3	1.0	-0.4
UK	0.3	0.2	-0.1
Asia	0.0	0.0	0.0
Developed High Yield	0.0	0.6	0.6
Americas	0.0	0.5	0.5
EMEA	0.0	0.1	0.1
Emerging Market Debt	2.0	2.3	0.3
Americas	0.7	0.8	0.1
EMEA	1.0	0.8	-0.2
Asia	0.3	0.7	0.4
Hybrid Investments	0.0	0.0	0.0
Hedge Funds	0.0	0.0	0.0
Real Assets	0.0	0.0	0.0
Commodities	0.0	0.0	0.0

	Ctuata ula	Tastiasit	Antivo
Classification	Strategic	Tactical*	Active
Classification	(%)	(%)	(%)
Equities	78.7	83.0	4.3
Developed Equities	68.5	70.1	1.6
Developed Large Cap Equities	58.3	60.0	1.8
Americas	37.1	36.8	-0.3
US All	34.9	34.3	-0.6
Canada EMEA	2.2	2.4	0.2
UK	13.1	14.6	1.5
•	3.9	3.9	-0.1
Germany	1.8	2.2	0.4
France	2.1	2.5	0.4
Switzerland	1.8	2.0	0.2
Benelux	1.0	1.2	0.2
Scandi	1.2	1.2	0.0
Spain	0.7	8.0	0.1
Italy	0.5	0.5	0.1
Others	0.2	0.2	0.0
Asia	8.1	8.7	0.6
Australasia	1.6	1.6	0.0
Far East ex Japan	1.1	1.5	0.4
Japan	5.4	5.6	0.2
Developed Small/ Mid Cap Equities	10.3	10.1	-0.2
Americas	5.6	5.5	-0.1
EMEA	3.1	3.0	0.0
Europe (ex UK)	2.4	2.6	0.2
UK	0.7	0.4	-0.3
Asia	1.6	1.5	0.0
Asia (ex Japan)	0.4	0.4	0.0
Japan	1.2	1.2	0.0
Emerging All Cap Equities	10.1	12.8	2.7
Americas	1.2	1.6	0.5
Brazil	0.7	1.0	0.3
Mexico	0.3	0.3	0.0
Other	0.2	0.4	0.2
EMEA	1.2	1.4	0.1
Turkey	0.1	0.1	0.0
Russia and Eastern Europe	0.6	0.6	0.1
South Africa	0.5	0.6	0.1
Other	0.0	0.0	0.0
Asia	7.7	9.8	2.1
China	3.2	3.9	0.6
India	1.1	1.5	0.4
South Korea	1.4	1.8	0.4
Taiwan	1.1	1.4	0.3
Other Emerging Asia	8.0	1.2	0.4
Total	100.0	100.0	0.0

# Global USD without Hedge Funds: Risk Level 4 - Tactical Allocations



Figures in brackets are active allocations. All allocations are subject to change at discretion of the GIC of the Citi Private Bank.

Developed large cap equities (1.8%) 60.0%

#### **Core Positions**

Global equities have an overweight position of +4.3% and global fixed income has an underweight of -4.3%. Cash and gold are both neutral.

Within equities, emerging equities have the largest overweight position of +2.7%, followed by developed large cap equities at +1.8%. Developed small/mid cap equities have an underweight at -0.2%.

Within fixed income, developed government debt has a large underweight position at -4.7% and emerging market debt is overweight by +0.3% followed by developed high yield at +0.6%.

Within EM fixed income, Latin America and Asia debts are in overweight positions with Asia highest at +0.4%.

# Global USD without Hedge Funds: Risk Level 5

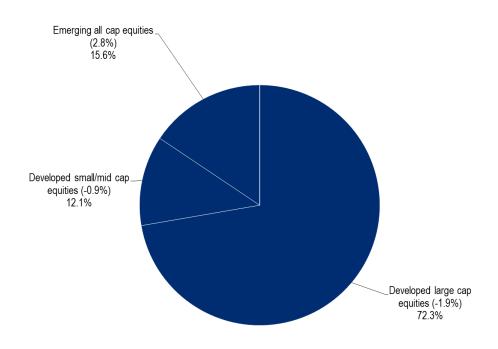
Risk Level 5 is designed for investors who emphasize return on investment. They are willing to subject their entire portfolio to greater risk and market value fluctuations in anticipation of a potentially greater return on investments. Investors may have a preference for investments or trading strategies that may assume higher than-normal market risks and/or potentially less liquidity with the goal (but not guarantee) of commensurate gains. Clients may engage in tactical or opportunistic trading, which may involve higher volatility and variability of returns.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	0.0	0.0	0.0
Fixed income	0.0	0.0	0.0
Developed Investment Grade	0.0	0.0	0.0
Developed national, supranational and regional	0.0	0.0	0.0
Developed Corporate Investment Grade	0.0	0.0	0.0
Americas	0.0	0.0	0.0
EMEA	0.0	0.0	0.0
Europe (ex UK)	0.0	0.0	0.0
UK	0.0	0.0	0.0
Asia	0.0	0.0	0.0
Asia (ex Japan)	0.0	0.0	0.0
Japan	0.0	0.0	0.0
Developed high yield	0.0	0.0	0.0
Americas	0.0	0.0	0.0
EMEA	0.0	0.0	0.0
Asia	0.0	0.0	0.0
Emerging market debt	0.0	0.0	0.0
Americas	0.0	0.0	0.0
EMEA	0.0	0.0	0.0
Asia	0.0	0.0	0.0
Equities	100.0	100.0	0.0
Global Developed Equities	87.2	84.4	-2.8
Developed Large Cap Equities	74.1	72.3	-1.9
Americas	47.2	44.1	-3.1
US All	44.4	41.2	-3.2
Canada	2.8	2.9	0.2
EMEA	16.7	17.6	0.9
UK	5.0	4.6	-0.4
Germany	2.3	2.7	0.4
France	2.7	3.1	0.4
Switzerland	2.3	2.4	0.2
Benelux	1.2	1.4	0.2
Scandi	1.5	1.4	-0.1
Spain	0.9	1.0	0.1
Italy	0.6	0.7	0.1
Others	0.2	0.3	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Asia	10.3	10.5	0.3
Australasia	2.0	1.9	0.0
Far East ex Japan	1.4	1.8	0.4
Japan	6.9	6.8	-0.1
Developed Small/Mid Cap Equities	13.0	12.1	-0.9
Americas	7.2	6.6	-0.5
EMEA	3.9	3.6	-0.3
Europe (ex UK)	3.0	3.1	0.1
UK	0.9	0.5	-0.4
Asia	2.0	1.9	-0.1
Asia (ex Japan)	0.5	0.4	0.0
Japan	1.5	1.4	-0.1
Emerging all Cap Equities	12.8	15.6	2.8
Americas	1.5	2.0	0.5
Brazil	0.9	1.2	0.3
Mexico	0.4	0.3	0.0
Other	0.3	0.5	0.3
EMEA	1.6	1.6	0.1
Turkey	0.1	0.1	0.0
Russia and Eastern Europe	0.7	0.7	0.0
South Africa	0.7	0.7	0.0
Other	0.1	0.1	0.0
Asia	9.8	12.0	2.2
China	4.1	4.7	0.6
India	1.4	1.8	0.4
South Korea	1.8	2.2	0.4
Taiwan	1.4	1.7	0.3
Other Emerging Asia	1.0	1.5	0.5
Hybrid Investments	0.0	0.0	0.0
Hedge Funds	0.0	0.0	0.0
Real Assets	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Total	100.0	100.0	0.0

## Global USD without Hedge Funds: Risk Level 5 - Tactical **Allocations**





Figures in brackets are active allocations. All allocations are subject to change at discretion of the GIC of the Citi Private Bank.

#### **Core Positions**

Global equities, global fixed income, cash and commodities are all at neutral position.

Within global equities, developed equities have an underweight position of -2.8% while emerging equities are at an overweight position of +2.8% primarily driven by allocations to Asia at +2.2%, Latin America at +0.5% and EMEA at +0.1%.

Neutral positions are spread among all fixed income sub-categories.

# **Asset Allocation Definitions**

Asset classes	Benchmarked against
Global equities	MSCI All Country World Index, which represents 48 developed and emerging equity markets. Index components are weighted by market capitalization.
Global bonds	Bloomberg Barclays Capital Multiverse (Hedged) Index, which contains the government -related portion of the Multiverse Index, and accounts for approximately 14% of the larger index.
Hedge funds	HFRX Global Hedge Fund Index, which is designed to be representative of the overall composition of the hedge fund universe. It comprises all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage and relative value arbitrage. The strategies are asset-weighted based on the distribution of assets in the hedge fund industry.
Commodities	Dow Jones-UBS Commodity Index, which is composed of futures contracts on physical commodities traded on US exchanges, with the exception of aluminum, nickel and zinc, which trade on the London Metal Exchange (LME). The major commodity sectors are represented including energy, petroleum, precious metals, industrial metals, grains, livestock, softs, agriculture and ex-energy.  The Thomson Reuters / Core Commodity Index is designed to provide timely and accurate representation of a long-only, broadly diversified investment in commodities through a transparent and disciplined calculation methodology.
Cash	Three-month LIBOR, which is the interest rates that banks charge each other in the international inter-bank market for three-month loans (usually denominated in Eurodollars).
Equities	
Developed market large cap	MSCI World Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the equity market performance of the large cap stocks in 23 developed markets. Large cap is defined as stocks representing roughly 70% of each market's capitalization.
All Country Ex US	MSCI All Country ex US, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the equity market performance of the large cap stocks in all countries excluding the US.
US	Standard & Poor's 500 Index, which 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.
Europe ex UK	MSCI Europe ex UK Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in each of Europe's developed markets, except for the UK
UK	MSCI UK Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in the UK
Japan	MSCI Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in Japan.
Asia Pacific ex Japan	MSCI Asia Pacific ex Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the performance of large cap stocks in Australia, Hong Kong, New Zealand and Singapore.
Developed market small and mid-cap (SMID)	MSCI World Small Cap Index, which is a capitalization-weighted index that measures small cap stock performance in 23 developed equity markets.
Emerging market	MSCI Emerging Markets Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure equity market performance of 22 emerging markets.
Bonds	
Developed sovereign	Citi World Government Bond Index (WGBI), which consists of the major global investment grade government bond markets and is composed of sovereign debt, denominated in the domestic currency. To join the WGBI, the market must satisfy size, credit and barriers-to-entry requirements. In order to ensure that the WGBI remains an investment grade benchmark, a minimum credit quality of BBB—/Baa3 by either S&P or Moody's is imposed. The index is rebalanced monthly.
Emerging sovereign	Citi Emerging Market Sovereign Bond Index (ESBI), which includes Brady bonds and US dollar -denominated emerging market sovereign debt issued in the global, Yankee and Eurodollar markets, excluding loans. It is composed of debt in Africa, Asia, Europe and Latin America. We classify an emerging market as a sovereign with a maximum foreign debt rating of BBB+/Baa1 by S&P or Moody's. Defaulted issues are excluded.
Supranationals	Citi World Broad Investment Grade Index (WBIG)—Government Related, which is a subsector of the WBIG. The index includes fixed rate investment grade agency, supranational and regional government debt, denominated in the domestic currency. The index is rebalanced monthly.
Corporate investment grade	Citi World Broad Investment Grade Index (WBIG)—Corporate, which is a subsector of the WBIG. The index includes fixed rate global investment grade corporate debt within the finance, industrial and utility sectors, denominated in the domestic currency. The index is rebalanced monthly.
Corporate high yield	Bloomberg Barclays Global High Yield Corporate Index. Provides a broad-based measure of the global high yield fixed income markets. It is also a component of the Multiverse Index and the Global Aggregate Index.
Securitized	Citi World Broad Investment Grade Index (WBIG)—Securitized, which is a subsector of the WBIG. The index includes global investment grade collateralized debt denominated in the domestic currency, including mortgage -backed securities, covered bonds (Pfandbriefe) and asset-backed securities. The index is rebalanced monthly.

# Other miscellaneous definitions

Asset Backed Securities (ABS)	A security whose income payments and hence value are derived from and collateralized (or "backed") by a specified pool of underlying assets such as consumer credit card debt or auto loans.
Commercial Mortgage Backed Securities (CMBS)	Commercial mortgage-backed securities (CMBS) are a type of mortgage-backed security that is secured by mortgages on commercial properties, instead of residential real estate.
High Yield Corporate Bonds (HY)	High yield corporate bonds are bonds with a credit rating less than BBB- (S&P) or Baa3 (Moody's), and are debt securities issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations.
Investment Grade Corporate Bonds (IG)	Investment grade corporate bonds are bonds with a credit rating equal to or above BBB- (S&P) or Baa3 (Moody's), and are debt securities issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations.

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#### Bond rating equivalence

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

Bond credit quality ratings	Rating agencies		
Credit risk	Moody's1	Standard and Poor's <sup>2</sup>	Fitch Ratings <sup>2</sup>
Investment Grade			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (Strong)	Α	Α	Α
Medium grade	Baa	BBB	BBB
Not Investment Grade			
Lower medium grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	В	В	В
Poor quality (may default)	Caa	CCC	ccc
Most speculative	Ca	CC	СС
No interest being paid or bankruptcy petition filed	С	D	С
In default	С	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.
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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.

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