



Citi Global Wealth Investments

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Global Strategy | Quadrant

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Taper Without Tantrum

We expect the economic expansion to endure, outlasting the current spike in inflation. A key challenge for asset allocators is gauging the impact of the coming macro policy normalization. Even if inflation moderates, the Fed is likely to raise interest rates gradually over the coming 2 to 3 years. Fiscal policy will boost demand far less than in 2020-2021.

Market-based long-term US inflation expectations are well above those of the last Fed tightening cycle in 2014-18. However, they are only in line with the Fed's inflation target. The last tightening cycle saw long-term inflation expectations plunge. That forced the Fed to rethink its approach toward reaching its goals. In today's context, this suggests the Fed will move only gradually in the coming years unless long-term inflation expectations soar. Such memories are helping to limit upward long-term yield pressure.

The 2014-2016 period has both similarities and large differences vis-à-vis today. The US dollar held onto a large real and nominal gain from that period, making a disruptive rise less likely now if the Fed can raise rates only gradually in the coming few years.

One parallel concern is China's property market, where a downturn has not yet been fully felt throughout its broader economy. Unlike in 2015, however, China's equity and credit markets significantly discount economic weakness, making a Fed-induced sharp negative reaction less likely.

We expect crude oil to peak in coming months, but its price is unlikely to collapse 65% as it did in 2014-2015. That period – one of booming US oil production – drove economic distress in some emerging markets, which is unlikely to repeat.

While we continue to be more overweight US equities than many others, non-US equities never recovered fully in valuation from the impact of Fed tightening and US dollar appreciation in the 2013-2017 era. This has improved their relative return prospects for the long-term.

We've maintained our 6% overweight in Global Equities and 6% underweight in Fixed Income and Cash. During 2021, we've reduced risk assets from a peak overweight of 11%, as we see equity returns in the coming year moderating toward high-single digits. We've migrated holdings toward consistent dividend growers and less cyclical areas such as healthcare to drive sustainable long-term returns.

We continue to overweight some assets that have benefited from the unusual circumstances of the pandemic. Our overweight in US Treasury Inflation Protected Securities has appreciated to a record high valuation on anticipated inflation. While we continue to value inflation hedges, we see actual inflation moderating in the coming 12 months as fiscal stimulus abates and supply disruptions ease.

We also remain overweight of some real estate assets after the dislocations of 2020. However, forward-looking yields have moderated. As such, we continue to look at opportunities for optimizing our holdings within fixed income and equities amid changing valuation and growth opportunities. We seek to invest in leading firms within industries whose share of economic output is growing. We also seek to invest in firms that sustainably increase income distributions to shareholders.

The Global Investment Committee (GIC) today kept its asset allocation unchanged with Global Equities 6% overweight. Fixed Income and cash remain 6% underweight.

Over the course of 2021, we've reduced risk assets from a peak overweight of 11% as we see equity returns in the coming year moderating toward high-single digits. This follows a 26% gain over the past 12 months. With even larger equity market gains in COVID-impacted sectors, we've migrated holdings toward consistent dividend growers and less cyclical areas (such as healthcare) to drive sustainable long-term returns.

We continue to overweight some assets that have benefited from the unusual circumstances of the pandemic. Our overweight in US Treasury Inflation Protected Securities has appreciated to a record high valuation on anticipated inflation. While we continue to value inflation hedges, we see actual inflation moderating in the coming 12 months as fiscal stimulus abates and supply disruptions ease. We also continue to overweight some real estate assets after the dislocations of 2020. However, forward-looking yields have moderated. As such, we continue to look at opportunities for optimizing our holdings within fixed income and equities given changing valuation and growth opportunities.

Our GIC discussions this week focused heavily on parallels to the Federal Reserve's last period exiting Quantitative Easing and moving to the early stages of a policy tightening cycle. The sharp rise in long-term yields of the so-called "taper tantrum" period of 2013 has been absent in recent months. However, the 100 basis point rise in US long-term yields in the past year appears to have already anticipated a gradual US monetary policy normalization. The US dollar has benefited more from the Fed's prospective action than US bond yields.

Key to the Fed being able to exit policy accommodation at a gradual pace will be the rate and persistence of inflation. While there is some underlying acceleration, inflation does appear to have significant temporary components which have been the larger part of the past year's rise.

The early period of Fed policy normalization in 2014-2016 catalyzed some global vulnerabilities which represent risks today. However, these risks appear lower in scale now. For one reason, the real value of the US dollar is significantly higher than in the "taper tantrum" period. Important to understanding 2014-2016, global petroleum prices collapsed as US oil supplies surged. This catalyzed negative economic effects in petrol states and many commodity-oriented economies. Similar vulnerabilities appear lower today. China's equity markets and currency fell sharply in 2015 and we see China's economy decelerating under a severe property sector retrenchment. However, unlike 2015, we believe Chinese equity and credit markets have already corrected significantly.

While we continue to overweight US equities somewhat more than others, non-US equities never recovered fully in valuation from the impact of Fed tightening and US dollar appreciation during 2013-2017. This setting leaves us somewhat less concerned about well-telegraphed Fed policy intentions now. At some point, the high valuation of US growth stocks relative to both US value shares and non-US shares generally will need to be reconciled. Very low real interest rates globally and strong IT-sector growth fundamentals at present provide no immediate catalysts for mean reversion between these classes of equities.

As noted, our portfolio allocations have evolved to moderate risks and gravitate toward lasting sources of income and growth. Many of the highest returns of the past 18 months have been in COVID-ravaged industries. For example, the US Hotels, Resorts and Cruise-lines group has returned 185% since April 2020. While further recovery seems likely, the long-term growth profile of these firms simply does not permit a repeat performance in the coming 18 months. By focusing on rising dividends among higher quality firms in growing industries, we see a higher probability of meeting or exceeding the absolute returns of broad markets in the coming year.

ASSET CLASSES | Global USD with Alternatives Level 3

-2	-1	0	1	2
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FIXED INCOME

Developed Sovereign				
Developed Investment Grade Corporates				
High Yield				
Emerging Market Sovereigns				

EQUITIES

Developed Equities				
Large Cap				
US				
Europe				
Asia ex-Japan				
Japan				
Small and Mid Cap				
US SMID Cap				
Non-US SMID Cap				
Emerging Market Equity				
Thematic Equity				

CASH

COMMODITIES

Please refer to the [Portfolio Allocations](#) for a comprehensive breakdown of the portfolios at each risk level.

-2 = very underweight | -1 = underweight | 0 = neutral | 1 = overweight | 2 = very overweight

Arrows indicate changes from previous GIC meeting

Why the Bond Market Refuses to Throw a Tantrum

The bond market is behaving as if it is done with having tantrums.

Ghosts of the sustained 1970s inflation surge have been a source of anxiety for investors for decades. Fears that it would return left bond yields lurching higher at the start of each recovery, particularly in the US. However, after the early 1980s, when the Fed showed it was willing to drive the US economy into recession twice within three years, each round of surging inflation and rising bond yields has been short-lived (see figure 1).

At the start of the recovery from the Global Financial Crisis in mid-2009, commodity prices leaped higher and 10-year US Treasuries jumped to a 4% yield. Falling inflation and the European Sovereign Debt Crisis (remember Greek debt?) drove yields down again.

In May of 2013, when Fed Chairman Bernanke moved to warn markets that QE wouldn't go on forever, the US bond market launched its famously named "taper tantrum." Long-term US yields swiftly rose about 140 basis points to 3.0%. The US dollar eventually followed with a lag, going on to a 10% surge in 2014 against major currencies as the rate hiking cycle merely started.

Interestingly, as Federal Reserve Chairman Powell has announced his own tapering, the US dollar has risen, but the US rate market has been nearly dormant since March (see figure 2). Perhaps this is because of widespread bond bearishness. While far from a "good value," the 10-year Treasury note's rise from a yield near 0.5% in July 2020 to 1.7% in March is statistically large enough to constitute most of the sustained yield increases of each new cycle since the mid-1980s.

Figure 1: Nominal 10-year US Treasury Yield Since 1980

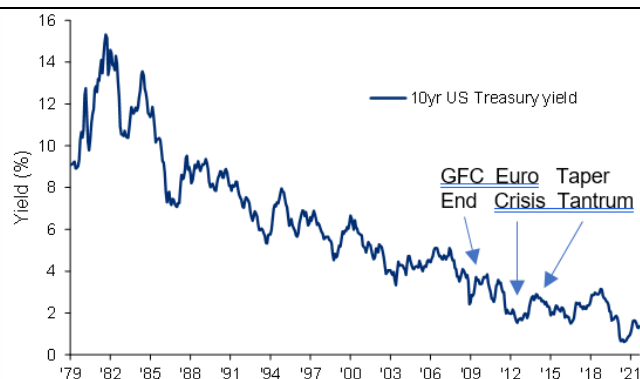


Figure 2: 10-year US Treasury Yield (%) and US Dollar Index Since 2013 "Taper Tantrum"



Source: Bloomberg as of November 18, 2021. 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.

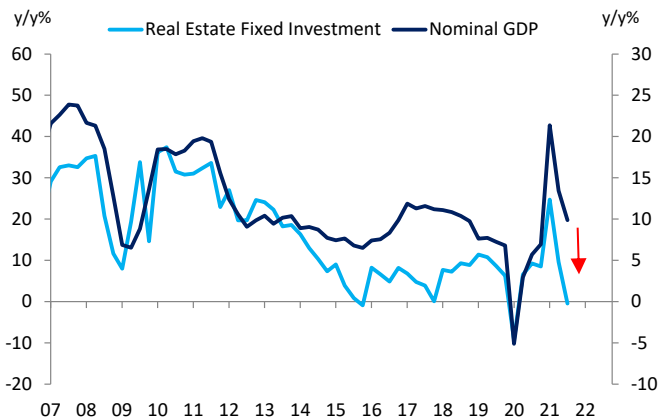
There are many overlapping reasons why US long-term yields are not surging to compensate investors for inflation or to account for likely Fed tightening at the front end of the curve. For one, the global developed market yield environment is mired in "Financial Repression" (see figure 3). Investors doubt the European Central Bank will follow the Fed closely on rates when it has spent years fighting "Japanification." (Japan for more than 25 years sustained mild deflation on self-imposed austerity).

In addition, China's immediate economic outlook remains bogged down in its own, self-imposed growth constraints. These may be gradually easing. COVID restraints have weakened certain Chinese consumer activities temporarily, and power restrictions are being lifted. However, we don't believe China's property downturn has fully impacted the broader Chinese economy as of yet, with likely spillovers to restrain employment and consumption growth (see [our October Quadrant](#) for discussion and figure 4).

Figure 3: Key European and US 10-Year Government Bond Yields: US Yields Highest of Developed Markets Save Australia, Canada, New Zealand



Figure 4: China's Real Estate Investment vs Nominal GDP Y/Y%



Source: Bloomberg as of November 5, 2021. 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.

There are similarities in the global economy to the last Fed tightening cycle from 2014-2018. However, key vulnerabilities of that period appear less acute today.

As discussed in last month's [Quadrant](#), China's economic weakness may be the closest reminder of the harsh period of "early cycle" Fed tightening in 2014-2016.

As figure 5 shows, China's equities – priced in US dollars – rose more than 75% in the year through April 2015 before falling 33% in the following 12 months. A variety of domestic political issues played a role in broadening public participation in equities markets at the time. Once the bubble burst, global fears migrated to worries of Chinese capital outflows and competitive foreign exchange devaluation. In the present case, however, China's equity market has already retrenched 30% recently on domestic growth and regulation concerns. It is not inflating into a Fed tightening period as was the case in 2014-2015.

Other vulnerabilities in emerging markets also appear lower in our view. The unprecedented boom in US oil production in the years through 2014 set off a collapse in petroleum, with a 50% oil price drop in 2015 and further weakness in 2016. Petro-states such as Nigeria and Saudi Arabia suffered GDP declines in 2016 and 2017. Other Emerging Markets (EMs) such as Brazil suffered export income losses contributing to local political instability.

Figure 5: China Equities (MSCI China Index)



Figure 6: Global Petroleum Price per Barrel (Brent Oil)



Source: Haver and Bloomberg as of November 18, 2021. 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.

As figure 2 showed, the US dollar has maintained a great deal of the strength it acquired during the last Fed tightening period. Over the course of 2014-2018, US equities posted a total return of 11.0% per year while non-US equities returned 3.7% per year in USD terms. This has left a valuation and performance gap that persists to this day (see figure 7). While we tactically overweight more US equities than non-US equities for now, the valuation legacy of the last

tightening cycle makes us somewhat less concerned for non-US markets facing a Fed policy normalization once again.

Figure 7: Trailing Price/Earnings: US Growth, US Value and Non-US Equities Total



Source: FactSet as of November 18, 2021. 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.

With rapid shifts in the products demanded by consumers during the pandemic, even high levels of unemployment would not have yielded stable inflation in the past year.

The Fed does not believe such circumstances will persist. Neither does the US bond market.

How the Fed Sees It

The Fed's experience during the last cycle suggests a careful, gradual tightening approach in the period ahead, despite higher-than-expected near-term inflation.

Figure 8 shows the US Treasury market's expected inflation rate in the period from five to 10 years from now (2027-2031). This "five year, five-year-forward" inflation rate eliminates cyclical factors from expected inflation rates, leaving a "cleaner" view of the market's assessment of long-term monetary inflation. The figure shows that the negative global economic events of 2014-2017 catalyzed a drop in long-term inflation expectations below the Fed's target. (This is 2% for the personal consumption expenditures index or about 2.3% for the fixed-basket Consumer Price Index).

With the actualized 10-year US inflation rate 1.8% in the decade after the Global Financial Crisis, the Fed adopted changes to its inflation targeting approach to deliberately seek periods of "overshoot" in inflation so that 2% is sustained. Fed officials might object to our wording here, but this implies a 2% *minimum* long-term rate.

As the figure shows, this key expected inflation rate has only now risen back to the Fed's target. As such, if a new round of monetary tightening serves to sink inflation expectations again, the Fed would presumably slow the pace of future rate hikes, which are expected by the US bond market to take place quarterly from 2H 2022-2023.

With long-run monetary inflation expected by markets to merely hit the Fed's target, US officials have felt compelled to focus significantly on their other Congressional mandate, "maximum employment." Rapid shifts in the products demanded alone made consumer prices unstable in the past year. Fiscal stimulus added sharply to overall demand as we discuss below. This means that **even high levels of unemployment would not have yielded stable inflation.**

Abstracting from the unique COVID period distortions – including a 3.1 million drop in the US labor force – had the pandemic not hit, US employment would likely be 6-7 million higher today (see figure 9). Over a period of several years, the Fed would expect these "missing" jobs to be restored with employment growing 1.5-2.0 million per year due to ordinary gains in the working age population. Arguably, monetary policy is not the reason why the jobs are presently missing. However, the Fed would certainly not want to slow down a return to "maximum employment" if the outlook for long-term inflation hasn't changed.

Figure 8: US Treasury Market 5-Year Forward 5-Year CPI Inflation Rate (%)

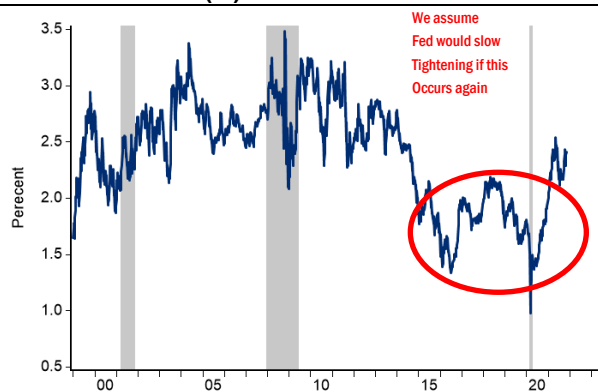
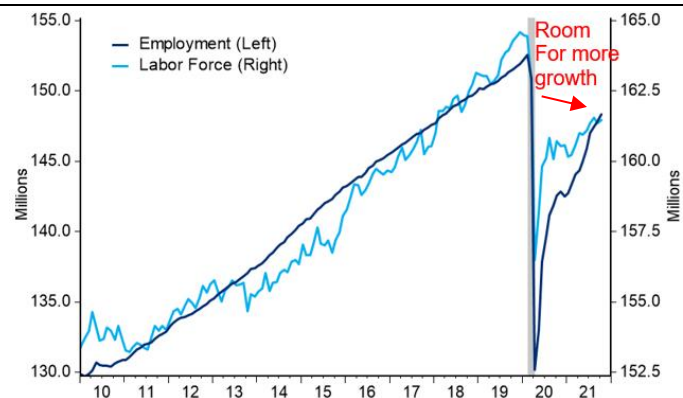


Figure 9: US Employment and Labor Force



Source: Haver and Bloomberg as of November 18, 2021. 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 not indicative of future returns. For illustrative purposes only. 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. Note: Shaded regions are recessions.

The COVID Blight Persists

COVID distortions remain a large, and still temporary blight on the immediate performance of the economy. As figure 10 shows, there were only two rounds of Federal government income support payments to US consumers and there are no present plans to repeat them. This means the pace of consumption growth will normalize to income growth, which no longer has a \$4 trillion boost within it. A further normalization in the types of products consumers demand is also critical to slowing inflation in the coming year (see figure 11).

Figure 10: US Federal Outlays vs US personal Savings Rate

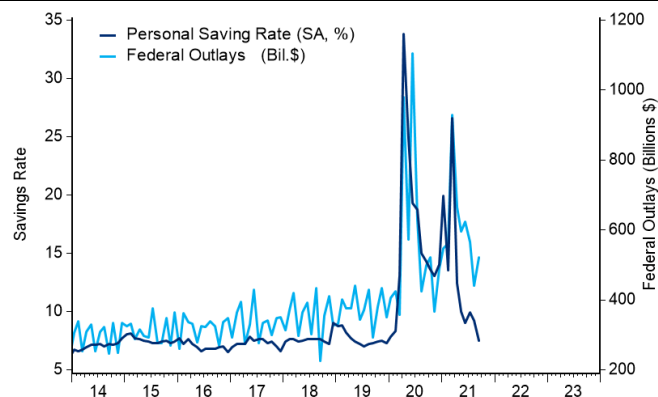
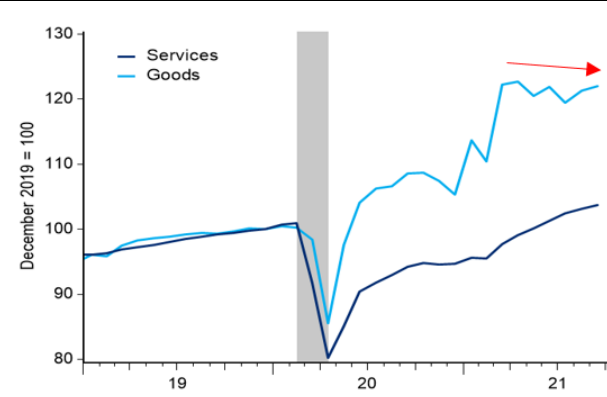


Figure 11: US Consumer Goods vs Services Spending



Source: Haver Analytics as of November 5, 2021. Note: Gray shared areas are US recessions

The underlying pace of US consumer income growth is accelerating, and with it, domestic demand is strengthening. This does not eliminate the \$3.9 trillion annualized drop in after-tax income since March 2021 as stimulus wasn't repeated. With several forms of emergency support now history, returning to work and consuming wage income should return to its place as the primary driver of consumption.

Figure 12 shows the rise in US compensation costs and its close link with domestic services prices. October's employment report is indicative of further gains. Nonetheless, **labor markets simply haven't been the inflation story of the past year**. Rather, inflation has been driven by a sharp jump in scarce imported goods as **COVID-bound consumers shifted the composition of what they purchased more rapidly than in any other time in history** (see figure 13). For this reason, the Fed continues to ask for patience, arguing the inflation spike is transitory. While not the entirety of the story, there is much data to support their view.

Fiscal and monetary policy together are a demonstrable "inflation-maker." The policy outlook does not suggest a repeat of the discrete steps of 2020 and 2021.

Figure 12: US Employment Cost Index vs Core Services CPI

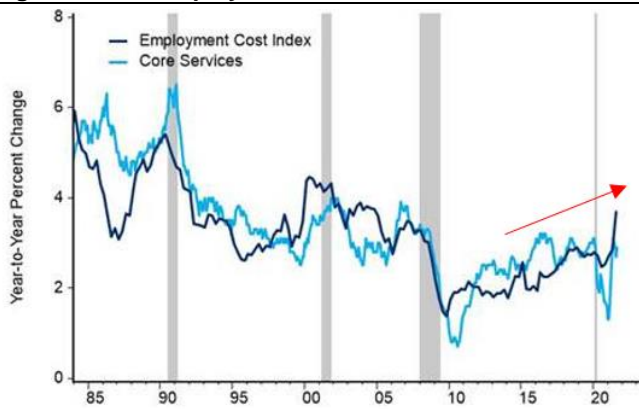
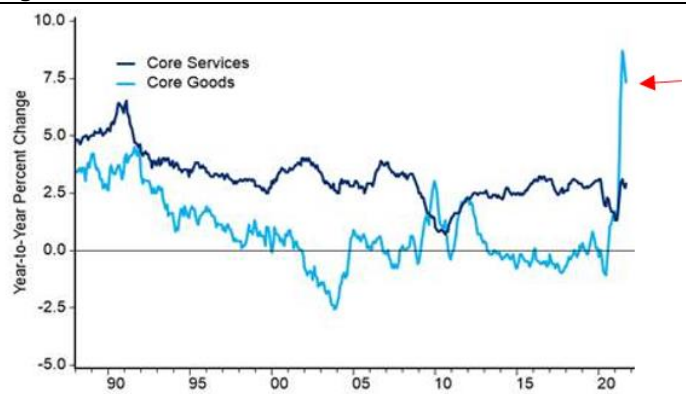


Figure 13: US Core Goods vs Services CPI



Source: Haver Analytics as of November 18, 2021. Note: Shaded grey areas are US recessions. 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.

No Good Deals for Bond Holders

Current yield levels are hard to justify even if inflation in the coming year moderates to 3% and trends slightly lower beyond. We do wonder if our own lingering fears of 1980s bond yields is a factor in our psychology. But even if nominal US bond yields manage to surpass 2%, this would hardly be a level that would collapse highly valued US growth shares without some new and unlikely economic downturn (see figures 14-15 and our [CIO bulletin](#)).

Figure 14: US Growth Stock Price/Earnings Ratio vs US Inflation-Indexed Real Bonds Yield

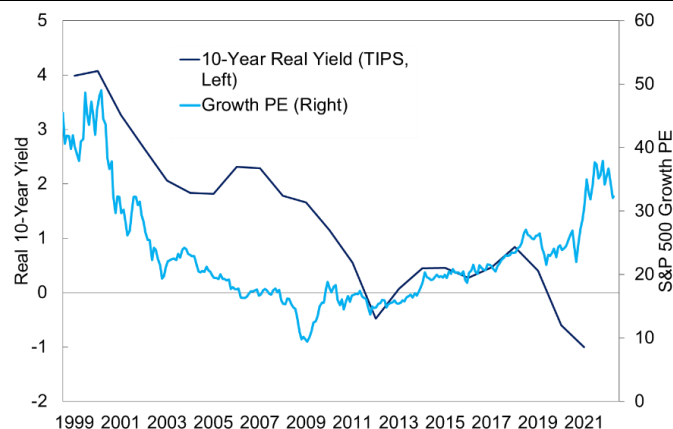


Figure 15: US Growth Index vs 10 Year US Treasury Yield and Gold Price



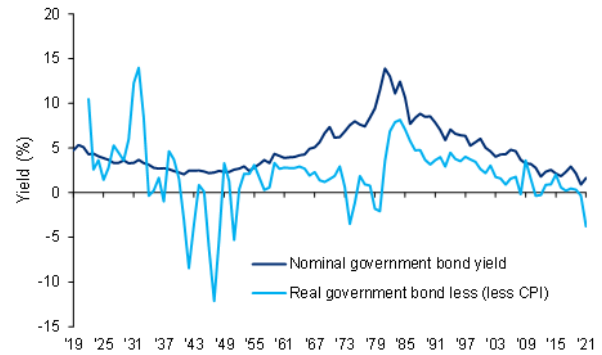
Source: Haver and FactSet as of November 17, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Despite doubts about the near-term outlook for monetary policy or growth, there are good reasons why we should expect an end of the four-decade long period of disinflation in the US and other Developed Markets. Quite simply, central banks have waived the victory flag. They are no longer trying to force down the trend pace of inflation. With some complex fine print, they've adopted slightly higher inflation targets. Nonetheless, history shows this doesn't mechanically mean bond holders will be compensated for their wealth losses to inflation (see figures 16-17).

Figure 16: 10-Year US Treasury Yield and 12-Month CPI Inflation



Figure 17: US 10-Year Government Bond Yield and Yield Less 12-Month Inflation



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Direct inflation hedges have surged in price even as broader financial markets price in benign long-term inflation.

Ironically, with global financial markets pricing inflation as a mere short-term threat, some forms of hedging against inflation have risen sharply in cost. As figures 18-19 show, the valuation of US Treasury Inflation Protected Securities has risen to an all-time high.

We began 2021 with an overweight in TIPS and doubled that overweight in March in anticipation of upward surprises in inflation. Since that time, the asset class appreciated more than 2% while receiving nearly 6% in inflation compensation. At our November Global Investment Committee meeting, we decided to maintain our position in TIPS for now. However, as with other asset classes, we evaluated the performance of TIPS during the “taper tantrum” period of 2013. Notably, including inflation compensation, TIPS lost 10.5% in value in the period.

Figure 18: US TIPS Real Yield % (Average Duration)

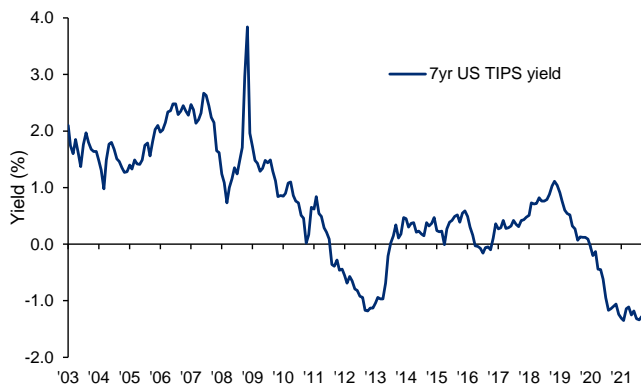
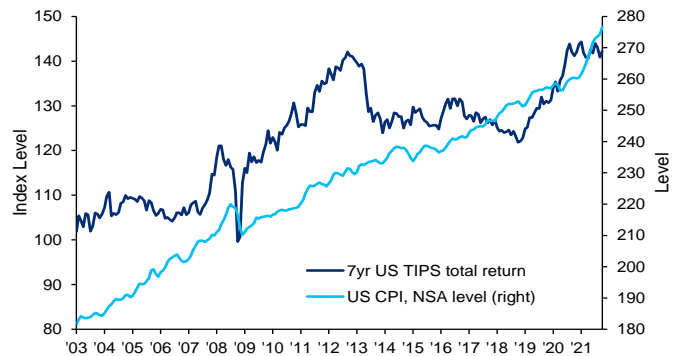


Figure 19: US TIPS Price Performance (Average Duration and CPI Compensation)



Source: Haver and FactSet as of November 17, 2021. 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.

How to Outperform When the Distortions are Behind Us

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Senior Economist

We expect the financial market outlook of the coming year to be quite different from 2020 or 2021. The next recession is a story for another day. But so is a 30% return for world equity markets as a whole, such as just experienced in the past 12 months (see figure 20).

Investors who missed out on buying “COVID cyclicals¹” such as hospitality shares - or entire country markets such as Brazil – can’t expect to copy those returns earned in the year past (see figure 21). Many of the assets that posted the strongest gains (such as the 120% annualized gains since April 2020 in hotels, resorts and cruise line operators) were only made possible because of their plunge into the initial abyss of the COVID recession.

Figure 20: S&P 500 Year/Year % Change

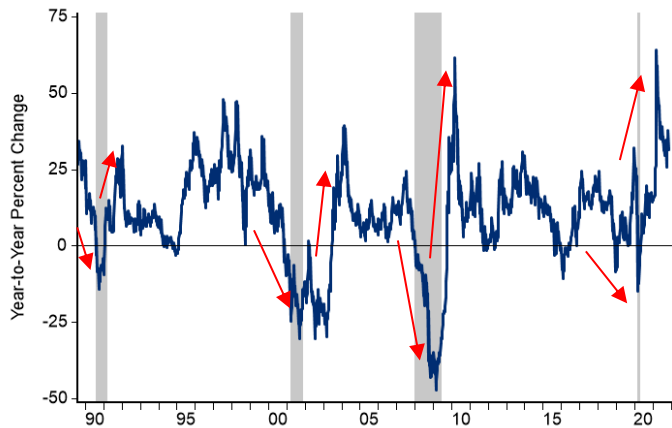
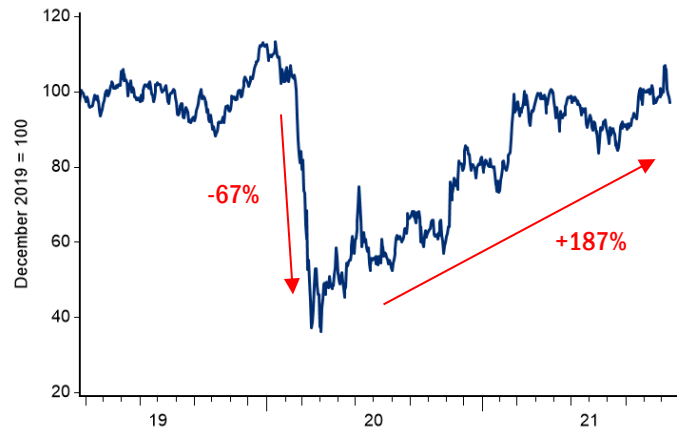


Figure 21: US Hotels, Resorts and Cruise Lines Group



Source: Haver Analytics as of November 5, 2021. Note: Gray shaded areas are US recessions. 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.

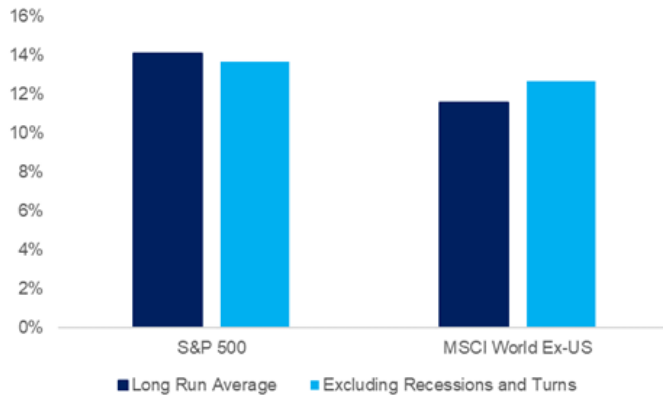
Importantly, **financial market returns purging away both the plunge and rebound periods are little different from their long-term averages. What this shows is that staying invested for economic progress is a historic builder of real wealth** (see figure 22).

Using history as a guide, long-run returns in equity markets can be beaten with either of two things:

1. **Invest in firms that consistently lead their industry and within industries that grow as a share of the economy.** We would look to “unstoppable trends” such as the secular rise in healthcare demand or the transition of the economy from tangible to digital as macro-level examples of “secular growth industries.” We would see traditional autos or oil drilling as counter examples, with gradually diminishing growth, yet still facing cyclical booms and busts (see figures 23-24).
2. **Invest in firms that sustainably grow income distributions to shareholders.** US firms with the most consistent dividend growth have outperformed the mighty S&P 500 by about 60 percentage points in the last 30 years (see figure 25). Firms with the very best opportunities can save dividend distributions to invest internally for stronger returns. However, when one has doubts about a firm’s growth opportunities, tangible, growing dividends are a highly valuable asset for investors (see figure 26). In other words, firms must work harder or have extraordinary growth opportunities to ask investors to forego dividends which have cumulatively driven half of long-term equity market returns.

¹ Energy, Materials, Consumer Discretionary (ex-E-Commerce), Industrials, Financials, Real Estate

Figure 22: US and Global Equities Annual Total Return Since 1960: Average and Excluding Year Before and After Recessions



Source: Bloomberg as of November 5, 2021. 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 23: S&P 500 Revenues vs FAAMG Revenues

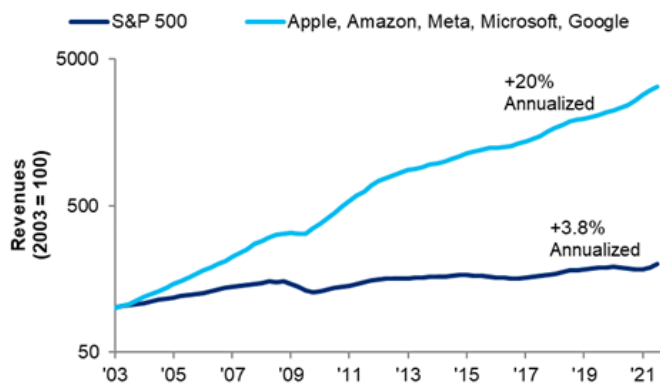
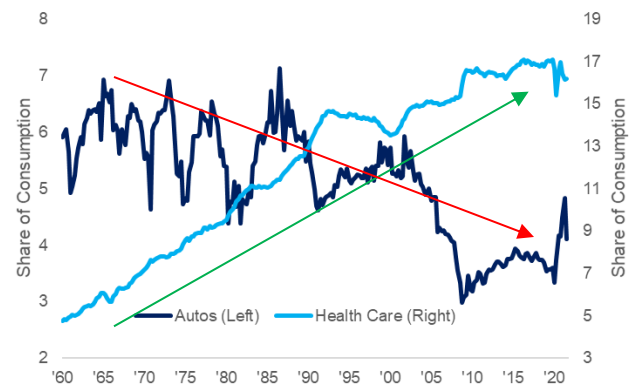


Figure 24: US Healthcare vs Autos Spending as a % of Total Consumer Outlays



Source: Haver Analytics as of November 5, 2021. 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 25: S&P 500 Dividend Aristocrats, MSCI Quality Index and All US Shares

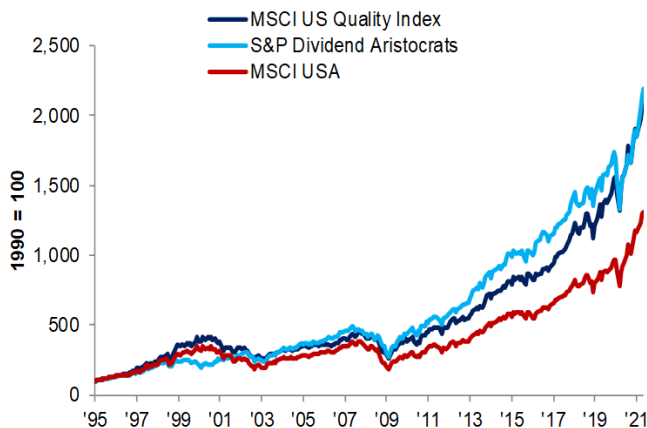
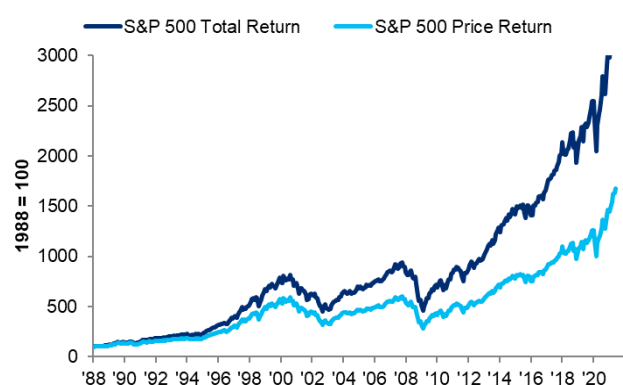


Figure 26: S&P 500 Price Index vs Total Return Index with Reinvested Dividends



Source: Bloomberg and FactSet as of November 17, 2021. 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.

Many of the assets posting the strongest gains in the past 12-18 months were those merely recovering from COVID distortions.

To sustain returns, we need allocations in industries growth-leading sectors with rising cash distributions to shareholders.

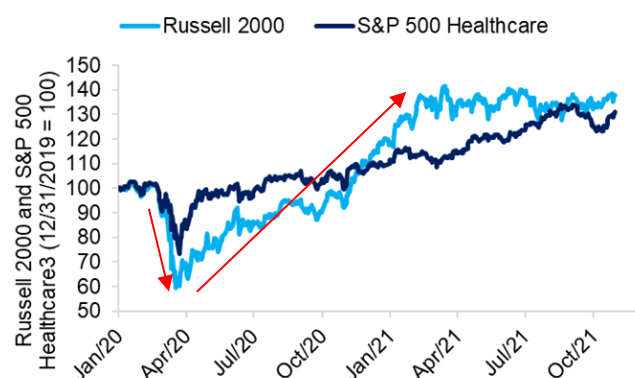
While there are still some COVID-impacted industries and certainly country markets, we believe the transition from “recovery” to “expansion” in financial markets is mostly over.

The challenge is to realign portfolios toward sustainable return drivers. This led us to alter many of our allocations in the past year. For example, we reduced holdings of volatile, leveraged small cap firms that enjoyed an exaggerated recovery from depressed levels. We reinvested in the generally more stable growth and value offered in the healthcare sector (see figure 27).

Accelerating global healthcare demand goes hand-in-hand with an aging world population, with the United Nations projecting a doubling in the size of the over-65 population in less than 30 years. The growth of this demographic is more than 4x faster than overall world population's growth. With science delivering longer lives - but ever-increasing demand to sustain the trend - it makes “Increased Longevity” a Citi Global Wealth Unstoppable Trend (see figure 28).

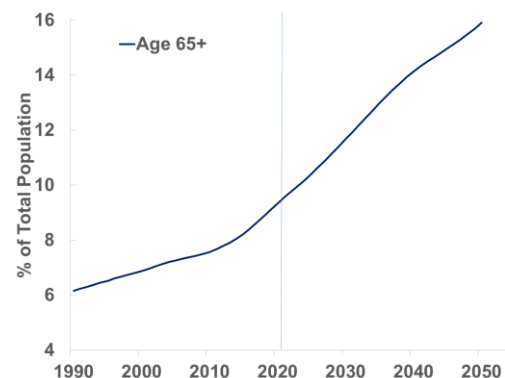
Similarly, the digital economy's early promises of the dot.com bubble period were delivered on in the two decades that followed (see figure 29). This time, we don't see the growth of the digital economy at an excessive or unsustainable level overall. Digitization helped the world adapt to COVID, saving millions of jobs with mobility and flexible work arrangements. In doing so, it likely reduced the speed and scope of the pandemic as it enabled social distancing. Beyond the extremes and distortions of this period, the digital world is increasingly the “real economy” for more and more global citizens.

Figure 27: US Small and Mid-Cap Shares vs Large Cap Healthcare Sector



Source: Haver Analytics as of September 23, 2021

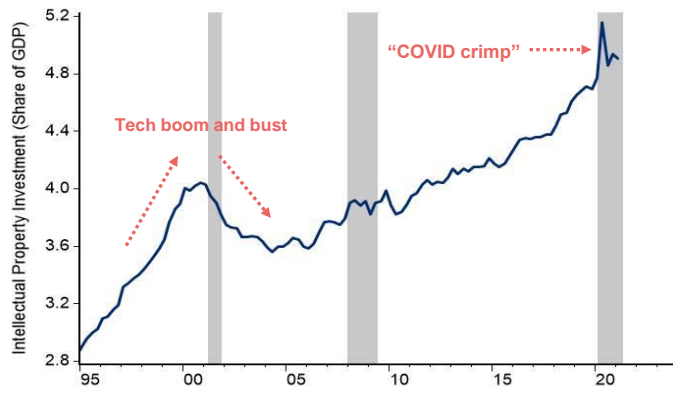
Figure 28: Share of Global Population Aged 65+: UN Projection



Source: FactSet as of September 23, 2021

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

Figure 29: Intellectual property investment as % of US GDP



Source: Haver Analytics as of September 20, 2021. Note: Shaded areas are periods of recession.

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 November 17, 2021 GIC meeting.

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

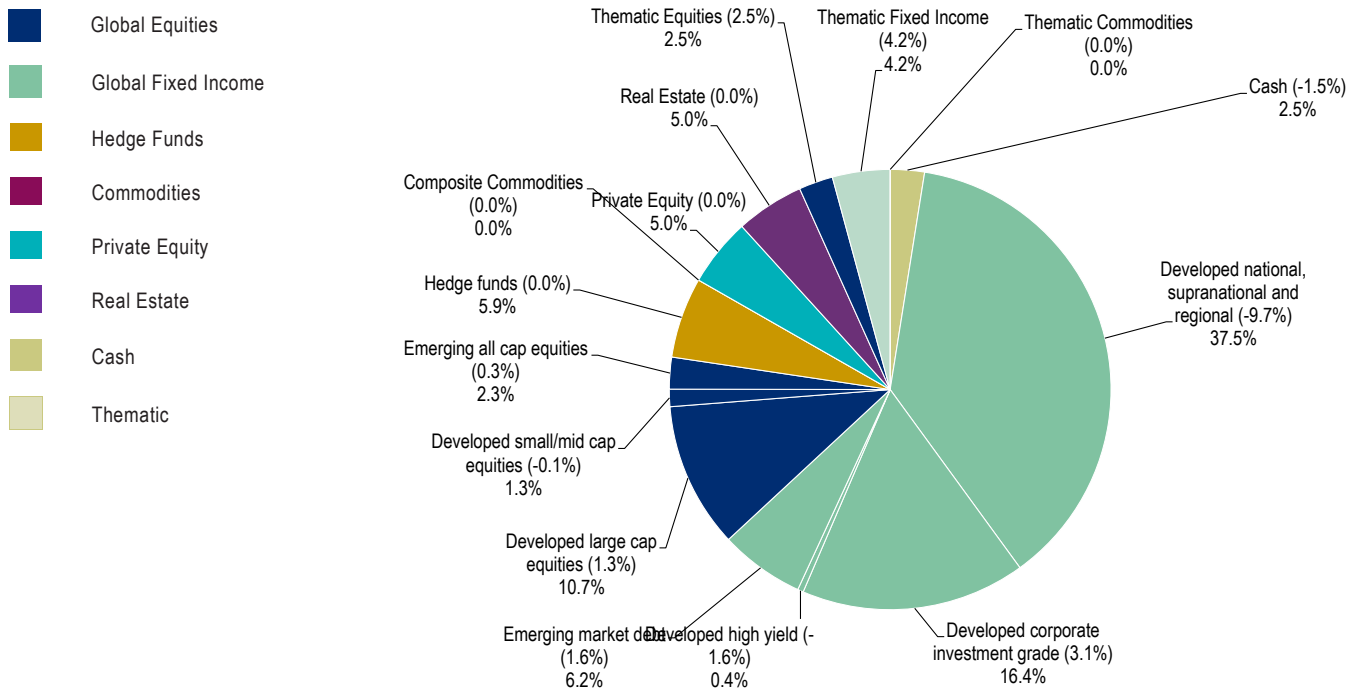
Risk Level 2 is designed for investors who emphasize capital preservation over return on investment, but who are willing to subject some portion of their principal to increased risk in order to generate a potentially greater rate of return on investment.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	4.0	2.5	-1.5
Fixed Income	67.2	64.8	-2.5
Developed Investment Grade	60.6	53.9	-6.6
US	33.7	37.9	4.2
Government	14.1	14.0	-0.1
Inflation-Linked	2.0	3.3	1.3
Short	3.8	2.2	-1.6
Intermediate	5.8	6.0	0.2
Long	2.5	2.5	0.0
Securitized	10.8	12.0	1.2
Credit	8.9	11.9	3.1
Short	1.2	1.4	0.2
Intermediate	4.7	7.6	2.8
Long	2.9	2.9	0.0
Europe	20.4	13.1	-7.3
Government	15.8	8.5	-7.3
Credit	4.5	4.5	0.0
Australia	0.4	0.4	0.0
Government	0.4	0.4	0.0
Japan	6.1	2.6	-3.6
Government	6.1	2.6	-3.6
Developed High Yield	2.0	0.4	-1.6
US	1.5	0.0	-1.5
Europe	0.5	0.4	-0.1
Emerging Market Debt	4.6	6.2	1.6
Asia	0.8	1.9	1.1
Local currency	0.4	1.0	0.6
Foreign currency	0.4	0.9	0.5
EMEA	2.6	2.6	0.0
Local currency	1.3	1.3	0.0
Foreign currency	1.3	1.3	0.0
LatAm	1.3	1.7	0.4
Local currency	0.6	0.7	0.0
Foreign currency	0.6	1.1	0.4
Thematic Fixed Income	0.0	4.2	4.2
US Bank Loans	0.0	4.2	4.2
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	12.8	16.8	3.9
Developed Equities	10.8	12.0	1.1
Developed Large Cap Equities	9.4	10.7	1.3
US	6.4	7.1	0.7
Canada	0.3	0.3	0.0
UK	0.4	0.7	0.3
Switzerland	0.3	0.3	0.0
Europe ex UK ex Switzerland	0.9	1.0	0.1
Asia ex Japan	0.3	0.4	0.0
Japan	0.8	0.8	0.1
Developed Small/Mid Cap Equities	1.4	1.3	-0.1
US	0.8	0.5	-0.3
Non-US	0.7	0.8	0.1
Emerging All Cap Equities	2.0	2.3	0.3
Asia	1.8	2.2	0.4
China	1.1	1.4	0.2
Asia (ex China)	0.6	0.8	0.2
EMEA	0.1	0.0	-0.1
LatAm	0.1	0.1	0.0
Brazil	0.1	0.1	0.0
LatAm ex Brazil	0.0	0.0	0.0
Thematic Equities	0.0	2.5	2.5
Global Equity REITs	0.0	0.0	0.0
US Mortgage REITs	0.0	0.5	0.5
Global Healthcare	0.0	2.0	2.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Hedge Funds	5.9	5.9	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

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

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 +3.9%, global fixed income has an underweight of -2.5%, cash has an underweight of -1.5%.

Within equities, developed large cap equities are at an overweight position of +1.3% while developed small/mid cap equities are at underweight positions of -0.1%. Emerging market equities have an overweight of +0.3%. Thematic equities have an overweight of +2.5%.

Within fixed income, developed investment grade has an underweight position of -6.6%; developed high yield has an underweight position of -1.6% and emerging market debt has an overweight position of +1.6%. Thematic fixed income has an overweight of +4.2%.

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

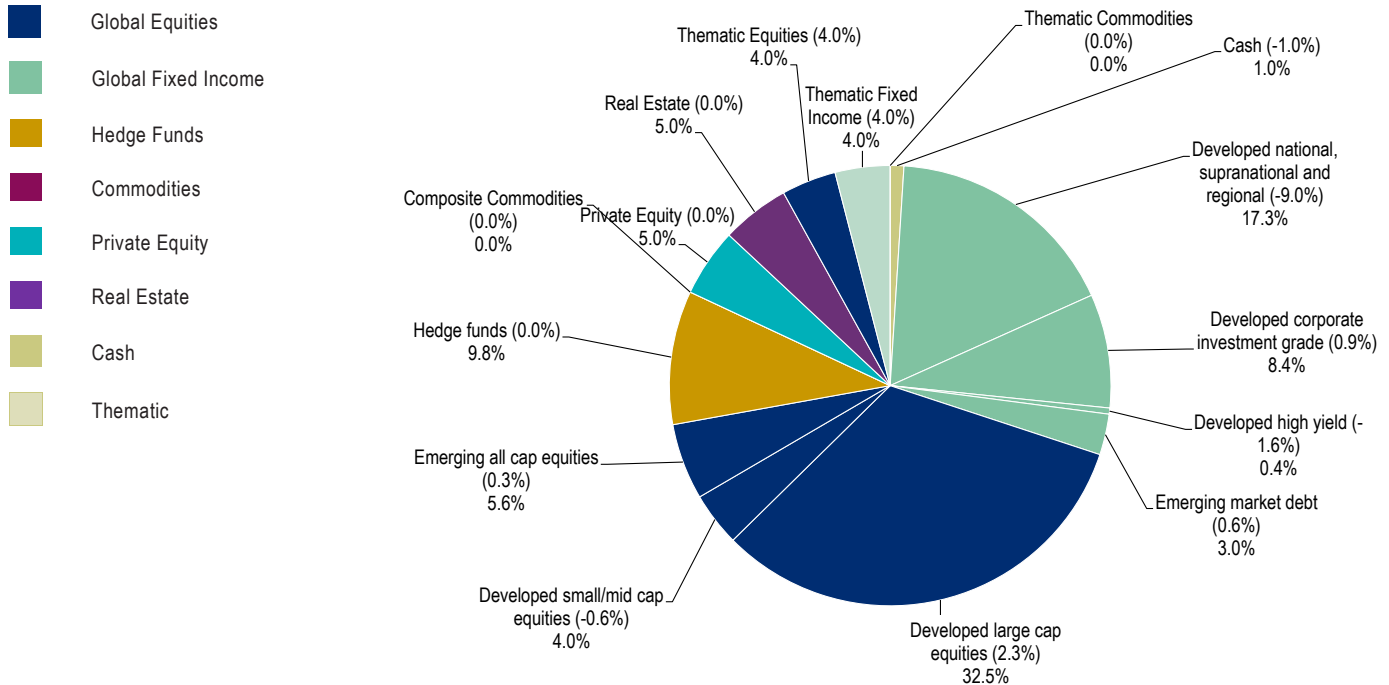
Risk Level 3 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. Risk Level 3 may be appropriate for investors willing to subject their portfolio to 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	1.0	-1.0
Fixed Income	38.1	33.1	-5.0
Developed Investment Grade	33.6	25.6	-8.0
US	18.7	21.0	2.2
Government	7.8	9.1	1.3
Inflation-Linked	1.1	3.2	2.1
Short	2.1	0.1	-2.0
Intermediate	3.2	4.3	1.1
Long	1.4	1.4	0.0
Securitized	6.0	5.9	-0.1
Credit	4.9	6.0	1.1
Short	0.7	0.7	0.0
Intermediate	2.6	3.7	1.1
Long	1.6	1.6	0.0
Europe	11.3	4.4	-6.9
Government	8.8	2.0	-6.8
Credit	2.5	2.3	-0.2
Australia	0.2	0.2	0.0
Government	0.2	0.2	0.0
Japan	3.4	0.1	-3.3
Government	3.4	0.1	-3.3
Developed High Yield	2.0	0.4	-1.6
US	1.5	0.0	-1.5
Europe	0.5	0.4	-0.0
Emerging Market Debt	2.4	3.0	0.6
Asia	0.4	1.0	0.5
Local currency	0.2	0.5	0.3
Foreign currency	0.2	0.4	0.2
EMEA	1.3	1.4	0.0
Local currency	0.7	0.7	0.0
Foreign currency	0.7	0.7	0.0
LatAm	0.7	0.7	0.0
Local currency	0.3	0.3	0.0
Foreign currency	0.3	0.3	0.0
Thematic Fixed Income	0.0	4.0	4.0
US Bank Loans	0.0	4.0	4.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	40.1	46.1	6.0
Developed Equities	34.8	36.5	1.7
Developed Large Cap Equities	30.2	32.5	2.3
US	20.6	21.9	1.3
Canada	1.0	1.0	0.0
UK	1.2	2.0	0.8
Switzerland	0.9	1.0	0.0
Europe ex UK ex Switzerland	2.9	2.9	0.0
Asia ex Japan	1.1	1.1	0.0
Japan	2.5	2.6	0.0
Developed Small/Mid Cap Equities	4.5	4.0	-0.6
US	2.4	1.8	-0.6
Non-US	2.1	2.1	0.0
Emerging All Cap Equities	5.3	5.6	0.3
Asia	4.7	5.3	0.6
China	3.0	3.4	0.4
Asia (ex China)	1.6	1.9	0.2
EMEA	0.3	0.0	-0.3
LatAm	0.3	0.3	0.0
Brazil	0.2	0.2	0.0
LatAm ex Brazil	0.1	0.1	0.0
Thematic Equities	0.0	4.0	4.0
Global Equity REITs	0.0	0.0	0.0
US Mortgage REITs	0.0	1.0	1.0
Global Healthcare	0.0	3.0	3.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Hedge Funds	9.8	9.8	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

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

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.

Core Positions

Global equities have an overweight position of +6.0%, global fixed income has an underweight of -5.0%, cash has an underweight of -1.0%.

Within equities, developed large cap equities have an overweight position of +2.3% while developed small/mid cap equities have an underweight position of -0.6%. Emerging market equities have an overweight of +0.3%. Thematic equities have an overweight position of +4.0%.

Within fixed income, developed investment grade debt has an underweight position of -8.0%; developed high yield has an underweight position of -1.6%; emerging market debt has an overweight position of +0.6%. Thematic fixed income has an overweight position of +4.0%.

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

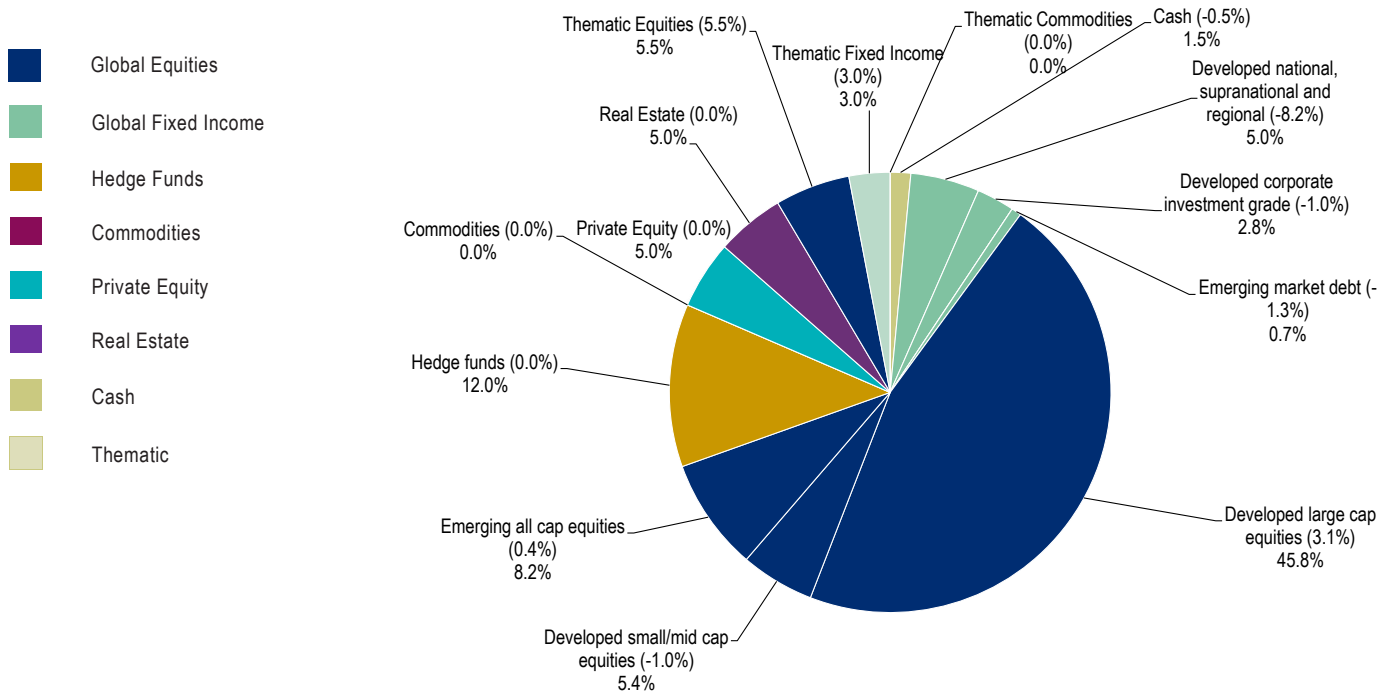
Risk Level 4 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. They are willing to subject a large portion of their portfolio to greater risk and market 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	2.0	1.5	-0.5
Fixed Income	19.0	11.5	-7.5
Developed Investment Grade	17.0	7.8	-9.2
US	9.5	7.2	-2.3
Government	4.0	4.2	0.3
Inflation-Linked	0.6	1.6	1.1
Short	1.1	0.0	-1.1
Intermediate	1.6	1.9	0.2
Long	0.7	0.7	0.0
Securitized	3.0	0.5	-2.6
Credit	2.5	2.5	0.0
Short	0.3	0.0	-0.3
Intermediate	1.3	2.2	0.9
Long	0.8	0.3	-0.5
Europe	5.7	0.6	-5.1
Government	4.5	0.3	-4.1
Credit	1.3	0.2	-1.0
Australia	0.1	0.0	-0.1
Government	0.1	0.0	-0.1
Japan	1.7	0.0	-1.7
Government	1.7	0.0	-1.7
Developed High Yield	0.0	0.0	0.0
US	0.0	0.0	0.0
Europe	0.0	0.0	0.0
Emerging Market Debt	2.0	0.7	-1.3
Asia	0.3	0.4	0.1
Local currency	0.2	0.3	0.1
Foreign currency	0.2	0.2	0.0
EMEA	1.1	0.0	-1.1
Local currency	0.5	0.0	-0.5
Foreign currency	0.5	0.0	-0.5
LatAm	0.6	0.3	-0.3
Local currency	0.3	0.0	-0.3
Foreign currency	0.3	0.3	0.0
Thematic Fixed Income	0.0	3.0	3.0
US Bank Loans	0.0	3.0	3.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	57.0	65.0	8.0
Developed Equities	49.1	51.2	2.1
Developed Large Cap Equities	42.7	45.8	3.1
US	29.0	31.0	1.9
Canada	1.4	1.4	0.0
UK	1.7	2.7	1.0
Switzerland	1.3	1.3	0.0
Europe ex UK ex Switzerland	4.1	4.2	0.0
Asia ex Japan	1.6	1.6	0.0
Japan	3.6	3.7	0.1
Developed Small/Mid Cap Equities	6.4	5.4	-1.0
US	3.4	2.6	-0.9
Non-US	3.0	2.8	-0.1
Emerging All Cap Equities	7.9	8.2	0.4
Asia	6.9	7.8	0.8
China	4.5	5.1	0.6
Asia (ex China)	2.4	2.6	0.2
EMEA	0.5	0.0	-0.5
LatAm	0.5	0.5	0.0
Brazil	0.3	0.3	0.0
LatAm ex Brazil	0.2	0.2	0.0
Thematic Equities	0.0	5.5	5.5
Global Equity REITs	0.0	0.0	0.0
US Mortgage REITs	0.0	1.5	1.5
Global Healthcare	0.0	4.0	4.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Hedge Funds	12.0	12.0	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

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

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 +8.0%, global fixed income has an underweight of -7.5%, cash has an underweight of -0.5%.

Within equities, developed large cap equities have an overweight position of +3.1% while developed small/mid cap equities have an underweight position of -1.0%. Emerging market equities have an overweight of +0.4%. Thematic equities have an overweight of +5.5%.

Within fixed income, developed investment grade has an underweight position of -9.2%; developed high yield has a neutral position and emerging market debt has an underweight position of -1.3%. Thematic fixed income has an overweight of +3.0%.

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

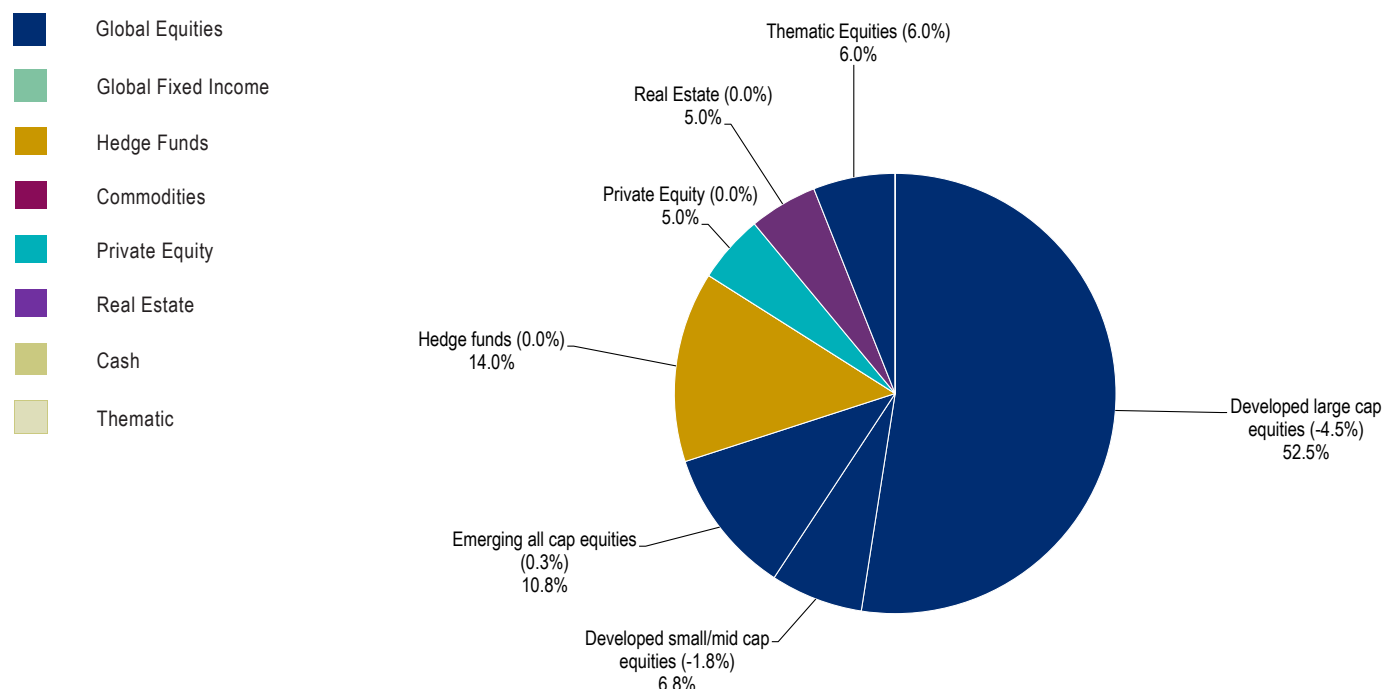
Risk Level 5 is designed for investors who emphasize return on investment. They are willing to subject their entire portfolio to greater risk and market value fluctuations in anticipation of a potentially greater return on investments. Investors may have a preference for investments or trading strategies 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
US	0.0	0.0	0.0
Government	0.0	0.0	0.0
Inflation-Linked	0.0	0.0	0.0
Short	0.0	0.0	0.0
Intermediate	0.0	0.0	0.0
Long	0.0	0.0	0.0
Securitized	0.0	0.0	0.0
Credit	0.0	0.0	0.0
Short	0.0	0.0	0.0
Intermediate	0.0	0.0	0.0
Long	0.0	0.0	0.0
Europe	0.0	0.0	0.0
Government	0.0	0.0	0.0
Credit	0.0	0.0	0.0
Australia	0.0	0.0	0.0
Government	0.0	0.0	0.0
Japan	0.0	0.0	0.0
Government	0.0	0.0	0.0
Developed High Yield	0.0	0.0	0.0
US	0.0	0.0	0.0
Europe	0.0	0.0	0.0
Emerging Market Debt	0.0	0.0	0.0
Asia	0.0	0.0	0.0
Local currency	0.0	0.0	0.0
Foreign currency	0.0	0.0	0.0
EMEA	0.0	0.0	0.0
Local currency	0.0	0.0	0.0
Foreign currency	0.0	0.0	0.0
LatAm	0.0	0.0	0.0
Local currency	0.0	0.0	0.0
Foreign currency	0.0	0.0	0.0
Thematic Fixed Income	0.0	0.0	0.0
US Bank Loans	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	76.0	76.0	0.0
Developed Equities	65.5	59.2	-6.3
Developed Large Cap Equities	57.0	52.5	-4.5
US	38.7	37.9	-0.8
Canada	1.9	0.7	-1.1
UK	2.3	2.8	0.6
Switzerland	1.8	0.8	-1.0
Europe ex UK ex Switzerland	5.5	4.8	-0.7
Asia ex Japan	2.1	1.5	-0.6
Japan	4.8	3.9	-0.8
Developed Small/Mid Cap Equities	8.6	6.8	-1.8
US	4.6	3.4	-1.2
Non-US	4.0	3.4	-0.6
Emerging All Cap Equities	10.5	10.8	0.3
Asia	9.2	10.0	0.7
China	6.0	6.4	0.4
Asia (ex China)	3.2	3.5	0.3
EMEA	0.6	0.4	-0.2
LatAm	0.7	0.4	-0.2
Brazil	0.4	0.3	-0.2
LatAm ex Brazil	0.2	0.2	-0.1
Thematic Equities	0.0	6.0	6.0
Global Equity REITs	0.0	0.0	0.0
US Mortgage REITs	0.0	1.0	1.0
Global Healthcare	0.0	5.0	5.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Hedge Funds	14.0	14.0	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

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

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 gold all have an overall neutral position.

Within equities, developed large cap equities have an underweight position of -4.5% and developed small/mid cap equities have an underweight position of -1.8%. Emerging market equities have an overweight of +0.3%. Thematic equities have an overweight of +6.0%.

Within fixed income, developed government debt, developed corporate investment grade, developed high yield and emerging market debt are all at neutral position.

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

Global USD without Hedge Funds: Risk Level 1

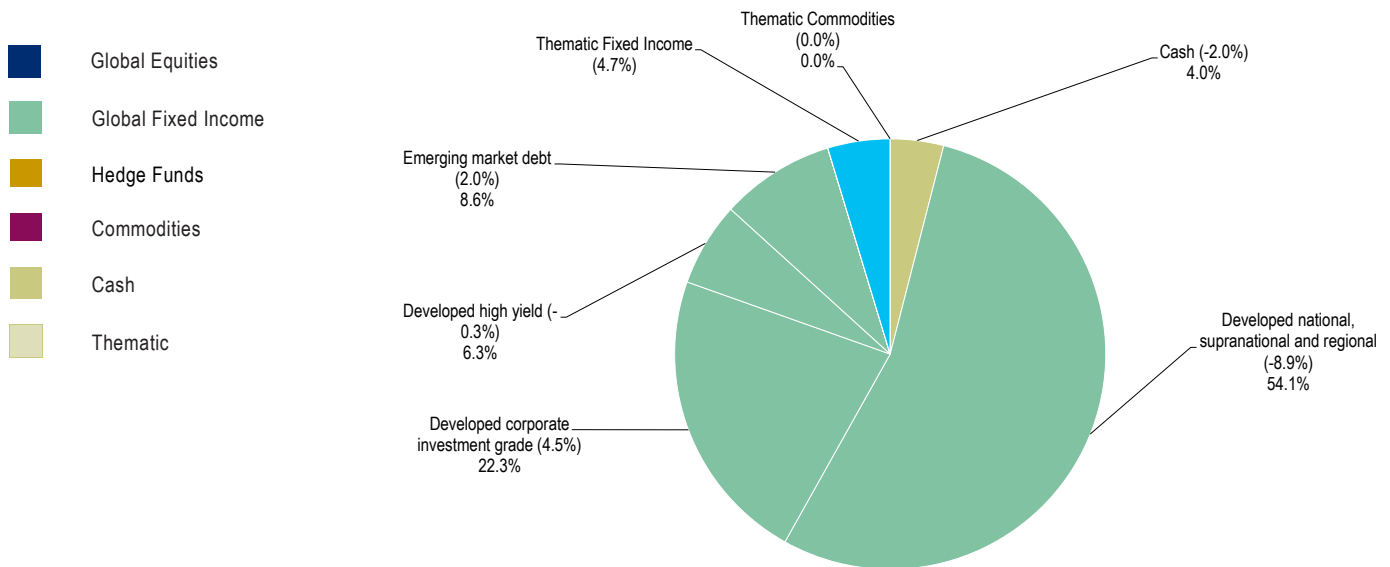
Risk Level 1 is designed for investors who have a preference for capital preservation and relative safety over the potential for a return on investment. These investors prefer to hold cash, time deposits and/or lower risk fixed income instruments.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	6.0	4.0	-2.0
Fixed Income	94.0	96.0	2.0
Developed Investment Grade	80.8	76.4	-4.4
US	45.0	51.1	6.1
Government	18.8	19.4	0.6
Inflation-Linked	2.7	3.5	0.8
Short	5.0	4.8	-0.2
Intermediate	7.8	7.8	0.0
Long	3.3	3.3	0.0
Securitized	14.4	15.9	1.5
Credit	11.8	15.8	4.0
Short	1.6	2.6	1.0
Intermediate	6.3	9.3	3.0
Long	3.9	3.9	0.0
Europe	27.2	20.2	-7.0
Government	21.1	13.6	-7.5
Credit	6.0	6.5	0.5
Australia	0.5	0.5	0.0
Government	0.5	0.5	0.0
Japan	8.2	4.7	-3.5
Government	8.2	4.7	-3.5
Developed High Yield	6.6	6.3	-0.3
US	5.0	3.1	-1.9
Europe	1.6	3.2	1.6
Emerging Market Debt	6.6	8.6	2.0
Asia	1.1	2.4	1.3
Local currency	0.6	1.1	0.5
Foreign currency	0.6	1.4	0.8
EMEA	3.6	3.6	0.0
Local currency	1.8	1.8	0.0
Foreign currency	1.8	1.8	0.0
LatAm	1.8	2.5	0.7
Local currency	0.9	0.9	0.0
Foreign currency	0.9	1.6	0.7
Thematic Fixed Income	0.0	4.7	4.7
US Bank Loans	0.0	4.7	4.7
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	0.0	0.0	0.0
Developed Equities	0.0	0.0	0.0
Developed Large Cap Equities	0.0	0.0	0.0
US	0.0	0.0	0.0
Canada	0.0	0.0	0.0
UK	0.0	0.0	0.0
Switzerland	0.0	0.0	0.0
Europe ex UK ex Switzerland	0.0	0.0	0.0
Asia ex Japan	0.0	0.0	0.0
Japan	0.0	0.0	0.0
Developed Small/Mid Cap Equities	0.0	0.0	0.0
US	0.0	0.0	0.0
Non-US	0.0	0.0	0.0
Emerging All Cap Equities	0.0	0.0	0.0
Asia	0.0	0.0	0.0
China	0.0	0.0	0.0
Asia (ex China)	0.0	0.0	0.0
EMEA	0.0	0.0	0.0
LatAm	0.0	0.0	0.0
Brazil	0.0	0.0	0.0
LatAm ex Brazil	0.0	0.0	0.0
Thematic Equities	0.0	0.0	0.0
Global Equity REITs	0.0	0.0	0.0
US Mortgage REITs	0.0	0.0	0.0
Global Healthcare	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Total	100.0	100.0	0.0

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

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 overall neutral position, global fixed income has an overweight of +2.0%, cash has an underweight of -2.0%.

Within equities, developed large cap equities, developed small/mid cap equities and emerging market equities are all at neutral positions.

Within fixed income, developed investment grade debt has an underweight position of -4.4%; developed high yield has an underweight position of -0.3% and emerging market debt has an overweight position of +2.0%. Thematic fixed income has an overweight position of +4.7%.

Global USD without Hedge Funds: Risk Level 2

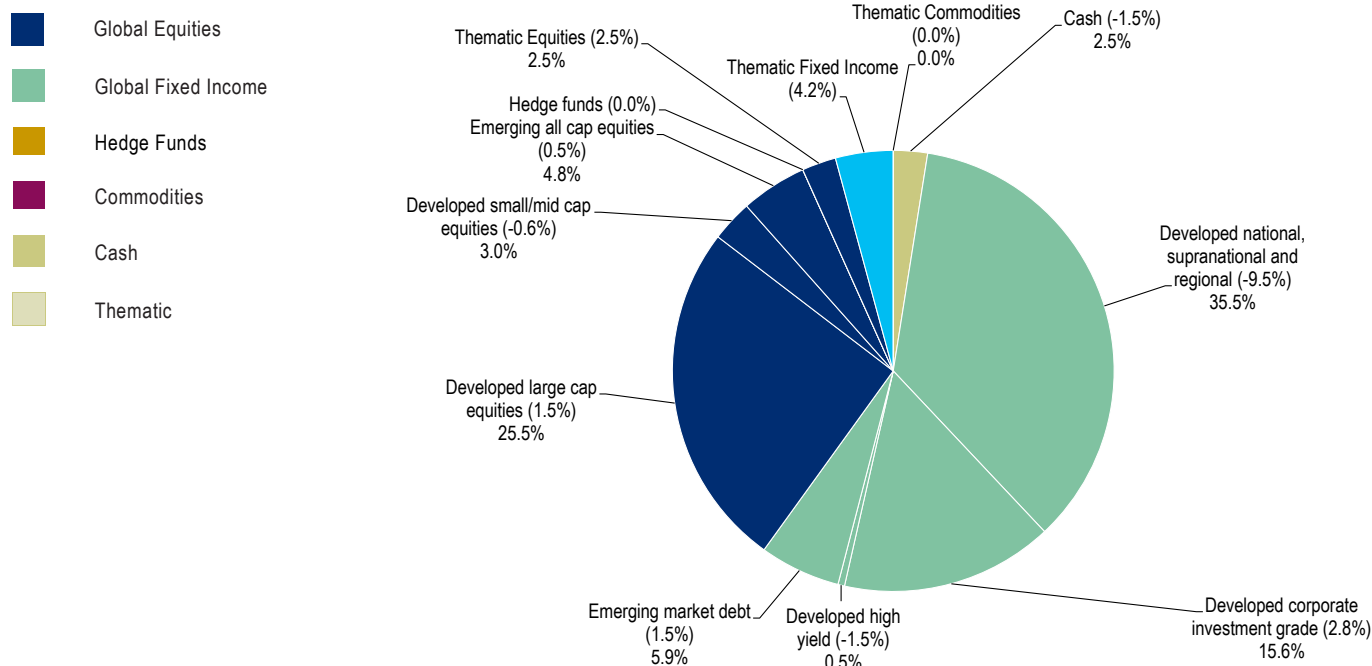
Risk Level 2 is designed for investors who emphasize capital preservation over return on investment, but who are willing to subject some portion of their principal to increased risk in order to generate a potentially greater rate of return on investment.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	4.0	2.5	-1.5
Fixed Income	64.1	61.7	-2.5
Developed Investment Grade	57.6	51.0	-6.6
US	32.1	35.9	3.8
Government	13.4	13.2	-0.2
Inflation-Linked	1.9	3.1	1.2
Short	3.6	2.1	-1.5
Intermediate	5.5	5.7	0.2
Long	2.4	2.4	0.0
Securitized	10.3	11.4	1.1
Credit	8.4	11.3	2.8
Short	1.2	1.4	0.2
Intermediate	4.5	7.2	2.7
Long	2.8	2.8	-0.0
Europe	19.4	12.4	-7.0
Government	15.1	8.1	-7.0
Credit	4.3	4.3	0.0
Australia	0.3	0.3	0.0
Government	0.3	0.3	0.0
Japan	5.8	2.4	-3.4
Government	5.8	2.4	-3.4
Developed High Yield	2.0	0.5	-1.5
US	1.5	0.0	-1.5
Europe	0.5	0.5	0.0
Emerging Market Debt	4.5	5.9	1.5
Asia	0.8	1.8	1.1
Local currency	0.4	0.9	0.6
Foreign currency	0.4	0.9	0.5
EMEA	2.5	2.5	0.0
Local currency	1.2	1.2	0.0
Foreign currency	1.2	1.2	0.0
LatAm	1.2	1.6	0.4
Local currency	0.6	0.6	0.0
Foreign currency	0.6	1.0	0.4
Thematic Fixed Income	0.0	4.2	4.2
US Bank Loans	0.0	4.2	4.2
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	31.9	35.8	3.9
Developed Equities	27.5	28.5	1.0
Developed Large Cap Equities	23.9	25.5	1.5
US	16.3	17.0	0.8
Canada	0.8	0.8	0.0
UK	0.9	1.7	0.8
Switzerland	0.7	0.7	0.0
Europe ex UK ex Switzerland	2.3	2.4	0.1
Asia ex Japan	0.9	0.9	0.0
Japan	2.0	2.0	0.0
Developed Small/Mid Cap Equities	3.6	3.0	-0.6
US	1.9	1.2	-0.8
Non-US	1.7	1.9	0.2
Emerging All Cap Equities	4.4	4.8	0.5
Asia	3.9	4.6	0.7
China	2.5	2.8	0.3
Asia (ex China)	1.4	1.8	0.4
EMEA	0.3	0.0	-0.3
LatAm	0.3	0.3	0.0
Brazil	0.2	0.2	0.0
LatAm ex Brazil	0.1	0.1	0.0
Thematic Equities	0.0	2.5	2.5
Global Equity REITs	0.0	0.0	0.0
US Mortgage REITs	0.0	0.5	0.5
Global Healthcare	0.0	2.0	2.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Total	100.0	100.0	-0.0

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

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 +3.9%, global fixed income has an underweight of -2.5%, cash has an underweight of -1.5%.

Within equities, developed large cap equities have an overweight position of +1.5% while developed small/mid cap equities have an underweight of -0.6%. Emerging market equities have an overweight of +0.5%. Thematic equities have an overweight of +2.5%.

Within fixed income, developed investment grade has an underweight position of -6.6%; developed high yield has an underweight position of -1.5% and emerging market debt has an overweight position of +1.5%. Thematic fixed income has an overweight position of +4.2%.

Global USD without Hedge Funds: Risk Level 3

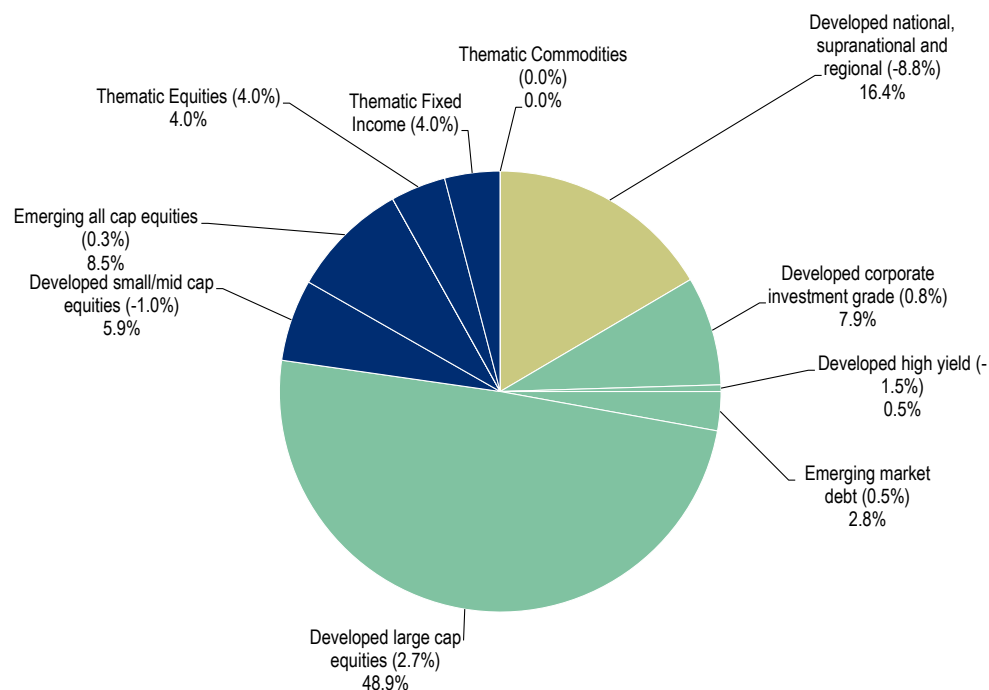
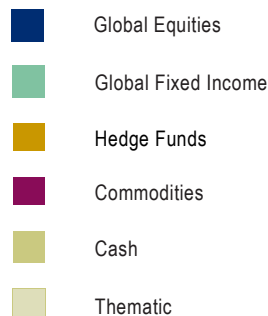
Risk Level 3 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. Risk Level 3 may be appropriate for investors willing to subject their portfolio to 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	1.0	-1.0
Fixed Income	36.6	31.6	-5.0
Developed Investment Grade	32.3	24.3	-8.0
US	18.0	19.9	1.9
Government	7.5	8.6	1.1
Inflation-Linked	1.1	3.1	2.0
Short	2.0	0.1	-1.9
Intermediate	3.1	4.1	1.0
Long	1.3	1.3	0.0
Securitized	5.8	5.6	-0.2
Credit	4.7	5.7	1.0
Short	0.6	0.6	0.0
Intermediate	2.5	3.5	1.0
Long	1.5	1.5	0.0
Europe	10.8	4.1	-6.7
Government	8.4	1.9	-6.5
Credit	2.4	2.2	-0.2
Australia	0.2	0.2	0.0
Government	0.2	0.2	0.0
Japan	3.3	0.1	-3.2
Government	3.3	0.1	-3.2
Developed High Yield	2.0	0.5	-1.5
US	1.5	0.0	-1.5
Europe	0.5	0.5	0.0
Emerging Market Debt	2.3	2.8	0.5
Asia	0.4	0.9	0.5
Local currency	0.2	0.5	0.3
Foreign currency	0.2	0.4	0.2
EMEA	1.3	1.3	0.0
Local currency	0.6	0.6	0.0
Foreign currency	0.6	0.6	0.0
LatAm	0.6	0.6	0.0
Local currency	0.3	0.3	0.0
Foreign currency	0.3	0.3	0.0
Thematic Fixed Income	0.0	4.0	4.0
US Bank Loans	0.0	4.0	4.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	61.4	67.4	6.0
Developed Equities	53.2	54.9	1.7
Developed Large Cap Equities	46.2	48.9	2.7
US	31.4	32.9	1.5
Canada	1.5	1.5	0.0
UK	1.8	3.0	1.2
Switzerland	1.4	1.4	0.0
Europe ex UK ex Switzerland	4.5	4.4	-0.0
Asia ex Japan	1.7	1.7	0.0
Japan	3.9	3.9	0.0
Developed Small/Mid Cap Equities	6.9	5.9	-1.0
US	3.7	2.7	-1.0
Non-US	3.2	3.2	0.0
Emerging All Cap Equities	8.2	8.5	0.3
Asia	7.2	8.0	0.8
China	4.7	5.2	0.5
Asia (ex China)	2.5	2.8	0.3
EMEA	0.5	0.0	-0.5
LatAm	0.5	0.5	0.0
Brazil	0.3	0.3	0.0
LatAm ex Brazil	0.2	0.2	0.0
Thematic Equities	0.0	4.0	4.0
Global Equity REITs	0.0	0.0	0.0
US Mortgage REITs	0.0	1.0	1.0
Global Healthcare	0.0	3.0	3.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Total	100.0	100.0	-0.0

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

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 +6.0%, global fixed income has an underweight of -5.0%, cash has an underweight of -1.0%.

Within equities, developed large cap equities have an overweight position of +2.7% while developed small/mid cap equities have an underweight position of -1.0%. Emerging market equities have an overweight of +0.3%. Thematic equities have an overweight of +4.0%.

Within fixed income, developed investment grade debt has an underweight position of -8.0%; developed high yield has an underweight position of -1.5%; emerging market debt has an overweight position of +0.5%. Thematic fixed income has an overweight of +4.0%.

Global USD without Hedge Funds: Risk Level 4

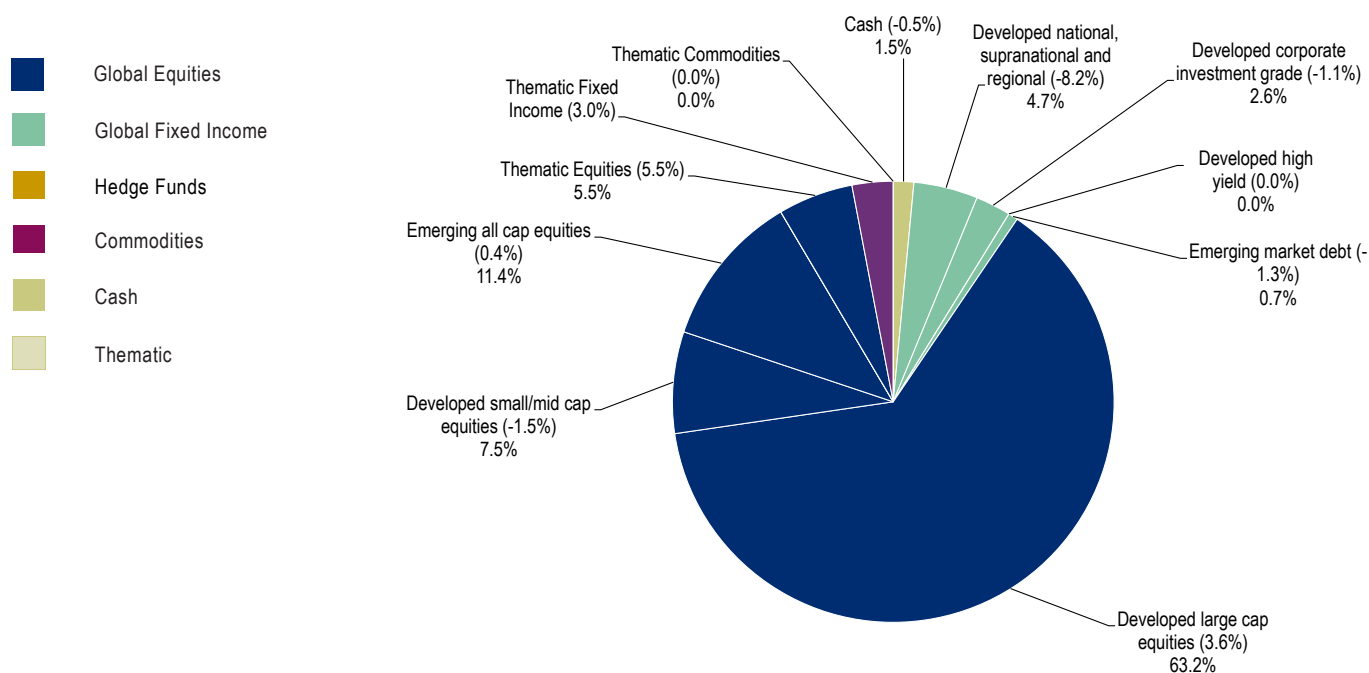
Risk Level 4 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. They are willing to subject a large portion of their portfolio to greater risk and market 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	2.0	1.5	-0.5
Fixed Income	18.5	11.0	-7.5
Developed Investment Grade	16.5	7.3	-9.2
US	9.2	6.7	-2.4
Government	3.8	3.9	0.1
Inflation-Linked	0.5	1.5	1.0
Short	1.0	0.0	-1.0
Intermediate	1.6	1.7	0.2
Long	0.7	0.7	0.0
Securitized	2.9	0.5	-2.5
Credit	2.4	2.4	-0.0
Short	0.3	0.0	-0.3
Intermediate	1.3	2.0	0.8
Long	0.8	0.3	-0.5
Europe	5.5	0.5	-5.0
Government	4.3	0.3	-4.0
Credit	1.2	0.2	-1.0
Australia	0.1	0.0	-0.1
Government	0.1	0.0	-0.1
Japan	1.7	0.0	-1.7
Government	1.7	0.0	-1.7
Developed High Yield	0.0	0.0	0.0
US	0.0	0.0	0.0
Europe	0.0	0.0	0.0
Emerging Market Debt	2.0	0.7	-1.3
Asia	0.3	0.4	0.1
Local currency	0.2	0.3	0.1
Foreign currency	0.2	0.2	-0.0
EMEA	1.1	0.0	-1.1
Local currency	0.5	0.0	-0.5
Foreign currency	0.5	0.0	-0.5
LatAm	0.6	0.3	-0.3
Local currency	0.3	0.0	-0.3
Foreign currency	0.3	0.3	-0.0
Thematic Fixed Income	0.0	3.0	3.0
US Bank Loans	0.0	3.0	3.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	79.5	87.5	8.0
Developed Equities	68.6	70.7	2.1
Developed Large Cap Equities	59.6	63.2	3.6
US	40.5	42.7	2.1
Canada	2.0	2.0	0.0
UK	2.4	3.8	1.4
Switzerland	1.9	1.9	0.0
Europe ex UK ex Switzerland	5.7	5.7	-0.0
Asia ex Japan	2.2	2.2	0.0
Japan	5.0	5.0	0.1
Developed Small/Mid Cap Equities	9.0	7.5	-1.5
US	4.8	3.6	-1.3
Non-US	4.1	3.9	-0.3
Emerging All Cap Equities	11.0	11.4	0.4
Asia	9.6	10.7	1.1
China	6.3	7.1	0.8
Asia (ex China)	3.4	3.6	0.3
EMEA	0.7	0.0	-0.7
LatAm	0.7	0.7	0.0
Brazil	0.4	0.4	0.0
LatAm ex Brazil	0.2	0.2	0.0
Thematic Equities	0.0	5.5	5.5
Global Equity REITs	0.0	0.0	0.0
US Mortgage REITs	0.0	1.5	1.5
Global Healthcare	0.0	4.0	4.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Total	100.0	100.0	-0.0

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

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.

Core Positions

Global equities have an overweight position of +8.0%, global fixed income has an underweight of -7.5%, cash has an underweight of -0.5%.

Within equities, developed large cap equities have an overweight position of +3.6% while developed small/mid cap equities have an underweight position of -1.5%. Emerging market equities have an overweight of +0.4%. Thematic equities have an overweight position of +5.5%.

Within fixed income, developed investment grade debt has an underweight position of -9.2%; developed high yield has a neutral position and emerging market debt has an underweight position of -1.3%. Thematic fixed income has an overweight position of +3.0%.

Global USD without Hedge Funds: Risk Level 5

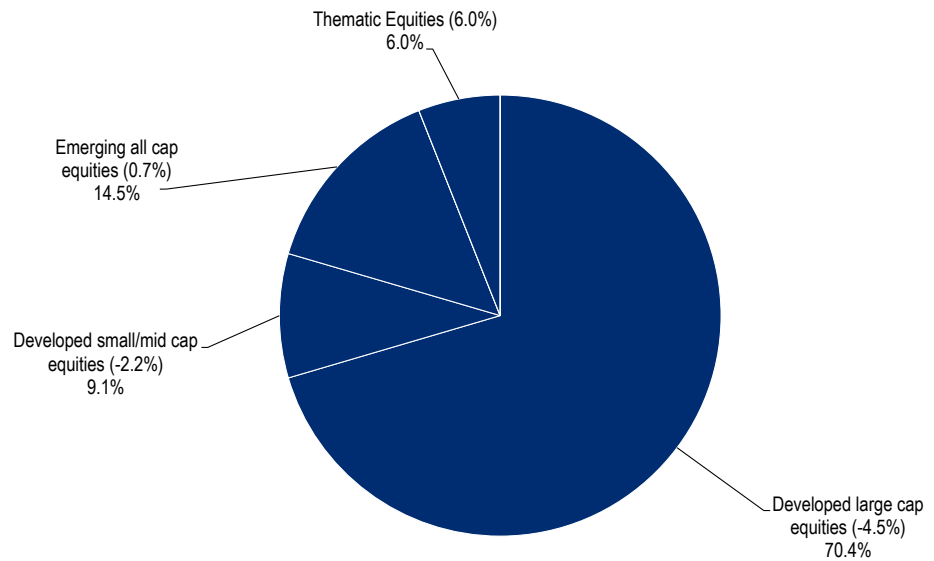
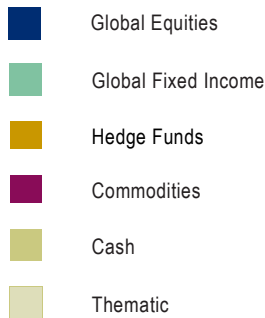
Risk Level 5 is designed for investors who emphasize return on investment. They are willing to subject their entire portfolio to greater risk and market value fluctuations in anticipation of a potentially greater return on investments. Investors may have a preference for investments or trading strategies 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
US	0.0	0.0	0.0
Government	0.0	0.0	0.0
Inflation-Linked	0.0	0.0	0.0
Short	0.0	0.0	0.0
Intermediate	0.0	0.0	0.0
Long	0.0	0.0	0.0
Securitized	0.0	0.0	0.0
Credit	0.0	0.0	0.0
Short	0.0	0.0	0.0
Intermediate	0.0	0.0	0.0
Long	0.0	0.0	0.0
Europe	0.0	0.0	0.0
Government	0.0	0.0	0.0
Credit	0.0	0.0	0.0
Australia	0.0	0.0	0.0
Government	0.0	0.0	0.0
Japan	0.0	0.0	0.0
Government	0.0	0.0	0.0
Developed High Yield	0.0	0.0	0.0
US	0.0	0.0	0.0
Europe	0.0	0.0	0.0
Emerging Market Debt	0.0	0.0	0.0
Asia	0.0	0.0	0.0
Local currency	0.0	0.0	0.0
Foreign currency	0.0	0.0	0.0
EMEA	0.0	0.0	0.0
Local currency	0.0	0.0	0.0
Foreign currency	0.0	0.0	0.0
LatAm	0.0	0.0	0.0
Local currency	0.0	0.0	0.0
Foreign currency	0.0	0.0	0.0
Thematic Fixed Income	0.0	0.0	0.0
US Bank Loans	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

Classification	Strategic (%)	Tactical* (%)	Active (%)
Equities	100.0	100.0	0.0
Developed Equities	86.2	79.5	-6.6
Developed Large Cap Equities	74.9	70.4	-4.5
US	51.0	50.9	-0.0
Canada	2.5	1.0	-1.5
UK	3.0	3.8	0.8
Switzerland	2.3	1.0	-1.3
Europe ex UK ex Switzerland	7.2	6.4	-0.8
Asia ex Japan	2.7	2.0	-0.7
Japan	6.3	5.3	-1.0
Developed Small/Mid Cap Equities	11.3	9.1	-2.2
US	6.0	4.5	-1.5
Non-US	5.2	4.6	-0.7
Emerging All Cap Equities	13.8	14.5	0.7
Asia	12.1	13.4	1.3
China	7.9	8.6	0.8
Asia (ex China)	4.2	4.7	0.5
EMEA	0.8	0.5	-0.3
LatAm	0.9	0.6	-0.3
Brazil	0.5	0.3	-0.2
LatAm ex Brazil	0.3	0.2	-0.1
Thematic Equities	0.0	6.0	6.0
Global Equity REITs	0.0	0.0	0.0
US Mortgage REITs	0.0	1.0	1.0
Global Healthcare	0.0	5.0	5.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Total	100.0	100.0	0.0

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

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 gold are all at neutral position.

Within equities, developed large cap equities have an underweight position of -4.5% and developed small/mid cap equities have an underweight position of -2.2%. Emerging market equities have an overweight of +0.7%. Thematic equities have an overweight position of +6.0%.

Within fixed income, developed government debt, developed corporate investment grade, developed high yield and emerging market debt are all at neutral position.

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. Moody's Baa Corporate Bond Index is an investment bond index that tracks the performance of all bonds given a Baa rating by Moody's Investors Service.

BAML US Corporate index (Bank of America Merrill Lynch) tracks the performance of US dollar denominated investment grade rated corporate debt publicly issued in the US domestic market.

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.

COVID-Cyclicals Financials, Industrials, Energy, Materials, Real Estate, Consumer Discretionary ex-Amazon.

COVID-Defensives IT, Health Care, Communication Services, Consumer Staples, Utilities, Amazon.

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

¹ The ratings from Aa to Ca by Moody's may be modified by the addition of a 1, 2, or 3 to show relative standing within the category.

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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

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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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Global Consumer Bank (Asia Pacific and EMEA):

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