

# Global Strategy Quadrant

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## Too Much Satisfaction?

**Prospects of further fiscal and monetary stimulus on top of effective COVID vaccines have buoyed global markets in 2021.** After a powerful rally, US investors are wondering if a record-sized stimulus is too much for the already-recovering economy to handle. Inflation expectations have risen, while US real yields have managed to creep upwards despite policymakers' efforts to maintain an easing course.

**At an existential level, investors worry that policymakers won't have a remedy for the side-effects of their medicine. If inflationary stimulus is used to counteract every shock, what would policymakers do if they had to fight inflation itself?** This question seems premature as the world economy remains distorted by COVID's impact. Even a strong rebound in overall world growth will leave large pockets of weakness into 2022. Current bottlenecks in manufacturing and related commodities will clear. Excess services capacity will keep inflation restrained in many sectors, while both demand *and supply* recover.

**The long-term inflation outlook will depend on whether monetary policy stays easy after the economy has fully recovered. The Fed is indeed targeting a slightly higher inflation rate, seeing the need for an "inflation buffer" for the first time in at least half a century.** Still, we would caution against expectations for runaway consumer price inflation anytime soon. One of the reasons that Treasury yields are rising is the prospect of sharply higher US government borrowing while the Fed holds the line on new lending at the current \$120 billion monthly pace (rather than boosting it to accommodate the US Congress's enlarged fiscal agenda).

**The positive news driving up global "safe haven" yields from ultra-low levels would ordinarily be shrugged off by equity markets.** However, after historically large upward EPS revisions and bullish economic growth forecasts, the bond market's "catch-up" is driving a valuation correction in aggressively priced growth equities that have benefited from collapsing yields and the "stay-at-home economy." In contrast, areas such as real estate, financials and energy have rallied on expectations of a reopening economy. In time, EPS gains for many tech firms should ultimately offset valuation contractions.

At our February Global Investment Committee meeting, we saw prospects for a near-term consolidation or correction in equity markets. However, we maintained our 9% overweight in Global Equities and REITS and our -9.5% underweight in Fixed Income. **Crucial to maintaining the equity overweight is our view is that global EPS growth in 2022 will be +12% to +15% after a surge in 2021.** Sustained growth is the key, which we can expect early in a recovery that is buoyed by supportive macro policies.

**For safer fixed income, valuations are becoming slightly more attractive, but the rise in real yields has been very small thus far.** Inflation-adjusted 10-year Treasury yields have risen from -1.1% to -0.8%, which still represents terrible value. Heading into 2021, we expected double-digit gains in EPS, single-digit gains in equity returns, and -1% for fixed income returns. Markets have played out largely as expected. We aspire to *outperform* these metrics by way of greater exposure to undervalued regions and recovering sectors.

## GIC – February 24

The Citi Private Bank Global Investment Committee (GIC) left our asset allocation unchanged today after modest steps to reduce risk allocations in January. Our Global Equity allocation (including REITS) remains 9.0% overweight. Global Fixed Income is 9.5% underweight. Gold remains 1.5% overweight for diversification and as an inflation hedge. Cash is 1% underweight.

In the past two weeks, inflation-adjusted (real) 10-year US Treasury yields have risen from -1.1% to -0.8%. While a very small rise, the move was abrupt, and helped catalyze a rotation away from highly valued growth equities that had benefited from COVID-related shifts in the economy. With lower market weightings, financials, real estate and energy equities rose during the period.

Nominal interest rates face continued upward pressure across the world as inflation expectations are gradually rising. This is largely owed to mounting expectations of a historically large new US fiscal stimulus, even as effective vaccines are deployed. In the year-to-date, Global Fixed Income returns have been about -1.5%, a slightly worse performance than we expected, but consistent with our underweight allocation.

Positive vaccine developments, robust fiscal stimulus and ultra-low central bank policy rates have led to a steepening US yield curve. With the Federal Reserve pledging to remain highly accommodative until a full labor market recovery is achieved, the slight rise in yields from record low levels would ordinarily not rile equity markets. However, this “catch-up” in bond yields has followed a period of very sharp upward EPS revisions across the world, during which bond market pressures were absent. The distinct timing of these events now points to some consolidation in world equities, and particularly in rate-sensitive growth shares that proved defensive during the worst of the COVID shock.

As equity returns moderate in the near-term, the outlook for sustained expansion beyond 2021 – along with poor valuations in cash and fixed income – remain key reasons for retaining a large overweight in global equities and REITS. Analysts anticipate a 27% rise in global EPS in 2021, somewhat stronger outside the US, given a worse performance in 2020. Our own expectation is for global EPS to gain another 12%-15% in 2022.

With labor markets depressed at present, easy macro policies will support a multi-year period of above-trend growth. We would expect a very strong first year of economic recovery from the COVID shock before a normalization. If proposed fiscal stimulus passes in the US Congress, widespread income supports could mean real economic growth approaches 6% for a year.

As the world economy recovers from COVID in stages, we expect further nominal interest rate pressures with US 10-year Treasury yields likely to rise into the 1.5%-2.0% range this year. Subsequent rises will be dependent upon a variety of developments, but most importantly upon how long policymakers continue to stimulate growth after the recovery from the crisis has ended.

The Fed's slightly higher inflation target – with “a make-up” strategy for periods after inflation has fallen below its target – suggests a potentially long period of negative real returns for cash and safer fixed income. Still, we would caution against expectations for runaway consumer price inflation anytime soon. The world economy remains heavily distorted by COVID's impact. Current bottlenecks in manufacturing and related commodities will clear. Excess services capacity will keep inflation restrained in many sectors, while both demand and supply recover.

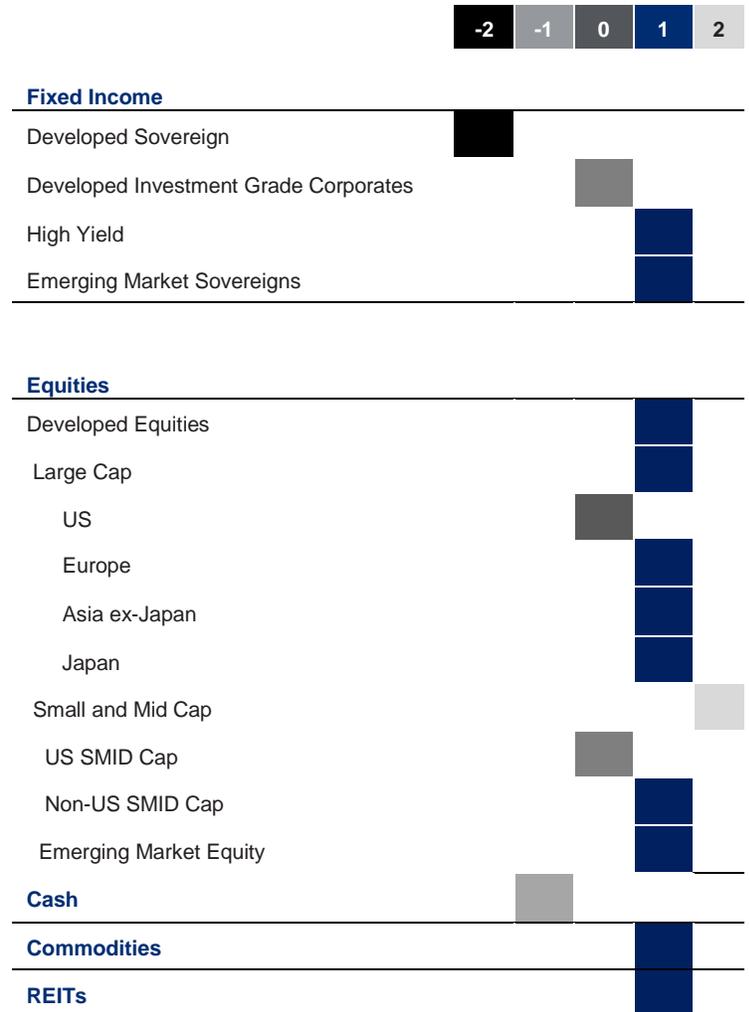
Notably, one of the reasons that US Treasury yields are rising is the prospect of sharply higher US government borrowing while the Fed holds the line on new lending at the current \$120 billion monthly pace, rather than boosting it to accommodate the US Congress's enlarged fiscal agenda. This prospect has stabilized the US dollar's value, although its valuation remains historically high.

Our expectation for global equities market returns in 2021 at the start of the year was for double-digit EPS gains, but mid- to high-single returns as rates rose and valuations moderated. This, however, doesn't end the period of favorable equity returns. Contraction periods have been less than one-fifth the duration of expansions in the US since World War II. The fully global contraction caused by COVID is highly unusual.

In the longer run, stimulus is presently running at an unsustainable pace. This will mean a period when the Fed begins to normalize monetary policy in stages. While valuations and economic circumstances are different today, when the Federal Reserve gradually tightened US monetary policy from 2013-2018, US equities posted a 14.1% annualized return. This included a 19% correction that ended the tightening phase. Non-US equity returns fared worse in the period, at 3.7% annualized. This has left a large valuation discount in non-US equities that persists in markets today.

After a strong rebound in 2021, we expect fiscal policy actions and vaccine deployments to create uneven economic outcomes across the world. This has left parts of emerging markets and some developed economies to underperform the US and China deeply. As we do not expect the COVID shock to be permanent anywhere, there remain substantial opportunities to allocate to laggard regions and sectors while still being allocated for sustained growth in particular industries. The negative nominal yield zone of Europe alone is more than 15% of the Global Fixed Income benchmark and 6% of global public asset benchmarks. Avoiding negative yield bonds allows us to invest in a variety of highly valued but high conviction growth assets, higher yielding credits and assets poised for cyclical recovery.

## Asset Classes – Global USD with Alternatives Level 3



### Allocations as of February 24, 2021

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

**Steven Wieting**  
Chief Investment Strategist  
& Chief Economist

## Printing \$1400 ≠ Producing \$1400

In last month's [Quadrant](#), we addressed the seeming dichotomy between a powerful rally in financial markets and the still depressed state of labor markets. With effective vaccinations surging and COVID infection rates falling, markets are convinced a recovery from the global pandemic is nearing.

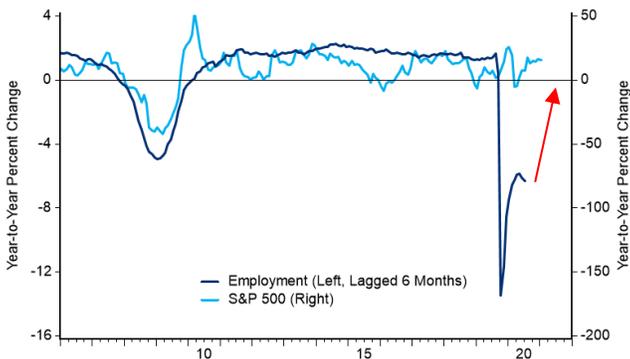
But now, as countless millions across the world still suffer from joblessness or income loss, investors appear to be moving ahead to consider the *aftermath* of crisis policymaking. They fear inflation while many still seek relief and recovery (see figure 1-2).

With a record fiscal stimulus likely in the US, is it possible that inflation could *precede* a return to full employment? Will recovery from a singular exogenous shock in the form of COVID mean we will have to live with perpetual price increases? Our answer is *no*, but the choice is actually in the hands of policymakers.

We believe policymakers have reacted appropriately to the economic collapse. In time, they need to pivot away from crisis policies.

Markets should only fret if they fail to do so when a full recovery is at hand.

**Figure 1: US Employment (lagging 6 Months) vs S&P 500 Y/Y% Changes**



**Figure 2: US Treasury Market 10-Year Average Expected Inflation (%)**



Source: Haver Analytics as of February 24, 2021.

## Short-Term Boom at What Long-Term Cost?

The US is once again moving to the forefront of the world in taking counter-cyclical measures to boost economic activity. President Biden and the US Congress appear set to press ahead with a \$1.9 trillion emergency stimulus after the \$900 billion it approved at year-end 2020.

While “reconciliation” procedures in the US Senate will likely mean some compromises and cuts, under the plan, total authorized pandemic emergency spending would be \$5.1 trillion over little more than a year. This exceeds 25% of US GDP. It would be more than the \$4.5 trillion we said would amount to “overwhelming force” when we first analyzed counter-cyclical pandemic policies in March 2020, [“Catching the COVID-19 Knife: What It Will Take”](#). Any new spending would exclude promises to revitalize US infrastructure, a Biden campaign priority predating the COVID crisis. This is a vital area of spending that augments the economy’s *capacity* to produce.

In confronting the economic effects of the health pandemic, one needs to think carefully about end goals. Is it carrying COVID’s economic victims past the period when social distancing requirements impair their industry, or is to create a macro-level boom?

The unquestionable highest priority should be stopping the health threat as quickly as possible. If spending to speed vaccinations can reduce the chance of further spread – and limit the timeframe for dangerous mutations – it would undoubtedly make a great public investment. It would reduce the need for *additional* public resources, and allow millions to return to work to the benefit of families, business owners, taxpayers and savers. It wouldn’t just restore immediate economic growth, but salvage the economy’s capacity to produce.

What is the end goal of emergency stimulus? To carry COVID economic victims past the pandemic period or to create a macro-level boom?

The impact of stimulus spending depends on the state of the economy at the time it hits.

As an aside to this, we can think of no greater use for foreign aid than for rich countries to *help themselves* by supporting vaccinations in poorer countries. It would lower the possibility of vaccine-resistant COVID strains from developing. This would otherwise come back and hit the rich, donor countries. Nothing unites humanity more than this biological threat.

It is also essential macro policy to help individuals and businesses “bridge over” the crisis period while the pandemic prevents work and sharply stems demand in certain industries. At a macro level, this limits second-order economic effects such as the cascade of self-reinforcing credit defaults seen most acutely in the 1930s. For these reasons, if more public money is needed, it is money well spent.

In contrast, **purposely generating a macro-level economic boom seems far less desirable.** A *lack* of imbalances, including excessive demand or over-production was one of the strengths of the US and world economy at the time the COVID shock hit in early 2020.

The Biden administration has quickly moved to shut down any arguments that the size of its proposed stimulus is too large. From a risk-management perspective, this is understandable. No one can claim that the pandemic is perfectly predictable. If financial resources are not needed, having them authorized for use is prudent. Significant taxpayer resources were authorized last year and were left un-tapped. For example, the Federal Reserve returned \$62 billion in capital to the US Treasury last year.

In a roughly similar way, \$500 billion in aid to state and local governments would offset previous revenue shortfalls. This may alleviate the need for pro-cyclical fiscal tightening. In other words, state and local tax increases that may be forthcoming may not be needed if the fiscal plan is passed.

With this said, the administration would send \$1400 checks to roughly 85% of the US public while only 6.5% (net) have lost jobs. This is not the major cost of the stimulus, but the bulk of the \$420 billion in checks can only be considered macro stimulus rather than a “safety net” measure.

As **Figure 3** shows, the majority of income transfers to consumers last year haven’t yet been spent. This data doesn’t capture the jump in transfer payments in January, which likely caused another spike up in personal savings last month despite a large jump in retail spending (this data will be reported February 26).

As **Figure 4** shows, the Biden plan would raise fiscal stimulus in 2021 relative to 2020. The economic context for this spending is highly material. It could be the appropriate level of emergency spending if the virus rages and the economy stays depressed. **But if the vaccine is effective in ending the pandemic, we doubt the \$1.9 trillion can even be spent** on goods and services. If it were, there would be too much demand relative to available supply.

Figure 3: US Personal savings rate (%)

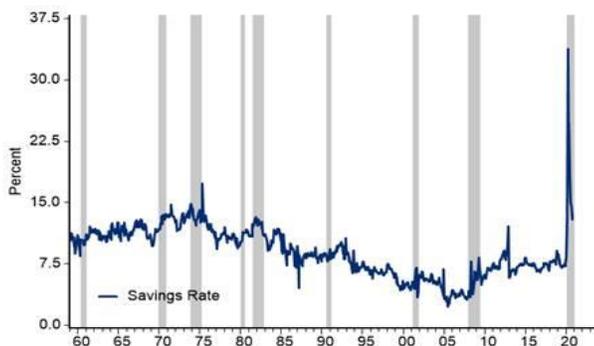
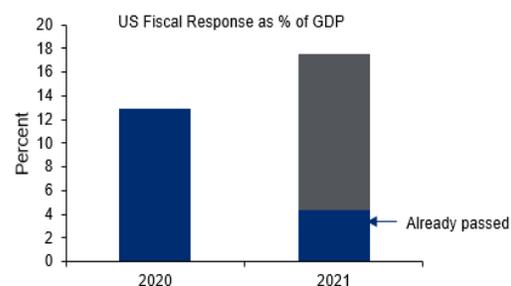


Figure 4: Potential 2021 Federal Stimulus relative to 2020



Note: Shaded areas are recessions. Source: Haver Analytics as of February 12, 2021.

A loose relationship between labor market slack and inflation was a boon during the long recovery of the past decade.

Yet it also means inflation can rise when labor markets have yet to recover.

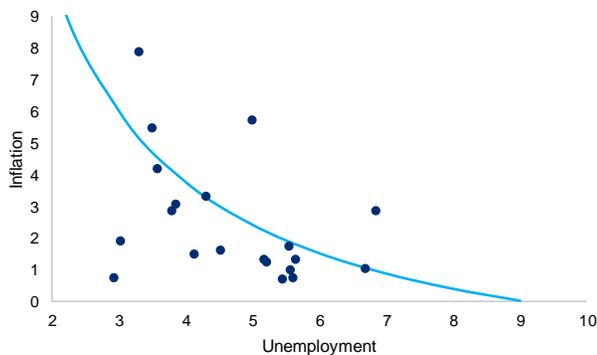
As **Figure 5** shows, between 1950 and 1970, there was a strong association between “slack” in the labor market and the rate of inflation. Supply and demand in the US economy was largely domestically determined in the early decades following World War II. Any excess or deficit in demand for labor would result in a rise or fall in wage rates. Wage growth would determine demand growth in a self-reinforcing way in this “closed system,” with imperfect competition among other factors. Easy monetary policy was largely a gradual “enabler” of higher inflation trends over the course of the two decades.

In time, factors apart from labor costs grew more and more important in determining consumer prices. By the 1970s, excessively easy monetary policy contributed to a self-reinforcing inflation. The relationship between labor markets and inflation weakened to such a point that only a *deeply depressed* labor market curbed inflation from 1980-1982.

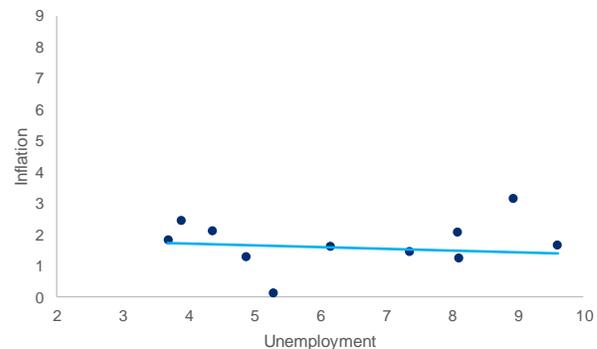
In the most recent decade, strong competitive forces and greater price transparency through information technology appear to have played a strong role in checking inflation. As **Figure 6** shows, this has “flattened the curve” – weakening the relationship between a strengthening labor market and inflation. This allowed policymakers to avoid overtly limiting the economy’s growth, permitting a higher level of employment.

**The same factors that limit the relevance of labor market “slack” in determining inflation when the economy is at a high level can also mean that inflation can be generated through other factors. If the US government spends “newly printed” money to purchase goods and services, the supply/demand balance in the economy won’t be determined by prior notions of full employment.**

**Figure 5: US Unemployment vs Inflation 1950-1970**



**Figure 6: US Unemployment vs Inflation 2010-2020**



Source: Haver Analytics as of February 12, 2021.

Of course, we raise this worry at a time of both depressed employment and depressed inflation. In 2008, there were tremendously misplaced inflation concerns. While today’s combined fiscal and monetary policy-driven inflation impulse is *much larger*, many of the same poor arguments for a rise in inflation remain.

As **Figure 7** shows, commodity inputs for goods vary tremendously in price compared to overall consumer prices. These inputs are “pennies on the dollar” that shift margins up and down at the different stages of production.<sup>2</sup> They give little indication of the state of final demand, and whether consumers will accept higher prices or walk away from the purchase. Present stories over supply “bottlenecks” and product shortages are far from unprecedented (**see Figure 8**). These are even more likely to be severe given the pandemic’s distortions in the economy, which have boosted goods demand while tanking services (**see Figure 9**).

Services prices (roughly 62% of the US consumer budget) matter, and we would expect a strong shift from the pandemic-bound economy’s strong demand areas (i.e. housing goods) to

Commodity prices remain a red-herring in determining the longer-term outlook for inflation.

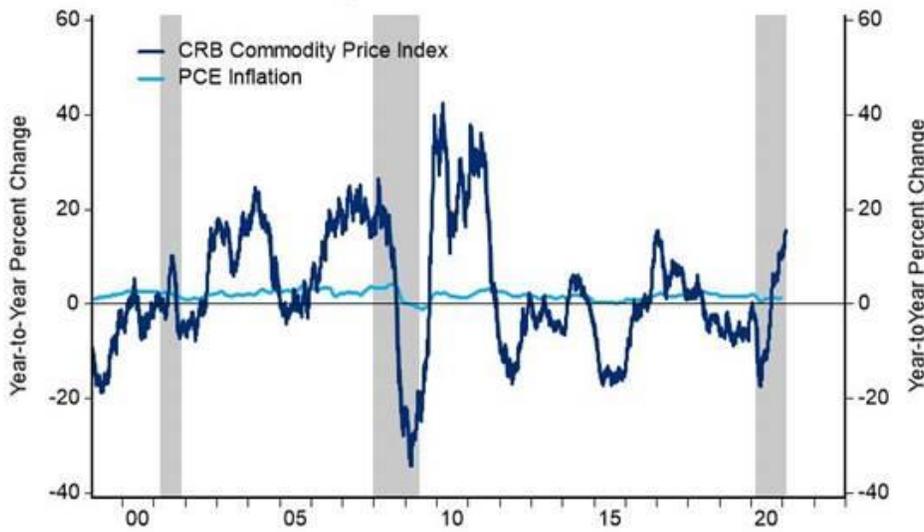
Central banks (in conjunction with fiscal authorities) will determine whether there will be *chronic* excesses demand relative to supply

<sup>1</sup> The Phillips curve is named for London School of Economics Professor William Phillips, with the connection later popularized in economic theory by other economists such as Milton Friedman and Edmund Phelps.

<sup>2</sup> In lower-income emerging markets, commodity prices are more important generally and play a larger role in the swings of consumer prices. For example, raw food commodities represent roughly 3 ½% of the US CPI basket. In some emerging markets, these can represent 20% of the consumer budget.

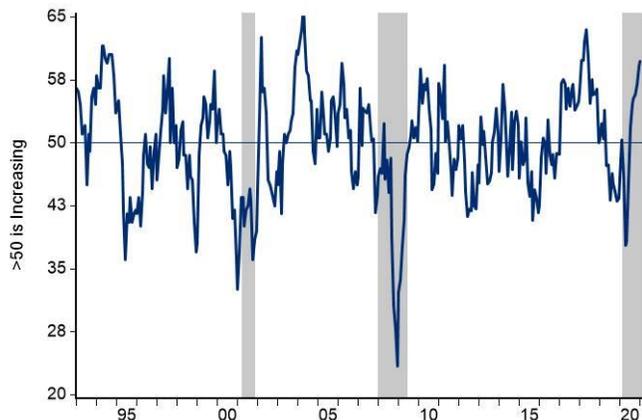
services following effective vaccinations. Home electronics, for example, could see softer demand and pricing in 2022 and 2023.

**Figure 7: US Consumer Prices vs Commodity Prices Y/Y%**

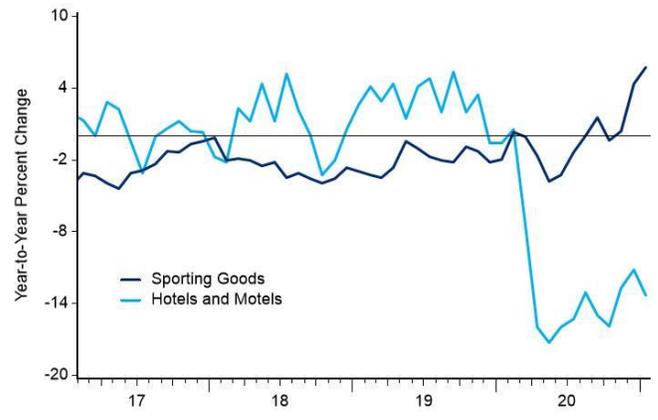


Note: Shaded areas are recessions. Source: Factset as of February 5th, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

**Figure 8: US Purchasing Managers Order Backlogs**



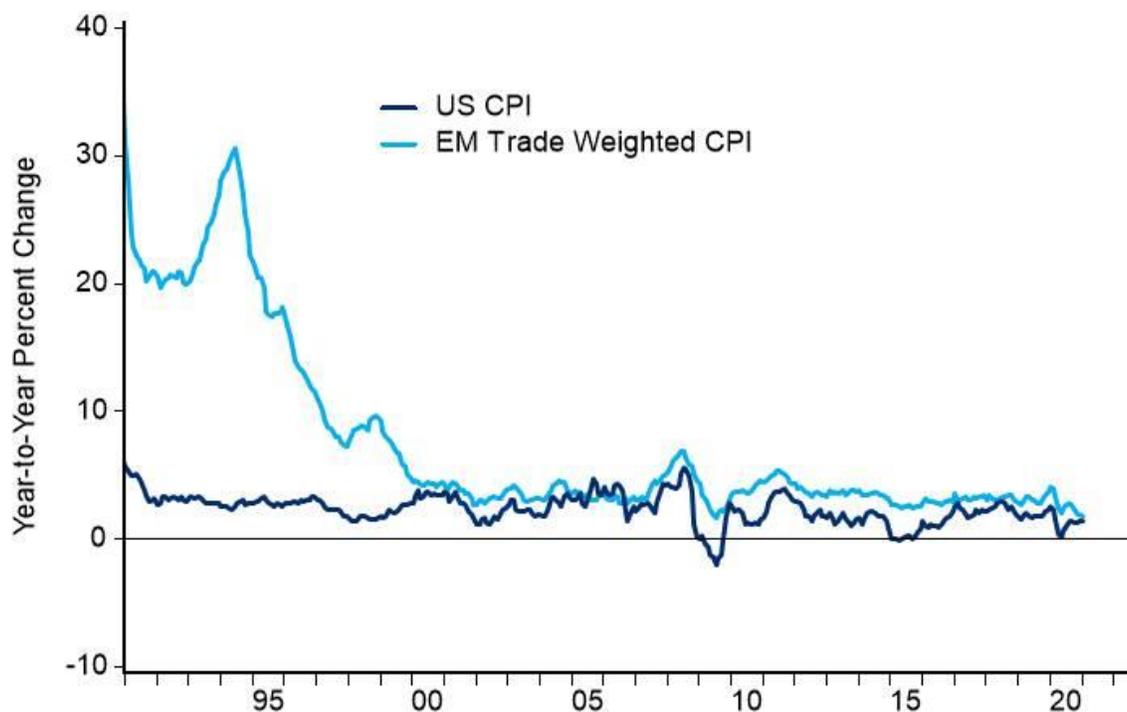
**Figure 9: US Goods vs Services Prices Impacted by COVID**



Note: Shaded areas are recessions. Sporting goods and hotels and motels are segment in the broader Consumer Price Index. Source: Haver Analytics as of February 12, 2021.

The US, with the world's *most widely held* reserve currency, the currency *most widely used* in cross-border trade, has enjoyed distinct advantages. For more than 30 years, the US central bank has been able to look past "transient spikes" in consumer prices with little or no loss in credibility. It has deserved this credibility. Actual consumer price inflation hasn't accelerated in any lasting way since the 1970s. The credibility of other central banks has risen too. The US has become less exceptional, with inflation generally far reduced in most countries (**see Figure 10**).

Figure 10: US Inflation vs Emerging Markets Inflation Y/Y%



Source: Haver Analytics as of February 12, 2021.

For the first time in at least half a century, developed economy central banks want inflation to speed up.

**The Fed is now the first central bank of significance to set a higher inflation target.** Its preferred inflation measure, the Personal Consumption Expenditures (PCE) deflator, changes its composition frequently to reflect the fact that consumers shift their purchases away from products that rise in price. Tongue-in-cheek, we might call this the “CPI for what you can still afford.” This measure persistently averages a gain 0.3% less than the Consumer Price Index, a fixed-basket inflation measure.

As the Fed has moved to seek an inflation rate that averages “at least 2%” in the PCE deflator to make up for past shortfalls, it consequently expects to maintain a zero policy rate through 2023. In our view, such a policy could see the measure of expected 10-year-ahead CPI inflation in the US bond market trend upwards toward 2.5% (**again see figure 2**).

In short, the US Federal Reserve and nearly all other Developed Markets central banks have said they want inflation to speed up. This is the first time anything like this has been considered in more than a half century. Therefore, investors should reexamine their biases and expectations when analyzing what’s to come.

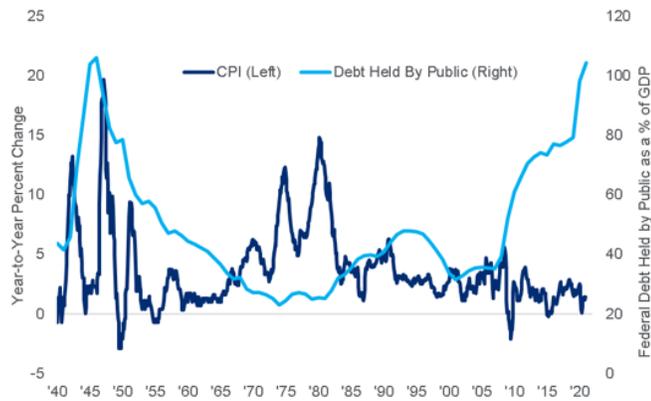
### **COVID Crisis Persists, But Limit Crisis Policy to Crisis Times**

The way governments and central banks have handled the present crisis is precedent setting. They moved faster and more forcefully at this time of crisis than in 2008/2009. This is undoubtedly good for the recovery ahead and avoiding harmful, lasting effects on potential growth.

Looking toward future crises, they may view strong intervention steps as yielding good results. Yet critical to maintaining price stability and likely financial stability, is a need to end emergency measures when emergencies cease.

As discussed in [Outlook 2021](#), the Federal Reserve ran monetary policy largely with zero or negative real interest rates for much of the period from the start of World War II to 1980 (**see Figures 11-12**). Will the public now come to expect money-financed or government-debt-financed income support (i.e. “universal basic income”) in a similar, *persistent* way?

**Figure 11: US Government Debt as % of GDP and Inflation**



**Figure 12: US real cash yield (T-Bill yield less inflation)**



Source: Haver Analytics as of February 12, 2021.

To date, real returns on financial assets from central bank money printing have been positive. The forward outlook for consumer price inflation has merely risen back to “normal” ranges. This wouldn’t be the case, however, if crisis-level monetary stimulus were applied persistently in a fully-employment economy.

It remains to be seen how policymakers would address a boom of their own making.

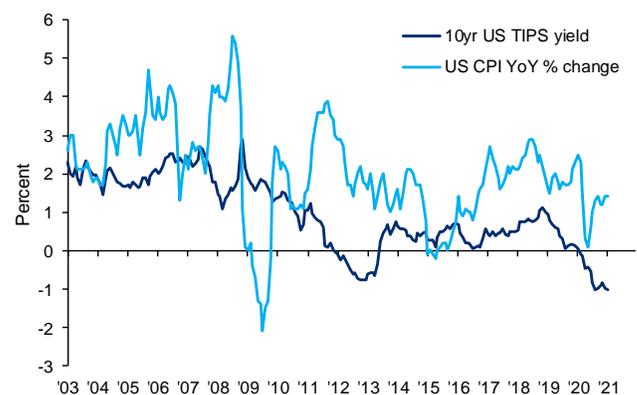
At present yield levels, **most global bonds are already priced for negative future returns after inflation (see figures 13-14)**. Such low yield levels spur risk-taking in the real economy and in financial markets. The jump in crypto-currencies and some highly speculative activity in small corners of the equities markets are apparent symptoms (again please see our [January Quadrant: Euphoric for Good Reason](#) for a full discussion).

In summary, we’ve seen how effective policymakers have been in shielding the economy from the effects of a negative shock. **It remains to be seen how policymakers would address the fallout from a boom of their making.**

**Figure 13: 10-Year US Treasury Yield Less Inflation (Yield less 12-month Change in Consumer Price Index)**



**Figure 14: US 10-Year Treasury Inflation Protected Security Yield and CPI Y/Y%**



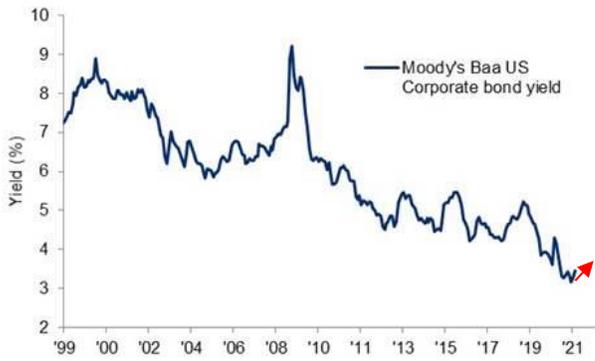
Source: Haver Analytics as of February 12, 2021.

## Was That the Momentum Buyer Leaving the Building?

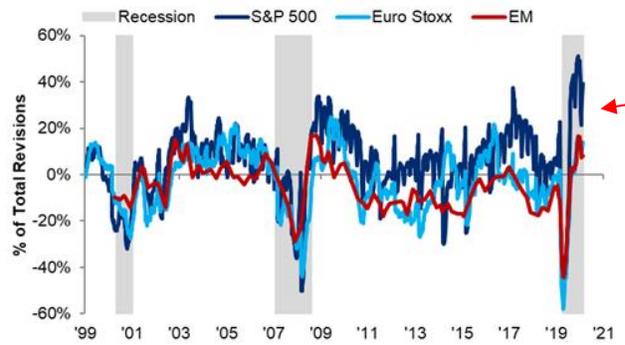
The final quarter of 2020 unleashed positive news for the world economic outlook while yields dropped. Now, the debt cost of capital for firms is firming, creating a slightly higher “hurdle” for equity markets that had just recently enjoyed the best of all worlds (see figure 15).

Over the past two weeks, we have seen a 25 basis point rise in inflation-adjusted 10-year yields. This followed a very favorable three-month period for equities during which vaccine breakthroughs, fiscal policy developments and cyclical forces helped push up strong revisions in expected corporate earnings and economic growth (see figure 16).

**Figure 15: US Long-Term Corporate BBB-Rated Yield (%)**



**Figure 16: Upward EPS Forecast Revisions as % of All Revisions**



Source: Haver Analytics as of February 12, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

### Beware Wary of Interest Rate Sensitive Sectors and Shares

Equities enjoyed large upward growth revisions while the bond market slumbered.

Rather than predict, the bond market has reacted to these strong forecast revisions with a lag.

We believe the bigger hurdles for stock markets are actual versus expected economic growth and corporate earnings rather than rate levels. The views of economists, analysts have already largely been priced in during the sharp rebound in many equities markets for 10 months (see figures 17-18). However, our expectation of persistent growth over the next several years, along with negatively priced cash and dearly priced fixed income, keep us strongly overweight many equities in our asset allocation. Our base case expectation for US and global EPS is a gain of 12-15% in 2022 after a surge in 2021.

**Figure 17: US Shares Have Slightly Overshot Consensus EPS Forecasts**



**Figure 18: Non-US Shares Has Only Matched Consensus EPS Forecast**



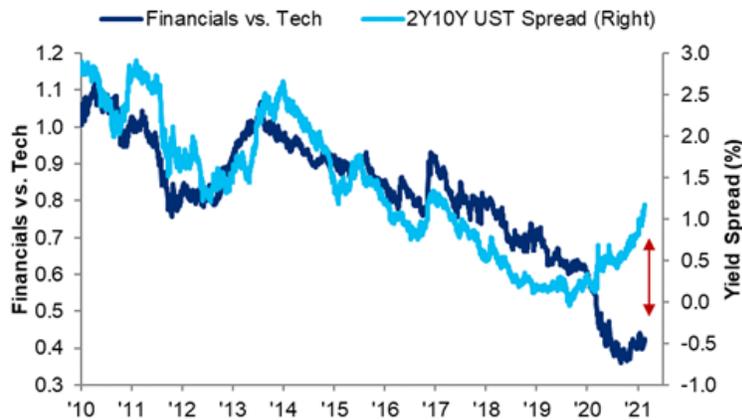
Source: Haver Analytics as of February 12, 2021. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

While rate rises have been modest, certain sectors have been strongly boosted by falling rates in the year past. As figure 19 shows, US growth stocks have come slightly off their highs, negatively mirroring the rise in US yields. This is consistent with other periods where interest rate sensitive stocks, like financials, begin to outperform technology shares as the US yield curve steepens, benefiting the spreads earned by banks when lending volumes rise (see figure 20).

**Figure 19: 10-Year US Treasury Yield, Gold, US Equity Growth Factor**



**Figure 20: US Yield Curve vs S&P 500 Financials/Tech Relative Performance**



Notes: Pure Growth is proxied using the Bloomberg US Pure Growth Index. Source: Factset as of February 12, 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.

The economy is producing many dramatic disruptions and some firms that can profit from the new industries they define.

We don't see a lasting downturn in technology profits. Still, even some successful firms will need a long period of time to grow into their high valuations.

For the bulk of the technology sector, we would expect persistent revenue and/or EPS gains to cushion returns. The valuation of tech stocks are likely to come down as growth improves, typical of prior recovery periods. Yet, this time around, with some of their valuations temporarily bolstered by the impacts of the “stay at Home” Covid economy, there are pockets of stocks displaying what appear to be “hyper growth” expectations. **As figure 21 shows, 10 of the large cap US growth stock index constituents trade at 18.9X their most recent annual sales. This compares to roughly 2.9X for S&P 500 firms and 1.7X for world equities outside the US.**

In looking at this \$1.4 trillion group, there are some firms likely to dominate large sectors or become large drivers of whole new industries. Yet, as we have seen before, it takes real execution and some good fortune for trillions in value to be created and maintained. In our view, this is one of those rare times when future growth prospects have been dearly priced.

As interest rates rise, higher immediate current income opportunities tend to compete more strongly against distant promises. Given present levels of interest rates, we see room for both growth and value equities in portfolios. However, a larger share of our tactical positions are international and value-oriented investments.

**Figure 21: Select US Growth Stock Basket Constituents, Fundamentals, Consensus Estimates**

Name	Market Cap (\$Bn)	P/S
Tesla Inc	766,107.07	23.7
Netflix Inc	244,185.87	9.7
Snap Inc	94,600.83	36.6
Zoetis Inc	80,255.60	12.0
Roku Inc	58,003.87	36.2
Vertex Pharmaceuticals Inc	55,852.42	9.0
Teladoc Health Inc	41,728.40	25.6
IAC/InterActiveCorp	23,371.49	7.4
Neurocrine Biosciences Inc	10,830.76	10.3
ACADIA Pharmaceuticals Inc	7,960.03	18.7
<b>Growth Stock Basket</b>	<b>1,382,896.36</b>	<b>18.9</b>

Bloomberg: Haver Analytics as of February 12, 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. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary. For illustrative purposes only. This should not be construed as an offer of, or recommendation of companies discussed.

## How to Overcome Financial Repression

We continue to hold fixed income to dampen volatility and earn credit premia where it is priced reasonably.

Yet aside from tactical changes, real safe haven bond yields would only warrant a large upward allocation at about a full percentage point above current levels.

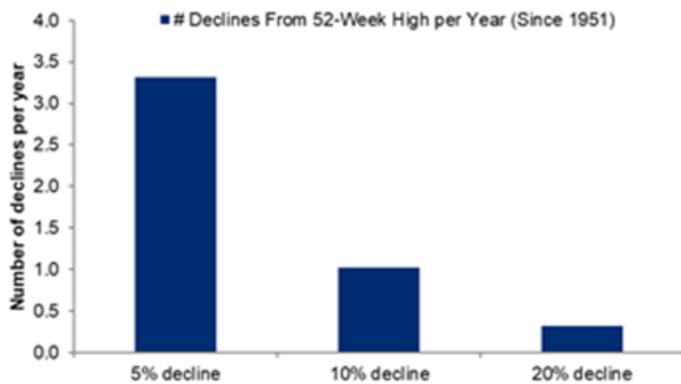
With the probability of a “hot economy” post-Covid, the possibility that rates will raise faster than investors expect is real. And while we do not expect that rates will hold back economic growth for the next few years, given the Fed’s policy approach, the real value of cash is likely to diminish at a faster rate than some might expect. Similarly, bonds will likely still underperform. That said, while it would take quite a rise in yields to generate a strong, sustained fixed income returns, we continue to hold select fixed income securities to dampen portfolio volatility and improve risk-adjusted returns with negatively correlated asset holdings.

This means that real assets, from stocks to private equity to commodities and real estate, will likely provide better returns both pre- and post-inflation. We would anticipate reducing our underweight to fixed income only when real yields become measurably more attractive.

Volatility during periods of major transition -- from “very low rates” to “low rates” and from a distorted Covid economy to one that has a more normal-- is something investors should expect. As figures 22-23 shows, it is typical to see one 10% equity correction per year, with 5% pullbacks three times more frequent. In return for accepting that volatility, long-term equity holders earn a direct stake in real economic growth.

Figure 22: Frequency of US Equity Market Corrections by Size

Figure 23: World Equity and Bond Total Return Since End 2009



Source: Haver and Factset as of Jan 8, 2021.

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

The revised Federal Reserve inflation targets created some complexities for our long-term portfolio assumptions. While we always allocate across a wide range of assets for global investors with a “medium” level of risk tolerance, real wealth will build in assets that grow with world economic output or have truly limited quantities, such as real estate<sup>3</sup>. This considers present valuations, as emerging market equities have lagged so deeply behind the US in particular and now benefit from the Fed’s more liberal monetary policy (see figure 24).

<sup>3</sup> The private market returns also assume embedded leverage and illiquidity.

**Figure 24: Citi Private Bank Strategic Return Estimates and Inflation Adjustments Assuming a 2.5% US CPI Trend Pace**

	Strategic Return Estimates (SRE) %				
	Nominal	Inflation-adjusted	10-year Cumulative Inflation-adjusted	Amount of time to double inflation-adjusted wealth at SRE	Amount of time to halve inflation-adjusted wealth at SRE
Global Developed Equity	5.0	2.5	28.0	28 years	
Global Emerging Equity	9.2	6.7	91.0	11 years	
Global Developed IG	1.2	-1.3	-12.3		53 years
Global HY	3.9	1.4	14.9	50 years	
Global EM fixed income	3.6	1.1	11.6	63 years	
US Cash	0.7	-1.8	-16.6		38 years
Hedge Funds	4.0	1.5	16.1	47 years	
Private Equity	14.2	11.7	202.4	6 years	
Real Estate	8.8	6.3	132.4	11 years	
Commodities	1.2	-1.3	-12.3		53 years

Source: Citi Private Bank Asset Allocation team, preliminary estimates as of February 19, 2021. Note: Inflation-adjusted subtracts estimated 10 year CPI rate of 2.5%. Strategic Return Estimates are in US dollars; all estimates are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Strategic Return Estimates are no guarantee of future performance. The private market returns also assume embedded leverage and illiquidity.

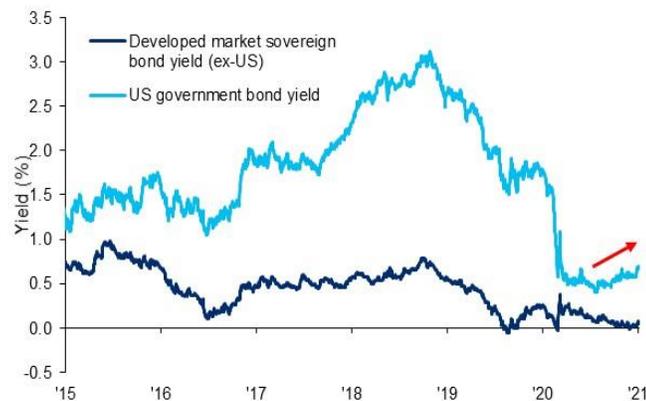
### What if the US Dollar Rebounds?

One additional risk remains. As figure 25 shows, US Treasury yields have edged slightly higher as other Developed Markets bonds yields have stagnated amid greater control from central banks along with less ambitious fiscal expansion plans. This pattern concerns us as the consensus of investors is overwhelmingly bearish on the US dollar. (This consensus emerged on the earlier declines in relative US rates).

As figure 26 shows, the US dollar remains historically high against major currencies. In time, the Fed's higher inflation target and vows to remain accommodative deep into a coming recovery should still weaken the dollar further. Yet net short positions in USD index futures are already at their highest level since 2009. As the figure shows, counter-trend rebounds and declines are common. A rebound could interrupt some of the gains in markets we favor.

The very "crowded" consensus bearish view short the US dollar is a risk to our favored market positions.

**Figure 25: US Long-Term Treasury Yield vs Non-US Composite**



**Figure 26: US Dollar Index and net short futures position as % of open interest**



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

As figures 27-28 show, US equity returns have beaten non-US equity returns in the decade past as the US economy outperformed and the US dollar rallied. Even the Fed's "policy normalization" steps of 2013-2018 didn't derail US equities until the Fed nearly ended the expansion early with both rate increases and quantitative tightening late in the period. US equities posted a 14.1% annualized return during the last tightening cycle. This included a 19% correction that ended the tightening phase.

During the “taper tantrum and beyond, non-US equity returns fared worse, returning 3.7% annualized from 2013-2018. This has left a large valuation discount in non-US equities that remains in markets today.

**Figure 27: US equities Relative to Global Equities Since 1988**



**Figure 28: US share of global market capitalization vs US trade weighted dollar**

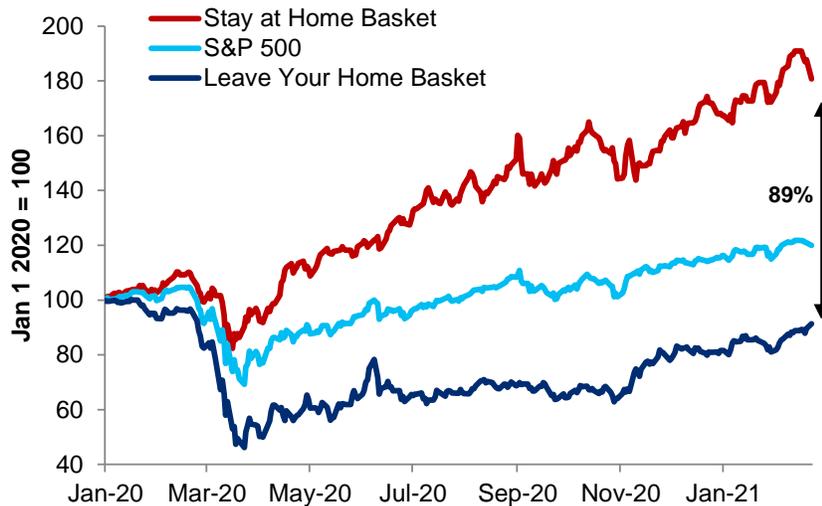


Source: Factset as of January 25, 2021. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

A US corporate tax rate hike could be a catalyst to end US equity market outperformance.

As we look ahead at the rotation of assets outperforming inside the US equity market, there are strong signs that the COVID shock is wearing off (see figure 29). While certain emerging market economies will not begin their recovery from COVID until 2022, their markets have been very substantial laggards versus the US and China in the year past. As we do not expect the COVID shock to be permanent anywhere, there remain substantial opportunities to allocate in these depressed regions. One catalyst that may end US outperformance could be an increase in US corporate tax rates in the year to come.

**Figure 29: “Stay at Home” vs “Leave Your Home” Baskets**



Bloomberg: as of February 12, 2021. Note: “Stay at Home” basket includes names identified to benefit from COVID-related disruptions and a shift to working from home “Leave Your Home” basket includes Buy and Neutral Rated US names in the following sub-industries: Banks, Industrial Conglomerate, Machinery, Oil Gas & Consumable Fuel, Textiles Apparel & Luxury Goods, Energy Equipment & Services, Hotels Restaurants & Leisure, Building Products, Retail REITs, Construction & Engineering, Leisure Products, Airlines, Multiline Retail

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## Reflections on the Ongoing Recovery

### Reopening winners need not fear rising rates

The sharp rise in bond yields in recent weeks has forced many equity investors to reconsider valuations among the world’s most expensive equity names. Concerns over inflation have also dominated market conversation, while the Fed seems perfectly comfortable letting the economy run “hot” until the employment situation improves. We do not view higher nominal rates as an existential threat to equity valuations, especially if that rise in interest rates is a reflection of upgraded economic expectations. With that said, an increased focus on “reopening” will likely mean a shift in global consumption towards services and temporarily away from home tech and video conferencing spending, which could have market-moving implications.

A dynamic we have followed for several months now is the relative performance of COVID beneficiaries versus those firms hardest hit by lockdowns. While still lower since January 2020, positive vaccine results in November have boosted our “Leave your Home” basket by over 50% in just a few months. Given structural impediments that were present even before COVID, and because “zoom meetings” and online shopping have likely permanently replaced some in-person activities, we do not necessarily expect this performance gap to close fully. However, it is clear that the normalization theme, which is picking up across multiple asset classes, should benefit these Covid-impacted value cyclicals over the short run. The rally in the most COVID-impacted sectors has coincided with a selloff in US government bonds, reflecting improved economic optimism by bond and equity investors alike. But investors highly concentrated in expensive Stay at Home beneficiaries should be more cautious, as higher rates will also make steep valuations in the COVID tech winners harder to justify.

Figure 30: “Stay at Home” vs “Leave your Home” Baskets

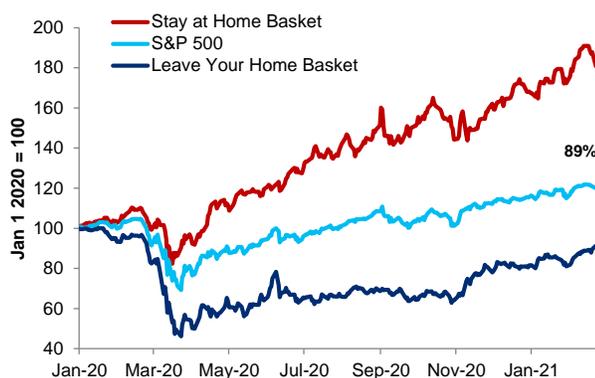
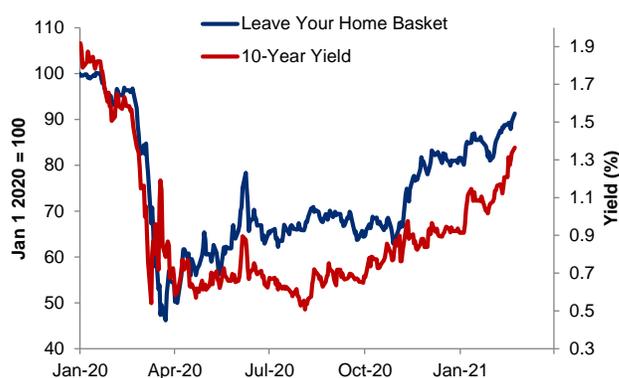


Figure 31: “Leave your Home” Basket vs 10-year Yield



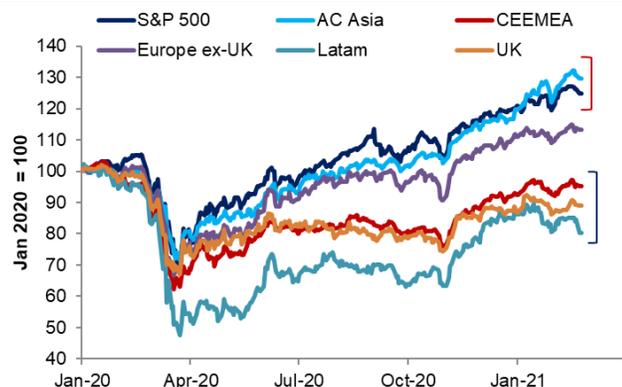
Bloomberg: as of February 12, 2021. Note: “Stay at Home” basket includes names identified to benefit from COVID-related disruptions and a shift to working from home “Leave Your Home” basket includes Buy and Neutral Rated US names in the following sub-industries: Banks, Industrial Conglomerate, Machinery, Oil Gas & Consumable Fuel, Textiles Apparel & Luxury Goods, Energy Equipment & Services, Hotels Restaurants & Leisure, Building Products, Retail REITs, Construction & Engineering, Leisure Products, Airlines, Multiline Retail

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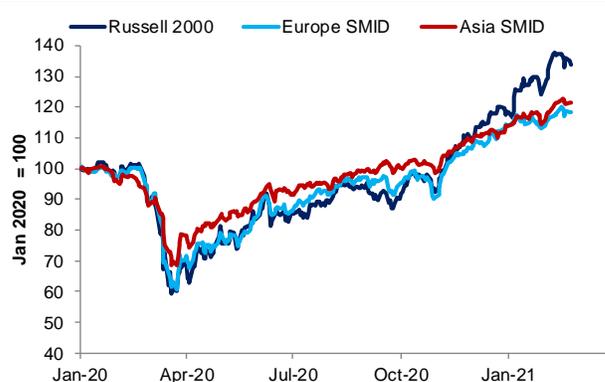
At the global level, we have looked to the relative dominance of COVID-defensives<sup>4</sup> by region to guide our recommended allocations. Tech-heavy US and EM Asia have performed much better than more cyclically-oriented regions like the UK, CEEMEA, and Latam since COVID locked down the global economy almost one year ago (Figure 32). However, as we move toward reopening and ultimately herd immunity, we expect a boom in global trade and economic activity to benefit those laggards, perhaps at the expense of US and Chinese tech valuations. Interestingly, we have actually seen less of a divergence by region within the SMID space. However, the very recent outperformance of US SMID vs non-US small caps led us to reduce our allocation to neutral after an 80% return since April (Figure 33).

<sup>4</sup> COVID-Defensives: IT, Health Care, Comm Services, Consumer Staples, Utilities, Amazon

**Figure 32: Regional Large Cap Performance since January 2020**



**Figure 33: Regional SMID Performance since January 2020**



Note: Europe and Asia SMID are MSCI indices. Source: Bloomberg as of February 25, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

## Balancing near-term recovery and long-term growth

When investors consider equity valuations, they are often using a short hand for what share of the price is a reflection of relatively near-term earnings. When the price-to-earnings ratio rises, this simply reflects that a larger share of that price is a bet on earnings far out into the future. In a world where interest rates are near zero, betting on long-term growth can be easier to justify. But when far-out earnings are increasingly discounted at higher rates, investors may become more biased towards earnings that can be delivered today instead of tomorrow.

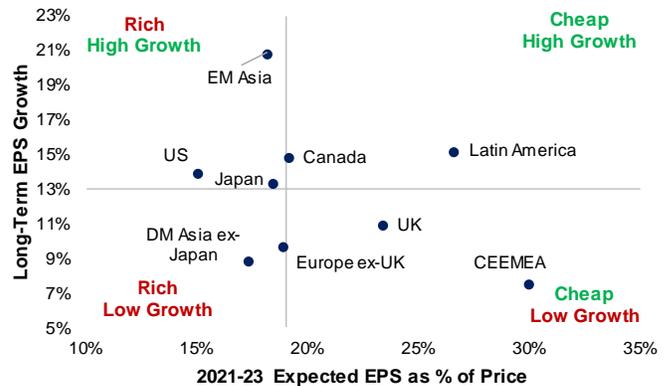
Given distortions related to this year's reopening, it is perhaps more illuminating to expand our valuation window beyond the usual 1-year forward look-ahead. While of course consensus expectations are not perfect predictors of the future, especially when looking out multiple years, they can still be a good indicator of how the professional investor community is handicapping the earnings recovery. In Figure 34, we add up EPS expectations for 2021 through 2023 across the major global equity regions, and divide that sum by the index level for each region. This value is essentially a multi-year earnings yield, and it not surprisingly shows that a lower share of near-term earnings are embedded in the US and China, while areas like EM ex-Asia and the UK are much more heavily weighted towards shorter term prospects.

While more cheaply valued companies may be less impacted by rapidly rising rates, very few equity investors build their portfolio around companies focused only on near-term EPS. Instead, investors need to balance valuation with long-term growth prospects. In Figure 35, we plot this relationship between valuation and growth at the regional level. The results are largely intuitive, with Asian and US equities very much priced for long term growth while regions like Europe present a short-term value opportunity but with more limited long-term prospects. Latin America is the only region in the inexpensive AND high growth quadrant, as some analysts have re-rated commodity producers in the region in anticipation of significantly higher metals and energy prices. We do believe Latin America should benefit from the global reopening trade, but we are more cautious over the medium to long term given a number of structural and political factors.

**Figure 34: 2021-23 EPS Expectations as % of Regional Equity Index Levels**

GIC Region	2021-23 EPS as % of Price	Long-Term EPS Growth
US	15%	14%
DM Asia ex-Japan	17%	9%
EM Asia	18%	21%
Japan	18%	13%
Europe ex-UK	19%	10%
Canada	19%	15%
UK	23%	11%
Latin America	27%	15%
CEEMEA	30%	8%

**Figure 35: Balancing Valuations and Long-Term Growth**



Source: Factset as of February 25, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

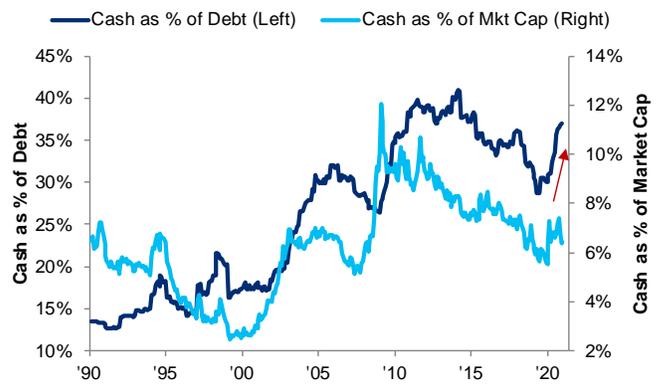
### New equity supply meets insatiable demand

We believe global central bank and fiscal support has provided ample liquidity in the system to continue to support share prices over the next 12 months. We see evidence of this liquidity in retail money market levels as well as corporate cash levels, which have risen even after accounting for increased debt issuance in the last year (Figures 36-37). With significant levels of cash on the sidelines earning negligible interest, we expect those funds will eventually be deployed in more productive ways, in the form of share buybacks, capex, debt reduction or M&A, all of which should be accretive for shareholders in a new economic cycle.

**Figure 36: Cash on the sidelines is still elevated, earnings negligible interest**



**Figure 37: S&P 500 cash as % of debt and equity**



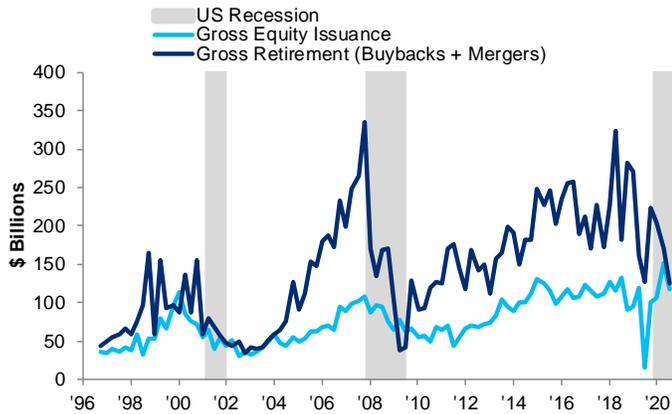
Source: Haver and Factset as of February 25, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

Equity bears have increasingly pointed to the rising level of equity *supply*, which has come in the form of IPOs, SPACs and secondary share issuance. It is true that new issuance has risen as companies take advantage of frothy markets, especially in high-flying sectors like electric vehicles (Figure 38). The emergence of pre-earnings and even pre-revenues companies into public markets requires careful study and selectivity when investing in these specific areas.

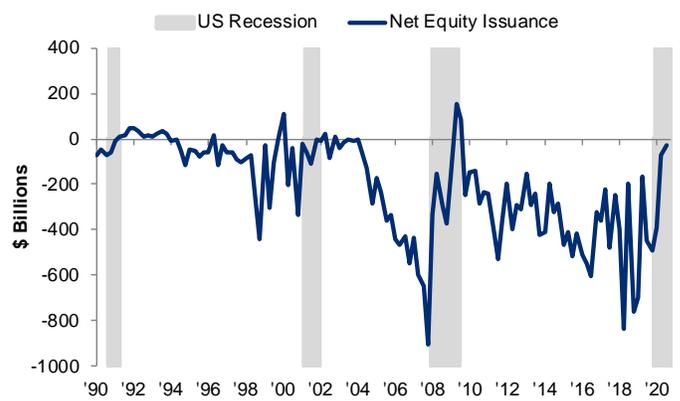
When viewing the market more broadly, it is true that companies have reduced share repurchases given uncertain cash flow needs during the pandemic period. With that said, US

companies have increasingly promised to make good use of their increased cash levels, with some announcing buyback programs, and others who are looking at M&A to enhance their competitive positions. If the trend of previous cycles continues, we should expect to see net issuance grow increasingly negative as firms become more confident that the pandemic shock is firmly in the rearview (Figure 39).

**Figure 38: Gross equity issuance and retirements (Non-financial corporates)**



**Figure 39: US net equity issuance (issuance minus retirements)**



Source: Haver as of February 25, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

## Finding growth in a value region like Europe

One region that has perhaps outperformed its “COVID-cyclical” regional peers is Europe ex-UK. Despite a slow vaccine rollout and a brief political crisis in Italy, European equity performance has actually tracked closer to the US and China when measured in US dollars. Looking under the hood within the region, however, we can identify increasing divergence between export-oriented multinationals and the more domestic services-focused side of the market.

Indeed, Asia’s outsized economic strength in 2020 relative to the rest of the world has benefited a number of European companies with heavy exposure by revenue to that region. Asian-exposed European names have returned 35% since the beginning of last year, over twice the return of firms which generate most of their sales domestically. With Europe’s medium and long term economic prospects challenged by structural and demographic headwinds, equity investors in the region should increasingly look to firms with global exposure to outperform those more focused on domestic growth.

Another area of significant growth potential in Europe is the green energy space. Many of the leading global players in electric power production and component manufacturing are based in a Europe, and investors are increasingly flocking to these shares over other European names (Figure 41). We expect green stocks will continue to grow as a share of the broader market over time as global demand for these types of investments will mean both new entrants into the index and higher share prices for existing players.

So taking all of this together, we believe Europe can continue to broadly outperform in a value-driven, reopening rally. But over the longer run, the real alpha in this region will be within a subset of areas exposed to global trends like Asian growth and Green energy. Owning a passive European index will always include a large portion of banks and traditional energy that may be less desirable beyond 2021 than perhaps a more active, growth-oriented approach to the region.

**Figure 40: Globally-exposed European names have led the recovery**

Largest Source of Revenues	Share of EU Mkt Cap	Return since Jan 2020
Asia	11.8%	35%
Europe	54.0%	14%
Americas	34.0%	12%

Majority of Revenues	Share of EU Mkt Cap	Return since Jan 2020
Majority Abroad	60.2%	18%
Majority Europe	39.8%	13%

**Figure 41: Green Europe is a key growth area, but not yet dominant by market cap**



Source: Factset as of February 25, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

**Charles Reinhard**  
Head – North America

**Melvin Lou**  
Global Strategy

## US Dividend Stocks and Accelerating Inflation

In August, the Federal Reserve changed its policy with the aim of exceeding 2% inflation for a while to average it after previously being below 2%. Accommodative monetary policy combined with the largest US fiscal policy response ever to address the COVID pandemic – an amount approaching \$5.1 trillion cumulatively if we include the package now working its way through Congress – should support demand. Add in the vaccine rollout underway, which is also medicine for the economy, and it looks as though inflation is poised to tick up further from its 0.9% low made last April using the Fed’s favorite measure, the Core Personal Consumption Expenditure index (Core PCE).

Investors have seen rising growth and inflation expectations chip away at their bond returns of late and have wondered what it might eventually mean for dividend stocks. Luckily, we have a few scenarios in the not-too-distant past where inflation did rise some to provide clues. The first case occurred in 1998-2002 during the Tech boom and bust. The other cases subsequently came in 2003-06, 2009-12 coming out of the Financial Crisis, and in 2015-18.

We selected three indices to represent dividend growers, dividend payers and a blended strategy which we compared to the S&P 500 index (Figure 42). Dividend growers have a long and admired record of making annual dividend increases. Dividend payers offer a high yield. The blended strategy starts with stocks having above average dividend yields and then screens for dividend sustainability and persistence. In all, we found that dividend stocks provided competitive performance and posted higher returns, on average, than the S&P 500 during these periods. Of course, past performance is not a guarantee of future results and you cannot invest directly in an index.

**Figure 42: Dividend Stocks and S&P 500 in Recent Periods of Accelerating Inflation**

Annualized Returns During Periods of Accelerating Inflation						
Index	Jun, 1998 - Sep, 2002	Sep, 2003 - Aug, 2006	Jul, 2009 - Jan, 2012	Oct, 2015 - Jul, 2018	Average return of all periods	Average return of post-dotcom periods
S&P 500	-3.4%	11.5%	18.6%	18.8%	11.4%	16.3%
<b>Dividend</b>						
<b>Growers</b> S&P 500 Dividend Aristocrats	2.8%	14.2%	25.0%	17.2%	14.8%	18.8%
<b>Dividend</b>						
<b>Payers</b> DJ Select Dividend	6.0%	17.2%	26.1%	17.7%	16.7%	20.3%
<b>Blend</b> MSCI USA High Dividend	-	14.0%	23.2%	18.9%	-	18.7%

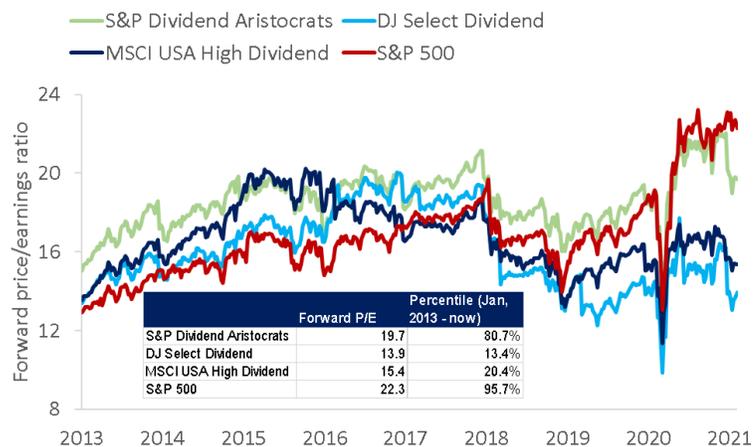
Source: Factset and Bloomberg as of Feb 23, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

We feel it is necessary to highlight that the period we examined covers a relatively tame inflation era. Runaway inflation was last experienced in the 1970s. Since that time, Paul Volcker broke the back of inflation and central banks have adopted overt inflation targets. Central banks have demonstrated they have the tools to reign in undesirable levels of inflation, although monetary policy works with long and variable lags.

## Price-Earnings Ratios

The performance of dividend stocks above may surprise some investors. We believe it can be explained, in part, by valuation readings (Figure 43). Dividend stocks generally have lower forward P/E ratios than growth stocks or the S&P 500 and are, thus, shorter in duration, a measure that captures an investment's price sensitivity to interest rates. Currently, the forward P/E ratio of the S&P 500 is elevated, at 22 times expected earnings over the next year, a 96th percentile reading since 2013. Dividend stock valuations are less stretched in an absolute sense, and compared to history, especially in the case of dividend payers which have a forward P/E ratio just below 14 (a 13th percentile reading).

**Figure 43: S&P 500 and Dividend Stock Forward Price-Earnings Ratios**



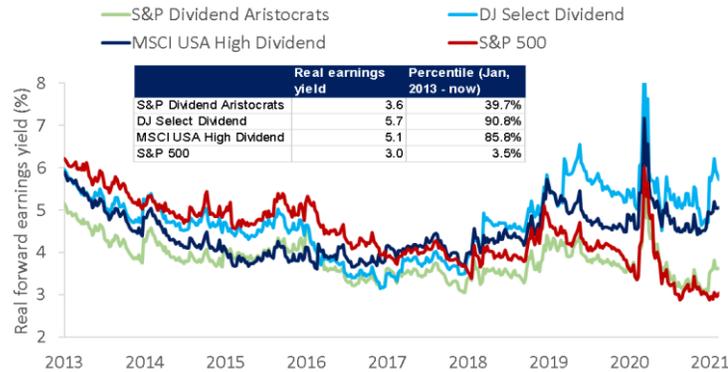
Source: Factset and Bloomberg as of Feb 23, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

## Real Earnings and Dividend Yields

By flipping the forward P/E ratios around (from P/E to E/P) and subtracting inflation, the resulting "real" forward earnings yields suggest the earnings power of US dividend

stocks offer investors a degree of purchasing power protection should inflation inch higher (Figure 44). While the S&P 500's real forward earnings yield, at 3.0%, compares favorably to 10-year US Treasury notes and the Bloomberg Barclays US Aggregate Fixed Income index which each have real yields near 0.0%, the 3.0% S&P 500 real yield is low versus its own history (around the 4th percentile). By contrast, the real yield of dividend growers is higher, at 3.6% (a middle range reading at the 40th percentile). Dividend payers and the blended strategy offer real yields that exceed 5.0% and are near the upper end of their respective ranges as shown.

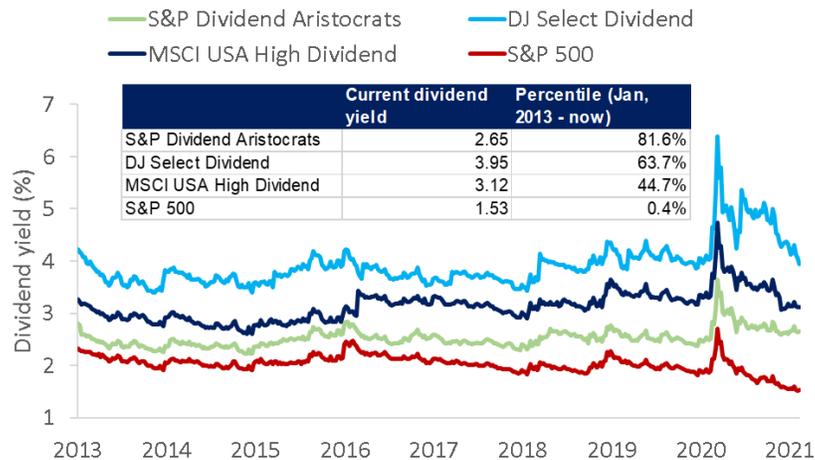
**Figure 44: S&P 500 and Dividend Stock “Real” or Inflation-Adjusted Earnings Yields**



Source: Factset and Bloomberg as of Feb 23, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

In terms of near-term income generation, the S&P 500 dividend yield, at 1.5%, is slightly higher than the yield of a 10-year Treasury or the yield-to-worst measure of the Bloomberg Barclay's US Aggregate fixed income index. What's more, an investor can expect dividends to rise over time as earnings grow. That said, the S&P 500 dividend yield has been lower less than 1% of the time since 2013 (Figure 45). In comparison to the S&P 500, the dividend strategies shown offer dividend yields that range from 2.65% to 3.95% all within the 45th to the 81st percentile of their respective dividend yield ranges since 2013, making them particularly useful for investors looking to generate income and overcome financial repression.

**Figure 45: S&P 500 and Dividend Stock Dividend Yield (%)**



Source: Factset and Bloomberg as of Feb 23, 2021. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

## Parting Thoughts

Dividend stocks are typically intended to be held as long-term investments. Where otherwise suitable, their performance in the last few periods of accelerating inflation supports the idea of holding them as the Fed attempts to overshoot 2% inflation long enough to average 2% inflation over time. Dividend stocks also have favorable forward price-earnings ratios, real earnings yields and dividend yields when compared to the S&P 500. As a result, dividend stocks, in our view, can be beneficial to investors in the pursuit of overcoming financial repression.

Jorge Amato  
Head – Latin America

## Brazil- Policy Risks, Market Opportunities?

Brazilian markets have been in the headlines recently after President Bolsonaro indicated that he would be replacing Petrobras CEO Castello Branco.

This move sparked concerns over the potential beginning of economic interventionism by the federal government. Markets sold off sharply on February 22nd, with Petrobras shares taking the brunt of the pain, down 29% between 18-22 February. The reason behind Bolsonaro's decision is rooted in a long standing policy spat. For more than a decade, Petrobras (publicly listed but 54% State owned) domestic fuel pricing policy has been used as a political tool. By periodically demanding the company charge below international market prices for fuel, the government effectively subsidized consumers through the company's balance sheet. This policy cost Petrobras an estimated \$40bn between 2011 and 2014 and led, in part, to a political crisis in 2015-2016 which ended in the impeachment of then President Dilma Rousseff. In 2018, then CEO Pedro Parente resigned over the same issue (after an attempt to adjust fuel prices triggered a trucker's strike that briefly paralyzed the economy).

Figure 46: Petrobras ADR (USD)



Source: Bloomberg as of Feb 24, 2021. For illustrative purposes only. This should not be construed as an offer of, or recommendation of companies discussed. Past performance is no guarantee of future returns. Real results may vary.

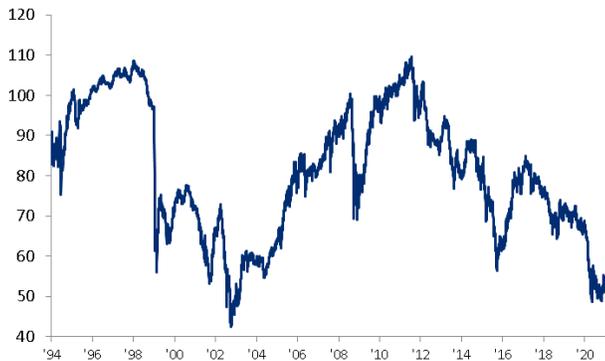
So while we certainly agree that these latest developments constitute a negative event for the country, we do not think that they present a dramatic shift in policy, and as such we think markets might have overreacted.

While at the center of this potential policy shift, Petrobras just reported a better than expected 4Q20, up 635% vs 4Q19. The company has steadily improved its operations and financial conditions since 2016 to the point that it now compares

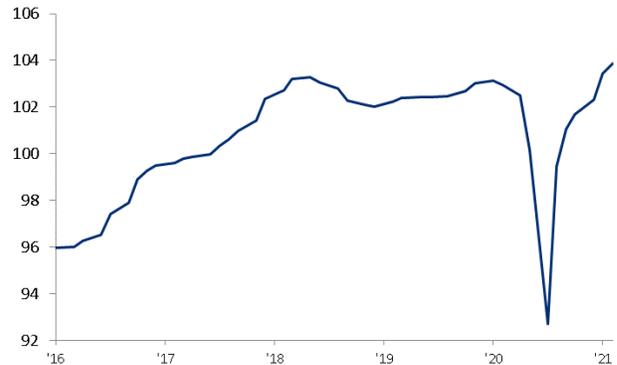
favorably in many financial metrics to large integrated producers such as Exxon. These most recent company figures, under the helm of Castello Branco, might soften the tone coming from the executive.

In addition, the Brazilian economy continues to show signs of adjusting and adapting to their severe COVID-19 outbreak. Brazil's free-floating exchange rate has depreciated by 37% since January 2020. In addition to the drop in aggregate demand (the economy likely contracted more than 4% last year) Brazil has significantly shrunk its current account deficit to less than 1% of GDP. This is lowest level in 13 years reducing external financing needs and vulnerabilities. In addition consumer confidence in February printed higher after 5 monthly declines. Recent preliminary inflation numbers have been inline with expectations at 4.6%.

**Figure 47: Brazil Real Effective Exchange Rate**



**Figure 48: Brazil Leading Indicators**



Source: Bloomberg as of February 25, 2021.

We have been Overweight Latam, and specifically Brazil, since mid-2020, due to global reflation expectations, and the highly pro-cyclical nature of the regional economies and the post-Covid normalization. Firm commodity prices, historically competitive real effective exchange rates, more fiscal stimulus and an earnings recovery should provide further upside from a low starting base. The most recent sell-off in Brazilian markets makes our tactical play even more compelling, in our view.

## 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 24, 2021 GIC meeting.

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

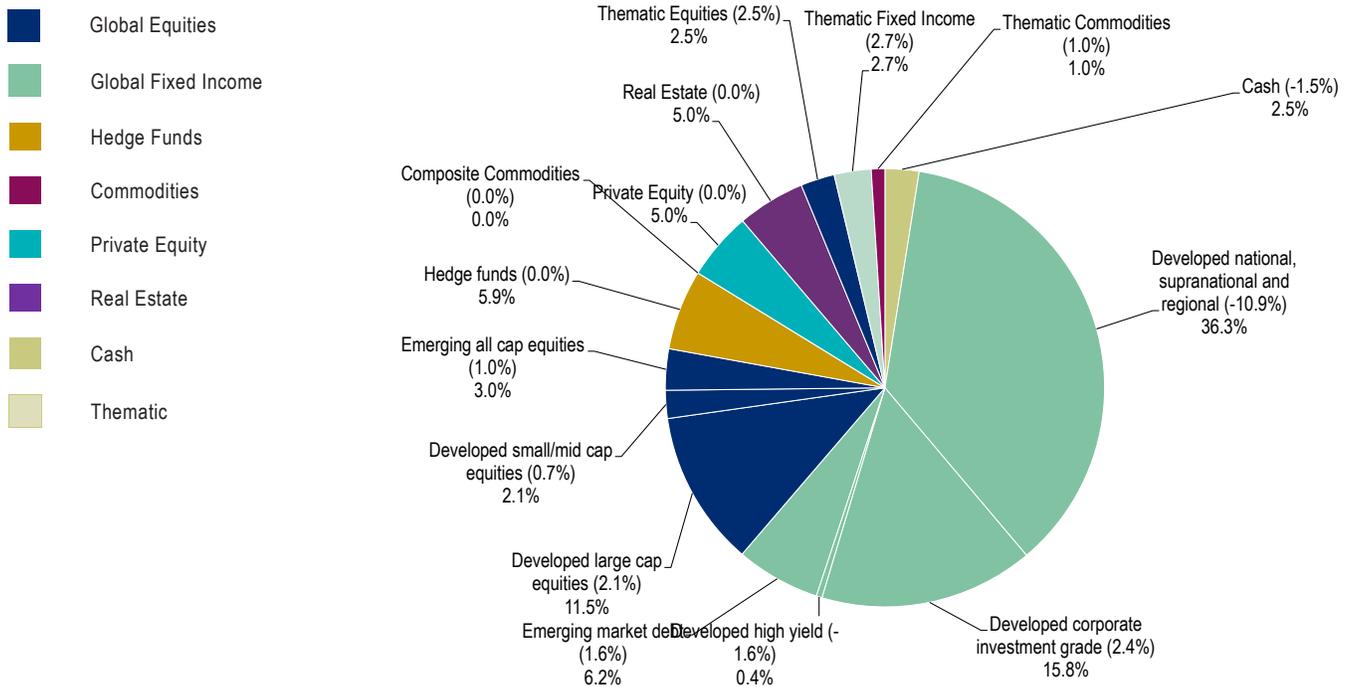
Risk Level 2 is designed for investors who emphasize capital preservation over return on investment, but who are willing to subject some portion of their principal to increased risk in order to generate a potentially greater rate of return on investment.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	4.0	2.5	-1.5
Fixed Income	67.2	61.5	-5.8
Developed Investment Grade	60.6	52.1	-8.5
US	33.7	36.1	2.4
Government	14.1	12.8	-1.3
Inflation-Linked	2.0	2.8	0.8
Short	3.8	2.2	-1.6
Intermediate	5.8	5.3	-0.5
Long	2.5	2.5	0.0
Securitized	10.8	12.1	1.2
Credit	8.9	11.2	2.4
Short	1.2	1.4	0.2
Intermediate	4.7	6.9	2.2
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	2.7	2.7
US Bank Loans	0.0	2.7	2.7
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	12.8	19.1	6.2
Developed Equities	10.8	13.5	2.7
Developed Large Cap Equities	9.4	11.5	2.1
US	6.4	7.4	1.0
Canada	0.3	0.4	0.0
UK	0.4	0.6	0.2
Switzerland	0.3	0.3	0.0
Europe ex UK ex Switzerland	0.9	1.2	0.3
Asia ex Japan	0.3	0.6	0.2
Japan	0.8	1.0	0.2
Developed Small/Mid Cap Equities	1.4	2.1	0.7
US	0.8	0.9	0.1
Non-US	0.7	1.2	0.5
Emerging All Cap Equities	2.0	3.0	1.0
Asia	1.8	2.2	0.5
China	1.1	1.3	0.2
Asia (ex China)	0.6	1.0	0.3
EMEA	0.1	0.2	0.0
LatAm	0.1	0.6	0.5
Brazil	0.1	0.4	0.3
LatAm ex Brazil	0.0	0.2	0.2
Thematic Equities	0.0	2.5	2.5
Global Equity REITs	0.0	0.5	0.5
US Mortgage REITs	0.0	0.5	0.5
Global Healthcare	0.0	1.5	1.5
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	1.0	1.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	1.0	1.0
Gold	0.0	1.0	1.0
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
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.0</b>

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 +6.2%, global fixed income has an underweight of -5.8%, cash has an underweight of -1.5% with gold overweight at +1.0%.

Within equities, developed large cap equities and developed small/mid cap equities are at overweight positions at +2.1% and +0.7%, respectively. Emerging market equities have an overweight of +1.0%. Thematic equities have an overweight of +2.5%.

Within fixed income, developed investment grade has an underweight position of -8.5%; 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 +2.7%.

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

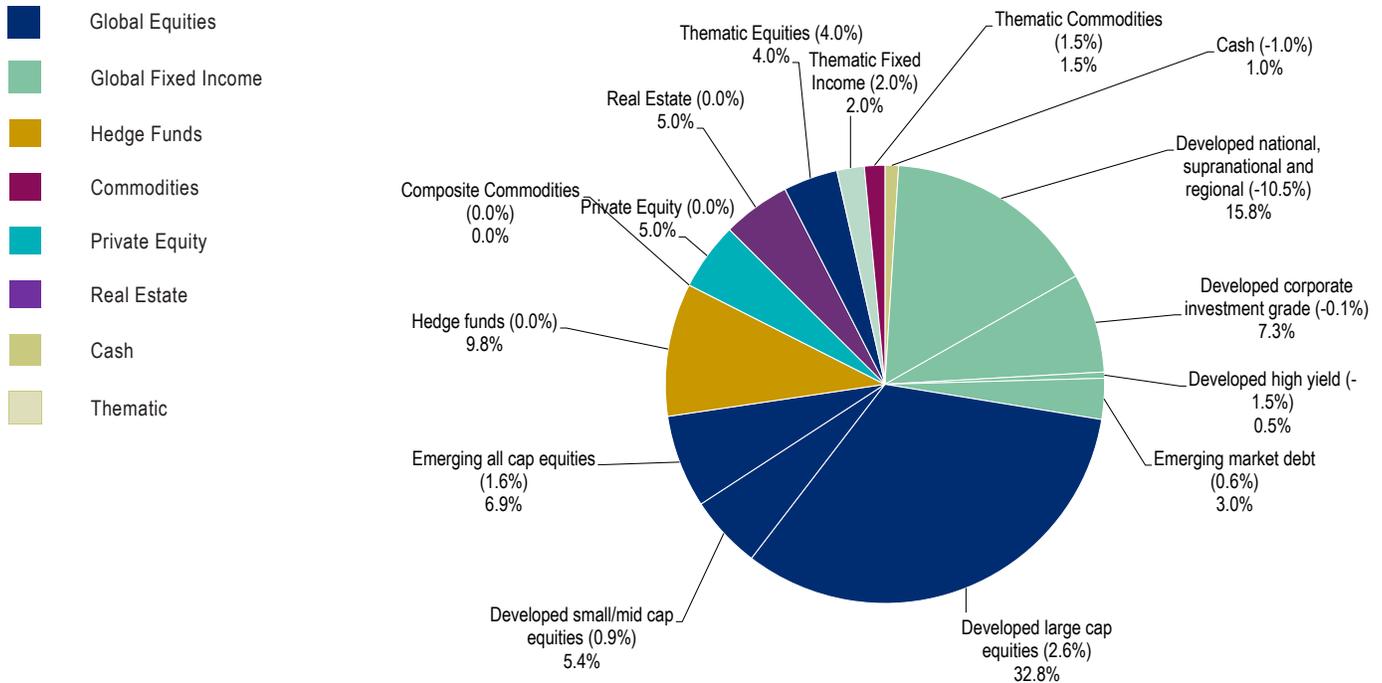
Risk Level 3 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. Risk Level 3 may be appropriate for investors willing to subject their portfolio to 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	28.6	-9.5
Developed Investment Grade	33.6	23.1	-10.5
US	18.7	18.4	-0.3
Government	7.8	7.0	-0.8
Inflation-Linked	1.1	2.2	1.1
Short	2.1	0.1	-2.0
Intermediate	3.2	3.3	0.1
Long	1.4	1.4	0.0
Securitized	6.0	6.4	0.4
Credit	4.9	5.0	0.1
Short	0.7	0.7	0.0
Intermediate	2.6	2.7	0.0
Long	1.6	1.6	0.0
Europe	11.3	4.4	-6.9
Government	8.8	2.1	-6.7
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	0.5	-1.5
US	1.5	0.0	-1.5
Europe	0.5	0.5	-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	2.0	2.0
US Bank Loans	0.0	2.0	2.0
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	49.1	9.0
Developed Equities	34.8	38.2	3.4
Developed Large Cap Equities	30.2	32.8	2.6
US	20.6	21.4	0.8
Canada	1.0	1.0	0.0
UK	1.2	1.6	0.4
Switzerland	0.9	1.0	0.0
Europe ex UK ex Switzerland	2.9	3.4	0.5
Asia ex Japan	1.1	1.6	0.5
Japan	2.5	2.9	0.4
Developed Small/Mid Cap Equities	4.5	5.4	0.9
US	2.4	2.5	0.1
Non-US	2.1	2.9	0.8
Emerging All Cap Equities	5.3	6.9	1.6
Asia	4.7	5.2	0.5
China	3.0	3.1	0.1
Asia (ex China)	1.6	2.0	0.4
EMEA	0.3	0.3	0.0
LatAm	0.3	1.4	1.0
Brazil	0.2	0.9	0.7
LatAm ex Brazil	0.1	0.5	0.3
Thematic Equities	0.0	4.0	4.0
Global Equity REITs	0.0	1.0	1.0
US Mortgage REITs	0.0	1.0	1.0
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	1.5	1.5
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	1.5	1.5
Gold	0.0	1.5	1.5
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
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

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 +9.0%, global fixed income has an underweight of -9.5%, cash has an underweight of -1.0% with gold overweight at +1.5%.

Within equities, developed large cap equities have an overweight position of +2.6% and developed small/mid cap equities have an overweight of +0.9%. Emerging market equities have an overweight of +1.6%. Thematic equities have an overweight position of +4.0%.

Within fixed income, developed investment grade debt has an underweight position of -10.5%; developed high yield has an underweight position of -1.5%; emerging market debt has an overweight position of +0.6%. Thematic fixed income has an overweight position of +2.0%.

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

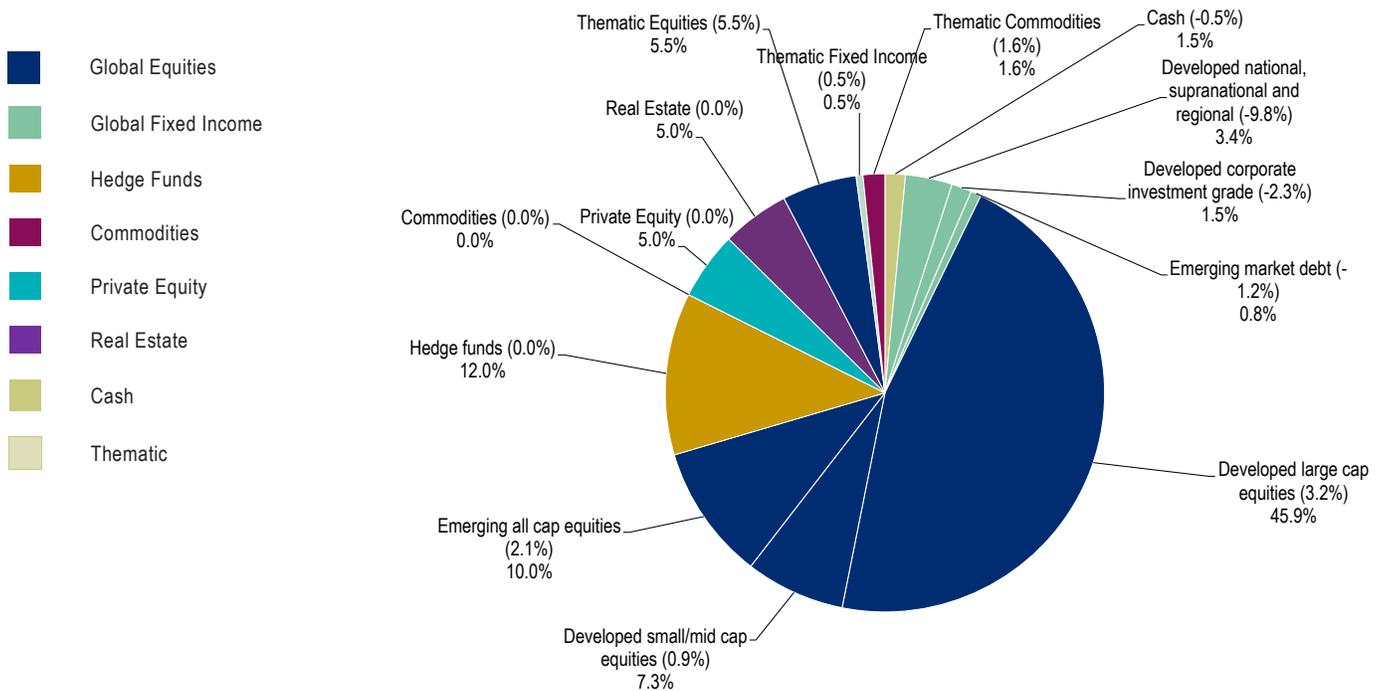
Risk Level 4 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. They are willing to subject a large portion of their portfolio to greater risk and market 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	6.2	-12.9
Developed Investment Grade	17.0	4.9	-12.1
US	9.5	4.3	-5.2
Government	4.0	1.9	-2.1
Inflation-Linked	0.6	0.6	0.0
Short	1.1	0.0	-1.1
Intermediate	1.6	0.5	-1.1
Long	0.7	0.8	0.1
Securitized	3.0	1.2	-1.8
Credit	2.5	1.2	-1.3
Short	0.3	0.0	-0.3
Intermediate	1.3	0.9	-0.5
Long	0.8	0.3	-0.5
Europe	5.7	0.6	-5.1
Government	4.5	0.4	-4.1
Credit	1.3	0.3	-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	0.8	-1.2
Asia	0.3	0.5	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	0.5	0.5
US Bank Loans	0.0	0.5	0.5
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	68.7	11.7
Developed Equities	49.1	53.3	4.1
Developed Large Cap Equities	42.7	45.9	3.2
US	29.0	29.9	0.8
Canada	1.4	1.4	0.0
UK	1.7	2.2	0.5
Switzerland	1.3	1.4	0.0
Europe ex UK ex Switzerland	4.1	4.7	0.6
Asia ex Japan	1.6	2.2	0.6
Japan	3.6	4.1	0.5
Developed Small/Mid Cap Equities	6.4	7.3	0.9
US	3.4	3.5	0.1
Non-US	3.0	3.8	0.8
Emerging All Cap Equities	7.9	10.0	2.1
Asia	6.9	7.5	0.6
China	4.5	4.6	0.1
Asia (ex China)	2.4	2.9	0.5
EMEA	0.5	0.4	-0.0
LatAm	0.5	2.0	1.5
Brazil	0.3	1.3	1.0
LatAm ex Brazil	0.2	0.7	0.5
Thematic Equities	0.0	5.5	5.5
Global Equity REITs	0.0	1.5	1.5
US Mortgage REITs	0.0	1.5	1.5
Global Healthcare	0.0	2.5	2.5
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	1.6	1.6
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	1.6	1.6
Gold	0.0	1.6	1.6
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
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.0</b>

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 +11.7%, global fixed income has an underweight of -12.9%, cash has an underweight of -0.5% with gold overweight at +1.6%.

Within equities, developed large cap equities have an overweight position of +3.2% and developed small/mid cap equities have an overweight of +0.9%. Emerging market equities have an overweight of +2.1%. Thematic equities have an overweight of +5.5%.

Within fixed income, developed investment grade has an underweight position of -12.1%; developed high yield has a neutral position and emerging market debt has an underweight position of -1.2%. Thematic fixed income has an overweight of +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

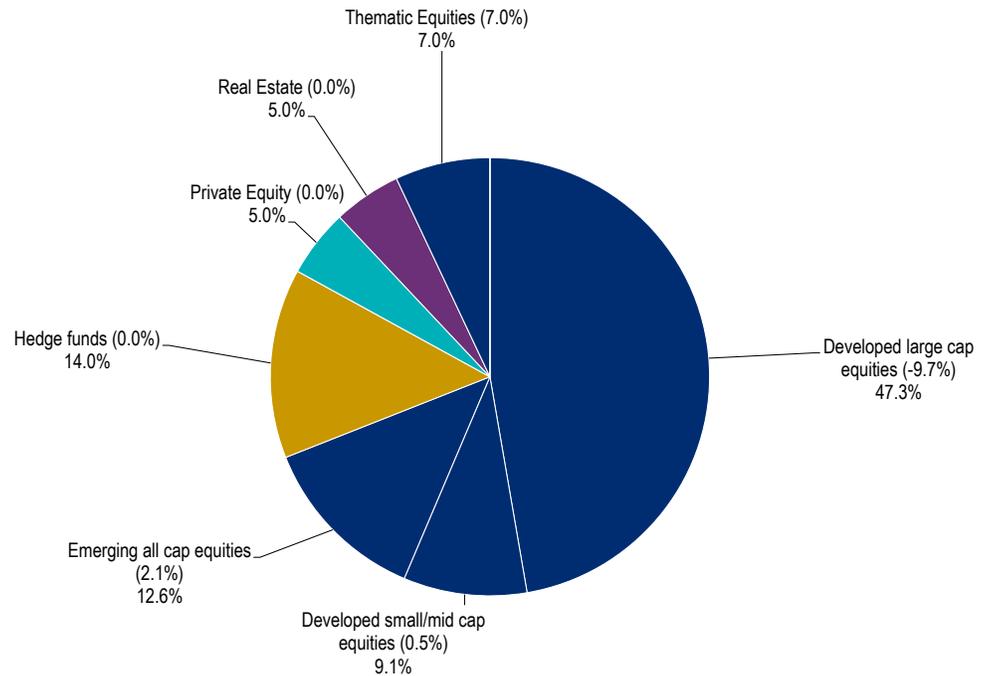
Risk Level 5 is designed for investors who emphasize return on investment. They are willing to subject their entire portfolio to greater risk and market value fluctuations in anticipation of a potentially greater return on investments. Investors may have a preference for investments or trading strategies 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
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	56.4	-9.1
Developed Large Cap Equities	57.0	47.3	-9.7
US	38.7	34.4	-4.3
Canada	1.9	0.0	-1.9
UK	2.3	2.1	-0.2
Switzerland	1.8	0.6	-1.2
Europe ex UK ex Switzerland	5.5	4.7	-0.8
Asia ex Japan	2.1	1.8	-0.3
Japan	4.8	3.7	-1.1
Developed Small/Mid Cap Equities	8.6	9.1	0.5
US	4.6	4.5	-0.1
Non-US	4.0	4.6	0.6
Emerging All Cap Equities	10.5	12.6	2.1
Asia	9.2	9.9	0.7
China	6.0	6.0	-0.0
Asia (ex China)	3.2	3.9	0.7
EMEA	0.6	0.4	-0.2
LatAm	0.7	2.3	1.7
Brazil	0.4	1.6	1.2
LatAm ex Brazil	0.2	0.8	0.5
Thematic Equities	0.0	7.0	7.0
Global Equity REITs	0.0	3.0	3.0
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	14.0	14.0	0.0
Private Equity	5.0	5.0	0.0
Real Estate	5.0	5.0	0.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

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 -9.7% and developed small/mid cap equities have an overweight of +0.5%. Emerging market equities have an overweight of +2.1%. Thematic equities have an overweight of +7.0%.

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

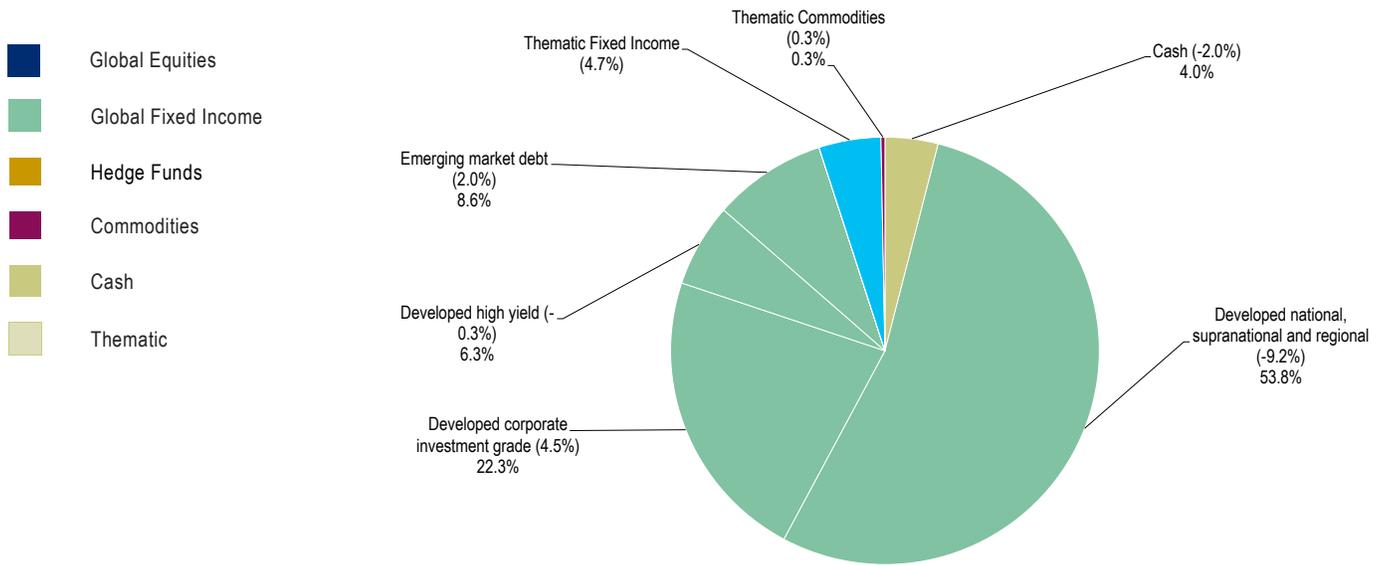
Risk Level 1 is designed for investors who have a preference for capital preservation and relative safety over the potential for a return on investment. These investors prefer to hold cash, time deposits and/or lower risk fixed income instruments.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	6.0	4.0	-2.0
Fixed Income	94.0	95.7	1.7
Developed Investment Grade	80.8	76.1	-4.7
US	45.0	50.8	5.8
Government	18.8	19.1	0.3
Inflation-Linked	2.7	3.2	0.5
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	0.3	0.3
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.3	0.3
Gold	0.0	0.3	0.3
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
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

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 +1.7%, cash has an underweight of -2.0% with gold overweight at +0.3%.

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 -4.7%; 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

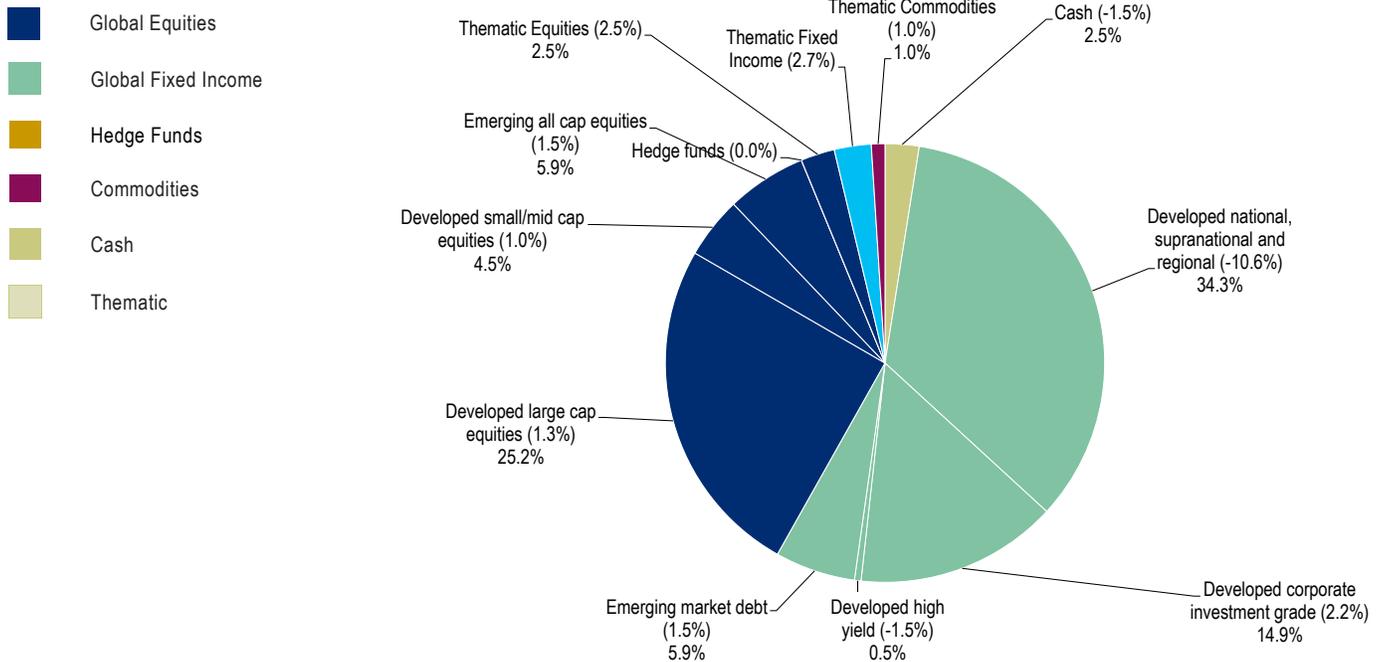
Risk Level 2 is designed for investors who emphasize capital preservation over return on investment, but who are willing to subject some portion of their principal to increased risk in order to generate a potentially greater rate of return on investment.

Classification	Strategic (%)	Tactical* (%)	Active (%)
Cash	4.0	2.5	-1.5
Fixed Income	64.1	58.4	-5.8
Developed Investment Grade	57.6	49.2	-8.4
US	32.1	34.1	2.0
Government	13.4	12.1	-1.3
Inflation-Linked	1.9	2.6	0.7
Short	3.6	2.1	-1.5
Intermediate	5.5	5.0	-0.5
Long	2.4	2.4	0.0
Securitized	10.3	11.4	1.1
Credit	8.4	10.6	2.2
Short	1.2	1.4	0.2
Intermediate	4.5	6.5	2.0
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	2.7	2.7
US Bank Loans	0.0	2.7	2.7
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	31.9	38.1	6.2
Developed Equities	27.5	29.7	2.2
Developed Large Cap Equities	23.9	25.2	1.3
US	16.3	16.3	0.0
Canada	0.8	0.8	0.0
UK	0.9	1.3	0.4
Switzerland	0.7	0.7	0.0
Europe ex UK ex Switzerland	2.3	2.6	0.3
Asia ex Japan	0.9	1.3	0.4
Japan	2.0	2.3	0.3
Developed Small/Mid Cap Equities	3.6	4.5	1.0
US	1.9	1.9	0.0
Non-US	1.7	2.6	1.0
Emerging All Cap Equities	4.4	5.9	1.5
Asia	3.9	4.4	0.5
China	2.5	2.5	0.0
Asia (ex China)	1.4	1.9	0.5
EMEA	0.3	0.3	0.1
LatAm	0.3	1.2	1.0
Brazil	0.2	0.8	0.7
LatAm ex Brazil	0.1	0.4	0.3
Thematic Equities	0.0	2.5	2.5
Global Equity REITs	0.0	0.5	0.5
US Mortgage REITs	0.0	0.5	0.5
Global Healthcare	0.0	1.5	1.5
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	1.0	1.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	1.0	1.0
Gold	0.0	1.0	1.0
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
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

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 +6.2%, global fixed income has an underweight of -5.8%, cash has an underweight of -1.5% with gold overweight at +1.0%.

Within equities, developed large cap equities have an overweight position of +1.3% and developed small/mid cap equities have an overweight of +1.0%. Emerging market equities have an overweight of +1.5%. Thematic equities have an overweight of +2.5%.

Within fixed income, developed investment grade has an underweight position of -8.4%; 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 +2.7%.

## Global USD without Hedge Funds: Risk Level 3

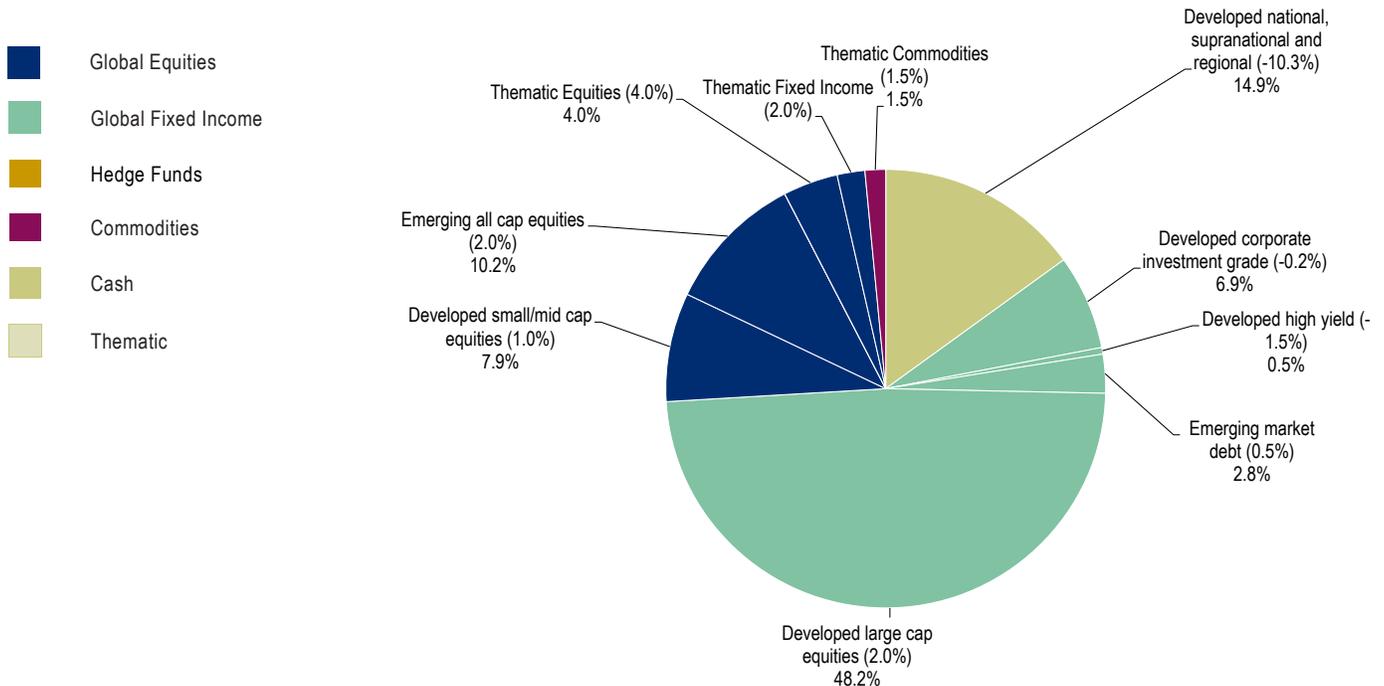
Risk Level 3 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. Risk Level 3 may be appropriate for investors willing to subject their portfolio to 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	1.0	-1.0
Fixed Income	36.6	27.1	-9.5
Developed Investment Grade	32.3	21.8	-10.5
US	18.0	17.4	-0.6
Government	7.5	6.6	-0.9
Inflation-Linked	1.1	2.1	1.0
Short	2.0	0.1	-1.9
Intermediate	3.1	3.1	0.0
Long	1.3	1.3	0.0
Securitized	5.8	6.1	0.3
Credit	4.7	4.7	0.0
Short	0.6	0.6	0.0
Intermediate	2.5	2.5	0.0
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	2.0	2.0
US Bank Loans	0.0	2.0	2.0
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	70.4	9.0
Developed Equities	53.2	56.2	3.0
Developed Large Cap Equities	46.2	48.2	2.0
US	31.4	31.4	-0.0
Canada	1.5	1.5	0.0
UK	1.8	2.3	0.5
Switzerland	1.4	1.4	0.0
Europe ex UK ex Switzerland	4.5	5.0	0.5
Asia ex Japan	1.7	2.3	0.6
Japan	3.9	4.3	0.4
Developed Small/Mid Cap Equities	6.9	7.9	1.0
US	3.7	3.7	0.0
Non-US	3.2	4.2	1.0
Emerging All Cap Equities	8.2	10.2	2.0
Asia	7.2	7.7	0.5
China	4.7	4.7	0.0
Asia (ex China)	2.5	3.0	0.5
EMEA	0.5	0.5	0.0
LatAm	0.5	2.0	1.5
Brazil	0.3	1.3	1.0
LatAm ex Brazil	0.2	0.7	0.5
Thematic Equities	0.0	4.0	4.0
Global Equity REITs	0.0	1.0	1.0
US Mortgage REITs	0.0	1.0	1.0
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	1.5	1.5
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	1.5	1.5
Gold	0.0	1.5	1.5
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
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.0</b>

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 +9.0%, global fixed income has an underweight of -9.5%, cash has an underweight of -1.0% with gold overweight at +1.5%.

Within equities, developed large cap equities have an overweight position of +2.0% and developed small/mid cap equities have an overweight of +1.0%. Emerging market equities have an overweight of +2.0%. Thematic equities have an overweight of +4.0%.

Within fixed income, developed investment grade debt has an underweight position of -10.5%; 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 +2.0%.

## Global USD without Hedge Funds: Risk Level 4

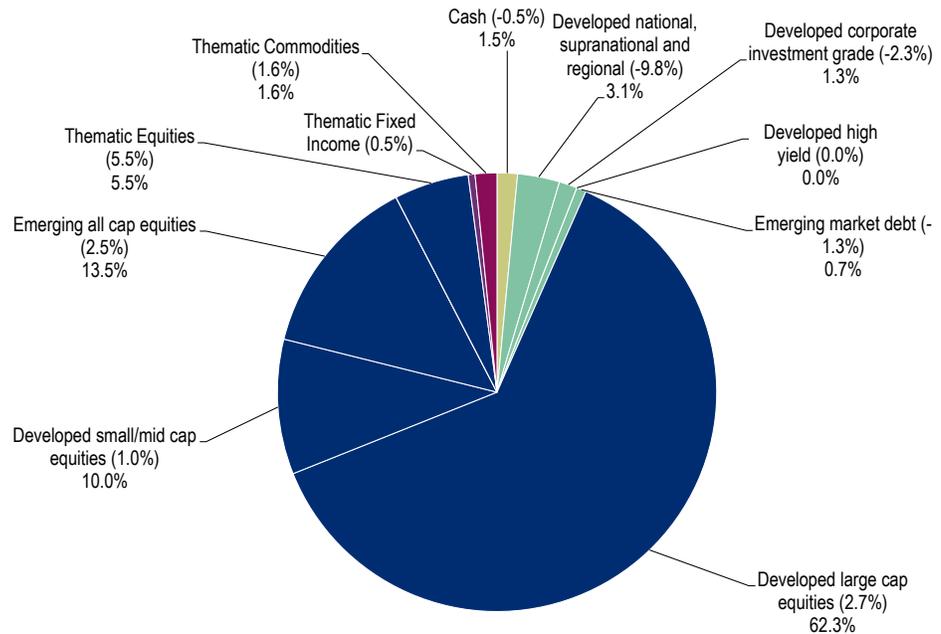
Risk Level 4 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. They are willing to subject a large portion of their portfolio to greater risk and market 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	5.6	-12.9
Developed Investment Grade	16.5	4.4	-12.1
US	9.2	3.9	-5.3
Government	3.8	1.7	-2.2
Inflation-Linked	0.5	0.5	-0.0
Short	1.0	0.0	-1.0
Intermediate	1.6	0.5	-1.1
Long	0.7	0.7	0.0
Securitized	2.9	1.1	-1.8
Credit	2.4	1.1	-1.3
Short	0.3	0.0	-0.3
Intermediate	1.3	0.8	-0.5
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	0.5	0.5
US Bank Loans	0.0	0.5	0.5
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	91.3	11.7
Developed Equities	68.6	72.3	3.7
Developed Large Cap Equities	59.6	62.3	2.7
US	40.5	40.5	-0.0
Canada	2.0	2.0	0.0
UK	2.4	3.0	0.7
Switzerland	1.9	1.9	0.0
Europe ex UK ex Switzerland	5.7	6.4	0.7
Asia ex Japan	2.2	3.0	0.8
Japan	5.0	5.5	0.6
Developed Small/Mid Cap Equities	9.0	10.0	1.0
US	4.8	4.8	0.0
Non-US	4.1	5.1	1.0
Emerging All Cap Equities	11.0	13.5	2.5
Asia	9.6	10.2	0.5
China	6.3	6.3	0.0
Asia (ex China)	3.4	3.9	0.5
EMEA	0.7	0.6	-0.1
LatAm	0.7	2.7	2.1
Brazil	0.4	1.8	1.4
LatAm ex Brazil	0.2	0.9	0.7
Thematic Equities	0.0	5.5	5.5
Global Equity REITs	0.0	1.5	1.5
US Mortgage REITs	0.0	1.5	1.5
Global Healthcare	0.0	2.5	2.5
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Commodities	0.0	1.6	1.6
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	1.6	1.6
Gold	0.0	1.6	1.6
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
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>-0.0</b>

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 +11.7%, global fixed income has an underweight of -12.9%, cash has an underweight of -0.5% with gold overweight at +1.6%.

Within equities, developed large cap equities have an overweight position of +2.7% and developed small/mid cap equities have an overweight of +1.0%. Emerging market equities have an overweight of +2.5%. Thematic equities have an overweight position of +5.5%.

Within fixed income, developed investment grade debt has an underweight position of -12.1%; 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 +0.5%.

## Global USD without Hedge Funds: Risk Level 5

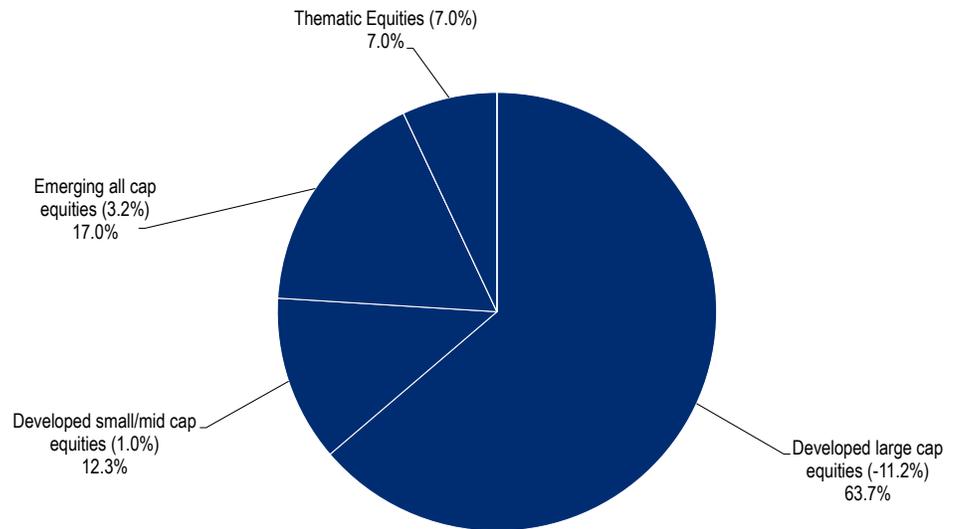
Risk Level 5 is designed for investors who emphasize return on investment. They are willing to subject their entire portfolio to greater risk and market value fluctuations in anticipation of a potentially greater return on investments. Investors may have a preference for investments or trading strategies 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	76.0	-10.2
Developed Large Cap Equities	74.9	63.7	-11.2
US	51.0	46.4	-4.5
Canada	2.5	0.0	-2.5
UK	3.0	2.8	-0.2
Switzerland	2.3	0.8	-1.5
Europe ex UK ex Switzerland	7.2	6.4	-0.9
Asia ex Japan	2.7	2.4	-0.4
Japan	6.3	5.0	-1.3
Developed Small/Mid Cap Equities	11.3	12.3	1.0
US	6.0	6.0	-0.0
Non-US	5.2	6.2	1.0
Emerging All Cap Equities	13.8	17.0	3.2
Asia	12.1	13.3	1.2
China	7.9	8.0	0.2
Asia (ex China)	4.2	5.3	1.0
EMEA	0.8	0.5	-0.3
LatAm	0.9	3.2	2.3
Brazil	0.5	2.1	1.6
LatAm ex Brazil	0.3	1.0	0.7
Thematic Equities	0.0	7.0	7.0
Global Equity REITs	0.0	3.0	3.0
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
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

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 -11.2% and developed small/mid cap equities have an overweight of +1.0%. Emerging market equities have an overweight of +3.2%. Thematic equities have an overweight position of +7.0%.

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).
<b>Equities</b>	
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.
<b>Bonds</b>	
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 publically issued in the US domestic market.

## Other miscellaneous definitions

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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.
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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 <sup>1</sup>	Standard and Poor's <sup>2</sup>	Fitch Ratings <sup>2</sup>
<b>Investment Grade</b>			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (Strong)	A	A	A
Medium grade	Baa	BBB	BBB
<b>Not Investment Grade</b>			
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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