



March 3, 2023

Global Strategy Quadrant

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Still Wintertime for Profits, Not Spring

Dramatically stronger US data for January – a "lull period" for actual business - underscores the difficulty in tracking the true path for the economy during the seasonal extremes of the year. Historically, January and July are the only months that have experienced historic revisions to US employment of larger than 300,000. Did US retail sales really surge at a 36% annualized rate in January? Without adjustments, sales fell 16% from December 2022, a normal seasonal drop.

We don't believe US labor markets have either accelerated or weakened yet. Layoff announcements are mounting, but many who have lost their jobs are likely still on their company payrolls, particularly in tech industries. Surging business inventories and unsold homes point to slowing US labor demand in the coming year and reduced upward interest rate pressure.

The "kick-back" rallies of January gave the appearance of a benign "Goldilocks" scenario for the economy and monetary policy. The sharp rally in the lowest quality credits and unprofitable firms seemed driven by short covering, rather than a new economic recovery.

In February, world markets have been set back by renewed rate fears on the strong data. Weaker data for the late winter/spring may provide relief. However, this won't leave room for a Goldilocks economic outlook over the near term.

For equities markets, falling profits are an inconvenient truth. S&P 500 EPS fell at a 14% annualized rate in 2H 2022, and we expect declines to persist near that pace through 1H 2023. (We still expect a 10% EPS decline for calendar 2023.)

A bottom in equities markets should come this year in anticipation of economic growth in 2024. However, downward EPS revisions could be a challenge through midyear.

While we might be premature, we would expect the spring quarter (2Q) to see the fastest rate of economic contraction as firms address high inventories by slashing production. Labor markets will likely weaken in a lagged fashion during this time and perhaps deliver a "jobless recovery" in 2024. Given a modest recovery to date and labor force constraints, we don't believe the US jobs market is vulnerable to large losses or is likely to see strong gains.

The reality for cyclical equities should be sharp downward revisions in EPS estimates for the calendar 2Q period as analysts predict an implausible 31% annualized gain from the first quarter pace. They go on to predict a new record high for quarterly US profits by 4Q of this year. We believe this is far too soon.

We still believe the worst of the bear market losses were felt in 2022, but we stay defensively positioned. Some investors see either a swift return or continuation of strong economic growth and low inflation despite a rapid US monetary tightening cycle with many other central banks following suit.

Real US yields (+1.5% to 2.0% in TIPS markets) are historically attractive in the current backdrop, as are investment grade corporate bond yields (5.8% for nominal long-term issues, greater for hybrid securities). Our largest off-index allocations in equities remains to the most consistent US dividend growers and pharmaceuticals firms. These are not, however, the likely leaders of a new early cycle bull market. When conditions are right, we would expect to shift our allocation toward riskier equities and continue raising the non-US share of our portfolios in time.

GIC | March 1

The Global Investment Committee left its asset allocation unchanged today with global Fixed Income +2% and Global Equities to -1%. Cash remains 1% underweight. We continue to favor assets with the most predictable source of returns, US investment grade coupon payments (especially US Treasuries) and dividends from the most consistent growers.

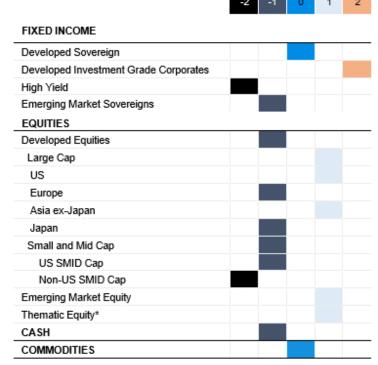
Global markets surged in January as inflation eased and a short covering rally boosted the value of unprofitable firms and weak borrowers in credit markets (CCC-rated issues). Subsequently, strong January economic data reignited interest rate fears on legitimate concerns that inflation will only decelerate slowly.

We believe January economic data for the US are highly misleading, reflecting difficult adjustments for seasonal variation during the most extreme seasonal swings of the year. Nonetheless, we don't believe the economic environment justifies "all clear views" for the economy. Reduced inflation will likely come at the price of stalled economic growth.

US jobs and retail sales data showed dramatic strength in January – likely signaling less weakness than reported during the prior two months. However, the sharp rise in inventories in 2022 – across retail, wholesale business and housing – points to reduced labor demand in the year ahead.

Corporate profits have fallen below our estimates in the final quarter of 2022, suggesting that our estimate for a roughly 10% EPS decline for the S&P 500 in 2023 is not excessively pessimistic. While continuing to cut estimates, industry analysts forecast an implausibly large EPS rebound during the second quarter of 2023. Their estimates also show a new record high for US EPS by 4Q 2023. This appears far

ASSET CLASSES | Global USD with Alternatives Level 3



*Thematic equities include Cyber security, Fintech, Pharmaceuticals, Global Natural Resources and US Oilfield Services.

Please refer to the Portfolio Allocations for a comprehensive breakdown of the portfolios at each risk level.

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

Arrows indicate changes from previous GIC meeting

too premature. As we expect declines in cyclical activity in the spring quarter as firms slash production, EPS estimates seem likely to be rationalized lower by midyear.

If economically sensitive equities correct lower in coming months, we would consider raising our allocation. For now, however, we favor strong and stable income opportunities in US fixed income and high quality dividend-oriented equities. Non-US markets in particular are more cheaply valued and should provide stronger returns as currencies appreciate against the US dollar. However, this could be realized in a period longer than our 12-18 month tactical return window.

In fixed income markets, we expect 10-year US Treasury yields to reach 3.0% at year-end 2023. However, longer-duration bonds are volatile and forecasts for bond price appreciation are not nearly as certain a source of return as coupon payments. Two-year US Treasury yields of 4.7% are higher and far less volatile. With shorter-term yields rising most sharply in recent months as the Fed tightened rapidly, we have added larger overweight positions in short-term bonds within portfolios. However, these high short-term rates are likely unsustainable. The Fed expects its long-term policy rate to average 2.5%, with the rate likely reaching 5.0% later this month. Avoiding ultra-low yields such as Japan government bonds and very low quality credit has given us the capacity to hold large overweights in high-yielding, high-quality fixed income across maturities.

Overall, our long-term strategic return estimates in both equities and fixed income have increased following the double-digit losses in both bonds and stocks in 2022. Even as markets still suffer from the after-effects of excessive macroeconomic stimulus and restraint, we urge investors to avoid abandoning a diversified portfolio approach. Innovation drives economic growth, and over time far exceeds the value of even prescient market timing (see our Outlook for 2023 for discussion).

Steven Wieting

Chief Investment Strategist and Chief Economist

We still fear recession risks are underpriced in markets.

Exaggerated strength in January economic data only increases that risk.

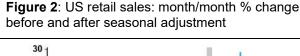
Still Wintertime for Profits, Not Spring

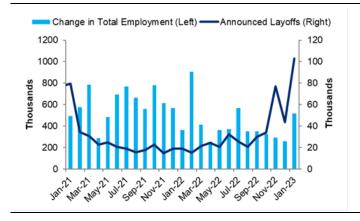
For economists, it's been said that blaming seasonal adjustments for surprising data is the "last refuge of a scoundrel." Nevertheless, we can't help but scoff at data suggesting that the US economy has had a sudden, sharp acceleration at the start of 2023. Did US employers decide to double their hiring pace in January while simultaneously announcing the largest mass layoffs since the COVID shutdowns? (See Figure 1.) And did US retailers experience a sudden spending boom in January after reporting a holiday period bust? (See Figure 2.)

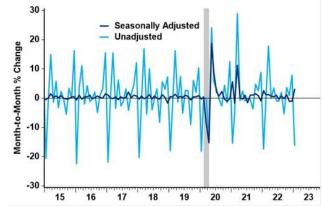
Data points for the turn of the year represent the seasonal extreme. As Figure 2 shows, the 16% drop in unadjusted retail sales for January was *rather ordinary*. In contrast, the 3% rise reported for the month *after seasonal adjustment* was stronger than 98% of all other months in the past 55 years. As for the jobs data, only January and July have recorded revisions higher than 300,000 in the US government's estimate of the monthly change in US employment.

Recent data likely hint that the severe slowing reported for the US economy in November/December datapoints was also exaggerated (biased downward). We are not arguing that a recession in the US economy is underway. If that were the case, we'd be focused on what's next – recovery. Rather, we fear that negative business cycle risks for markets are still underpriced.

Figure 1: Monthly change in US nonfarm jobs and announced layoffs







Source: Haver Analytics as of February 24, 2023. Gray areas are US recessions.

Labor demand reflects current production rates.

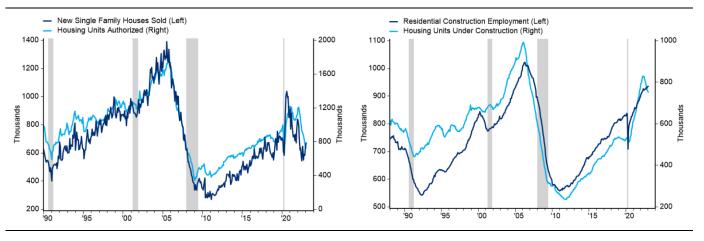
Sales and inventories data suggests this will adjust lower.

The Fed is currently focused on the "too prosperous" condition in US labor markets, a concern exacerbated by a sudden 517,000 leap in net hiring in January. Current demand for US labor reflects production requirements, which are now at a high level. As a prime example, one can see that the surge in interest rates has caused a historically sizeable drop in home sales, with new housing permits and starts following sales lower (Figure 3). In comparison, demand for residential construction labor reflects the very large number of housing units *still under construction*. This contrasts with the now lower pace of planned construction represented by building permits (Figure 4). Construction employment in the industry will follow the future production pace lower once housing units are

finished. This dynamic is similar, if less severe, across many industries. It will impact broad services employment as producers cut output, even while areas such as travel and tourism still experience pent-up demand (Figures 5-6).

Figure 3: New single family home sales and single family building permits

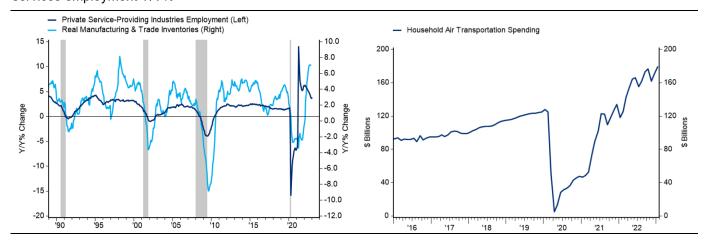
Figure 4: Housing units still under construction vs residential construction employment



Source: Haver Analytics as of February 24, 2023. Gray areas are US recessions.

Figure 5: US business inventories and private services employment Y/Y%

Figure 6: US consumer spending on air travel



Source: Haver Analytics as of February 24, 2023. Gray areas are US recessions.

Will our EPS estimates prove too pessimistic when industry experts disagree? Consider they forecast a new record high for US corporate profits by 4Q 2023, which seems phenomenally premature.

Unfortunately for US equities investors, corporate profits have not been among the positive surprises. Of course, the majority of firms have beaten the low bar of estimates for the quarter past, the estimates "served up" by the analysts who cover them. (Perhaps low estimates help smooth things over with Investor Relations departments?) Yet the 69% beat rate for the nearly 90% of S&P 500 firms was the lowest in 12 years, apart from 1H 2020. The weak signals from 4Q have sent revisions for 2023 lower, but unfortunately not enough to complete the job, in our view (Figures 7-8).

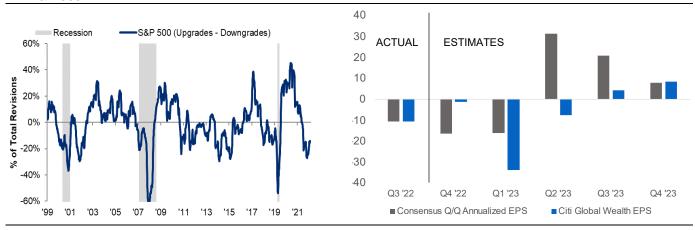
US share prices appear to reflect the current slowdown in business and EPS declines, not the further slowing we expect just ahead.

As Figure 8 shows, EPS fell at a 14% annualized rate in the second half 2022. EPS in the fourth quarter 2022 were 4% below our own quarterly estimate. For the first half 2023, we expect EPS to continue falling at roughly the same pace, leaving full year EPS 10% below 2022.

Even with cuts to analysts' estimates, our own forecast for S&P 500 EPS is about 10% below their full-year view. So, who will be more accurate? Consider that analysts project the spring quarter EPS to rise 31% (annualized) above the current quarter pace. This is actually the period when we think US economic activity measures will be at their peak rate of decline (perhaps other than employment). Moreover, analyst estimates show a new record high for US corporate profits by the fourth quarter 2023. We can only wish recovery would unfold so swiftly.

Figure 7: Net revisions to annual EPS estimates for the S&P 500

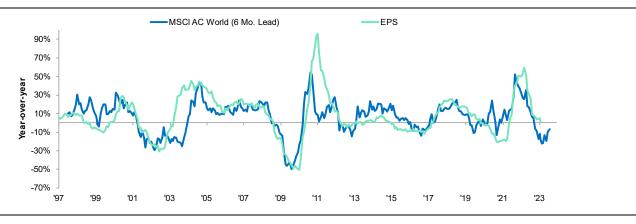
Figure 8: CGWI EPS estimates vs consensus



Source: Haver Analytics as of February 24, 2023.

As Figure 9 shows, share prices lead EPS. Last year's near 20% decline in share prices – even coupled with surging rates – wasn't an adjustment that anticipated rosy corporate profits this year. With the usual lead time, we expect markets to focus on the recovery of 2024, when we expect a 5% EPS gain, strengthening into 2025 and beyond. Over the near term, however, we believe share prices merely reflect current economic conditions and not the further weakening in business activity we expect in the coming few months (see Figures 10-11).

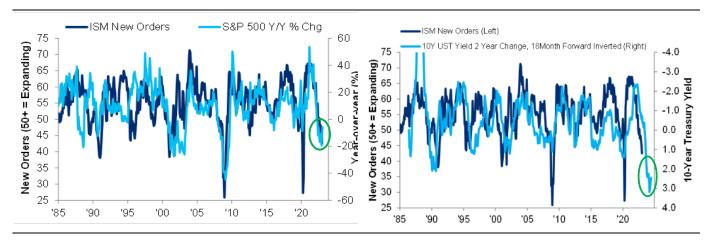
Figure 9: Global equities (6-month lead) vs EPS Y/Y%



Source: Bloomberg and Factset as of February 8, 2023. 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.

Figure 10: S&P 500 Y/Y% vs ISM New Orders

Figure 11: Change in 10yr UST yield (24 months) vs ISM New Orders



Source: Haver Analytics as of January 20, 2023. Note: LHS Circle displays the equity decline has coincided with the drop in ISM new order; RHS Circle displays that the sharp rise in bond yields has historically been followed by a further decline in economic activity. 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. Past performance is no guarantee of future results. Real results may vary.

While it might feel worse, market declines of 2022 have dramatically lowered investment risks from the "feel good" period of 2021.

No Pain, No Gain

It's our mission to help investors avoid the damaging extremes of business cycles, the exaggerated booms and busts of bull and bear markets. In particular, we want to help investors *avoid* making long-run portfolio mistakes because of some adverse short-term experience.

Unusually high yields and crushed equity markets are not preconditions to hold an investment portfolio.

After the sharp repricing to prospectively positive real yields, we are unlikely to revisit our extreme bond underweight of 2020-2021.

With this in mind, we have been gradually reducing the extent of our equity overweights since January 2021. As early as our Mid-Year Outlook for 2020, we warned that investors should avoid holding too large a concentration of COVID-boosted tech issues in portfolios. These shares have corrected the most in the past year before the premature optimism of 2023 set in (Figure 12).

The fact that fixed income did not truly shield portfolios from losses in 2022 stemmed from the dramatic easing of central banks. Some had cut and held nominal deposit rates at *negative* levels in the years before and during the COVID shock (Figures 13-14). The bond market's dramatic *drop* in value to prospectively price a positive real yield should be weighed in the overall mix of stocks/bonds looking forward (Figure 15).

At our peak weighting of 2020, we held global shares 12% overweight and global bonds 13% underweight, an extreme that we are unlikely to revisit unless yields again drop sharply while equities fall to an unusually low valuation.

However, unusually high yields and crushed equity markets are not preconditions to hold an investment portfolio. As Figure 16 shows, the long-run returns of investing in economic development and growth through equity markets has yielded a premium return to cash even in "normal times." So has lending at a longer duration than hoarding cash.

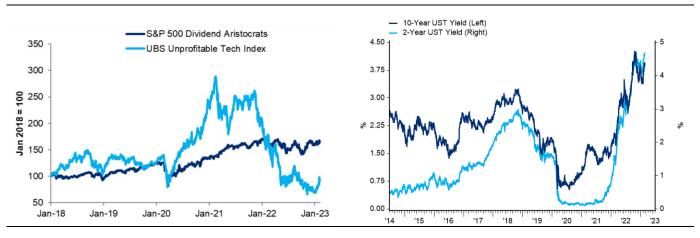
As we discussed in our Outlook, an equities investor who has held a portfolio through the dramatic crashes of the past three decades would have a real wealth level 3X higher than a "perfect market timer" who sold in early 2000 and earned T-Bill returns since then (Figure 17).

In essence, tactical asset allocation requires symmetry. Bull and bear markets are both exaggerated extremes. Big losses and gains largely, though not completely, offset each other (Figure 18).

Fortunately, economic development does not yield a zero-sum return. While investors might not appreciate it, both stocks and bonds investment risks are sharply lower today than they were in 2021 when asset prices were significantly higher and returns appeared much easier to come by.

Figure 12: Profitless tech shares vs S&P dividend aristocrats

Figure 13: US Treasury yields: 2-year and 10-year (%)



Source: Bloomberg and Haver Analytics as of February 15, 2023. Indices are unmanaged. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. 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...

Figure 14: German yields: 2-Year and 10-Year (%)

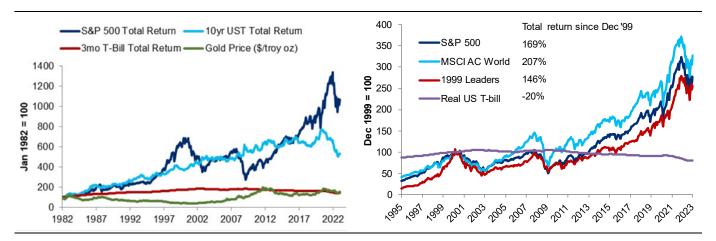
Figure 15: Strategic return estimates

			STRATEGIC RETURN ESTIMATES IN USD FOR 2023
German 10-Year Government Debt Yield (Left) German 2-Year Government Debt Yield		GLOBAL EQUITY	7.6%
31	^{3.00}	GLOBAL FIXED INCOME	5.1%
_ l	- 2.25	DEVELOPED MARKET EQUITIES	7.0%
2-	1.50	EMERGING MARKET EQUITIES	12.9%
M	- 1.50	INVESTMENT GRADE FIXED INCOME	4.6%
8 1-M	- 0.75 %	HIGH YIELD FIXED INCOME	7.4%
1 Nu 1		EMERGING MARKET FIXED INCOME	7.8%
What was a second		CASH	3.4%
0	-	HEDGE FUNDS	9.1%
A STATE OF THE STA	0.75	PRIVATE EQUITY	17.6%
A L. A.		REAL ESTATE	10.6%
-1 - հուդավարարարարարարարարարարարարարարարարարարա	- 1.50 3	COMMODITIES	2.4%

Source: Haver Analytics and Global Asset Allocation Team, data as of 31 October 2022. Gray areas are US recessions. Strategic Return Estimates (SRE) based on indices are Citi Global Wealth's forecast of returns over a 10-year time horizon for specific asset classes (to which the index belongs). Indices are used to proxy for each asset class. Cash refers to the US Cash SRE. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes use a proprietary forecasting methodology based on the assumption that equity valuations revert to their long-term trend over time. The methodology is built around specific valuation measures that require several stages of calculation. Assumptions on the projected growth of earnings and dividends are additionally applied to calculate the SRE of the equity asset class. Hedge Fund and Private Equity SREs are linked to equity SREs. Fixed Income asset class forecasts use a proprietary forecasting methodology that is based on current yield levels. Other asset classes use other specific forecasting methodologies. SREs are in US dollars. SREs are generally updated on an annual basis, however they may be updated off cycle based on market conditions or methodology adjustments. Strategic Return Estimates are no guarantee of future performance. SREs do not reflect the deduction of client fees and expenses. Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index. All SRE information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely ac

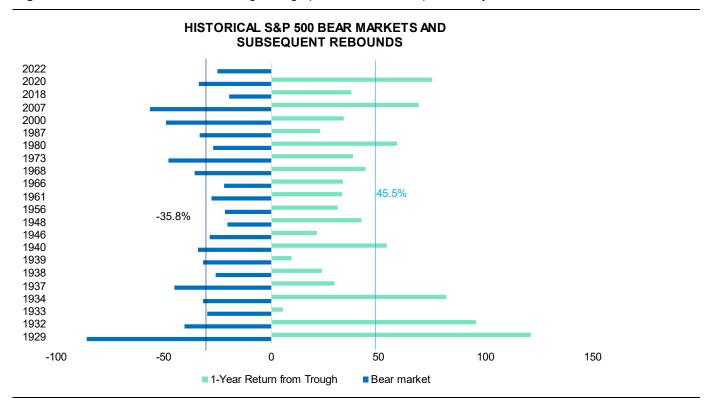
Figure 16: Real T-Bill, bond, gold, and equity returns

Figure 17: Real returns of 1-Year T-Bill, global shares, S&P 500 and 1999's largest 10 US equities by market cap



Source: Haver Analytics and Factset as of February 24, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Figure 18: S&P 500 bear markets through trough periods and subsequent one-year return



Source: Bloomberg, Haver Analytics as of January 9, 2022. 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. Past performance is no guarantee of future results. Real results may vary.

Joe Fiorica, CFA Head, Global Equity Strategy

Cecilia Chen, CFA Equity Strategy

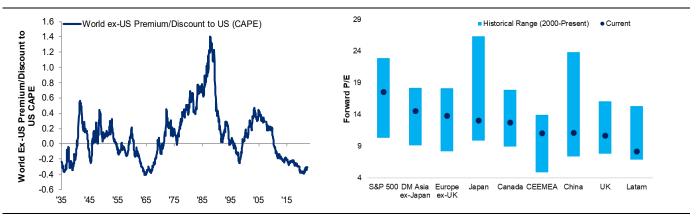
Will the next cycle be different for non-US stocks?

A favorable starting point for valuations

A common misconception among US-biased investors is that US stocks always have and always will trade at a premium to shares abroad. While this has certainly been true for the last decade or so, it is not a law of nature. In fact, for much of the last 100 years US equities have traded much closer to parity and sometimes even at a discount to their global peers (Figures 1-2). Over the past 15 years, however, US equities have gradually richened relative to international shares as America's tech dominance offered investors a highly coveted segment of growth in an otherwise muted global economic environment. Today, the US trades at a 27% premium to non-US equities on a forward P/E basis.

Figure 1: Non-US vs US relative CAPE

Figure 2: Current and historical P/E multiples by region



Source: Bloomberg, Factset and Global Quantitative Asset Allocation Team as of February 27, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Most crucially, US stocks have well out grown their share of global profits. While US equities make up roughly 60% of global market cap, US profits amount to just half of the world's earnings (Figure 3). Meanwhile Europe and Emerging Markets (in particular EM Asia) are delivering a greater share of profits than their current market caps would imply (Figure 4). This suggests global investors are skeptical that the non-US story can work, or that relatively resilient earnings today can hold up for long. While we expect a challenging year ahead for many of the world's largest economies, we see both cyclical and structural tailwinds for non-US shares in the expansion that will eventually follow the present slowdown.

Figure 3: US share of market cap and earnings as % of global equities

Figure 4: Regional share of market cap and earnings as % of global equities



Source: Bloomberg and Factset as of February 27, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Follow the money: signs of improving payouts and governance

Valuations are a notoriously poor market timing tool. Cheap can always get cheaper when fundamentals move in the wrong direction. While we see some evidence that US valuations have gotten overstretched relative to their overseas peers, it is hard to argue that US outperformance over the past decade was unjustified. US companies have been world-class at growing dividends and buybacks, while other developed markets have slowed or stagnated in that department (Figure 5).

Improving corporate governance in Japan

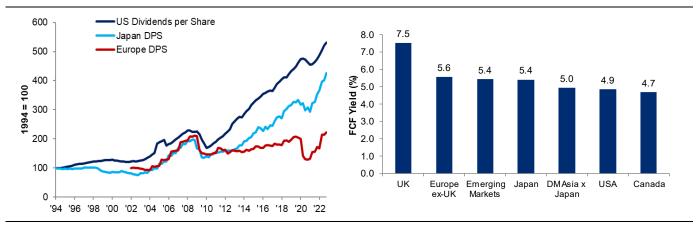
Early evidence suggests this paradigm may be shifting, or at least expanding beyond US shores. For example, while many Japanese multinationals make products that compete on the global market with American, European and Asian peers, investors have shunned their shares for decades amid concerns around opaque governance structures. After over a decade of shareholder-friendly reforms starting with late PM Abe in 2012 and most recently reinforced with updated listing rules on the Tokyo Stock Exchange, we are likely to see an unwinding of cross-ownership and a reduction in cash hoarding by leading Japanese firms in the years to come. Indeed, we are seeing building momentum around Japanese dividend growth since Abe's reforms took effect (Figure 5).

A renaissance for European buybacks?

Our colleagues in Europe <u>have written recently</u> about the growing momentum of buybacks in Europe. These payouts come as US firms are on the margin cutting back on share repurchases relative to stimulus-fueled 2021 levels. Of course, in aggregate, US companies buy back a more significant chunk of their own shares, amounting to 2.5% of market cap in 2022 vs just 0.7% for Europe ex-UK. But with free cash flow yields running higher for non-US shares broadly, we see room for payouts to grow in Europe and Asia in the years to come (Figure 6).

Figure 5: Dividends per share in the US, Japan and Europe

Figure 6: Free cash flow yields are higher outside the US



Source: Bloomberg and Factset as of February 27, 2023. Europe DPS data began in 2002. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Potential catalysts (and risks) for non-US outperformance

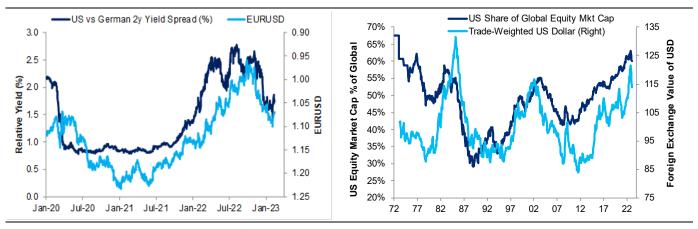
A Fed Pivot

Developments around US inflation and employment, and the Fed's reaction function to these conditions, are likely the most important factor driving global equity market direction at the moment. With inflation running above target in Europe and Japan, we think it likely that the Fed pivots towards easing before other major global central banks. The subsequent narrowing of interest rate differentials between the US and other major economies should drive a further weakening of the US dollar and incentivize more risk-taking outside the US (Figure 7).

Of course, a re-emergence of inflation, potentially coupled with a delayed economic slowdown, could ratchet US rate expectations ever higher. This scenario, which is not our base case, would likely delay the long-term weakening of the US dollar that we outlined in our Outlook 2023 (Figure 8).

Figure 7: US-European rate differentials have been key for the euro's direction

Figure 8: Trade-weighted USD vs US share of global market cap



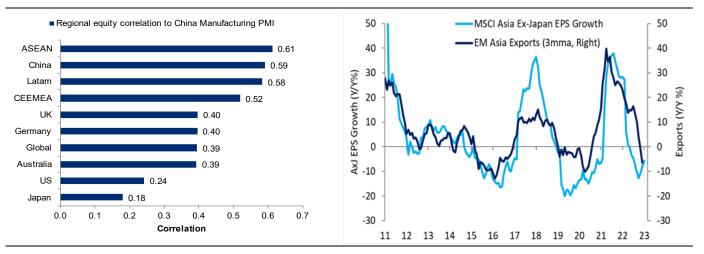
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Economic follow-through from Chinese reopening

The world's second-largest economy is on a very different economic trajectory from Europe and the Americas in 2023. After an initial surge from depressed levels as China rapidly adjusted its COVID policies, Chinese equities have taken a breather in February as investors realize short-term profits and contemplate the trajectory for the next leg of the recovery. We continue to expect that highly supportive fiscal and monetary policy in China should propel growth through the rest of the year. We therefore would expect China and China-exposed equities to outperform in this environment (Figure 9). While select US equities with significant exposure to China could also perform well, the broad US market tends to trade with a lower correlation to Chinese growth than other regions. A continued Chinese recovery should also be constructive for equity markets in broader Asia and Latin America, commodity producers in the UK, and exporters of cars and luxury goods in Europe (Figure 10).

Figure 9: Regional equity correlation to China Manufacturing PMI (since 2005)

Figure 10: The Chinese recovery should contribute to a resurgence in Asian exports and profits



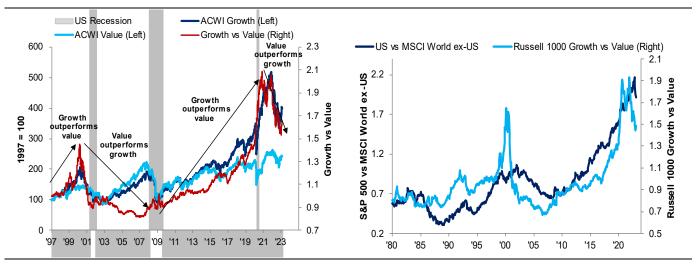
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Thematic shifts favor global portfolio exposure

While regional economic conditions are a key input for portfolio construction, we find that investing with an eye toward thematic trends can also be instructive to our regional biases. Market leadership in the decade or so between the Great Financial Crisis and COVID pandemic was broadly driven by near-zero interest rates, a scarcity of growth opportunities, and dominance of US technology giants. From a style perspective, this backdrop drove significant outperformance of growth stocks relative to value (Figure 11). Thinking from a thematic perspective, many of the winning themes of the 2010s like social media, cloud buildout, and e-commerce were largely concentrated in the US. For growth-hungry investors, the US was an obvious haven (Figure 12).

Figure 11: Value and growth have tended to alternate leadership each cycle

Figure 12: US vs non-US performance has generally tracked growth vs value



Source: Bloomberg, Haver, and Factset as of February 27, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

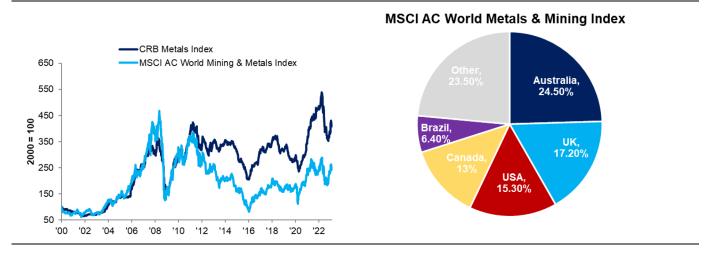
Looking forward, the trends we think will characterize the 2020s could be very different in nature, and likely more global:

- A push to de-carbonize the global economy will require significant investments in key commodities like copper, aluminum and lithium. Only 15% of public metals and mining firms, which should be key beneficiaries of this trend, are listed in the US. (Figures 13-14).
- Aging populations in the US, Europe and China will spend more (or demand more government spending) on pharmaceuticals, therapeutics and health care services offered by a global universe of equipment firms and researchers.
- Conflict between the US and China will benefit national champions on both sides of the divide. Asia's fast-growing middle class may choose to consume homegrown brands or products made in nations seen as less "controversial".

Even digitization, a theme which US players clearly dominated in the last decade, will see building leadership from European and Asian semiconductor manufacturing names, Chinese platform giants, and fintech upstarts in South Asia and Latin America.

Figure 13: CRB Metals prices vs Global Metals and Mining stocks

Figure 14: MSCI AC World Metals & Mining regional allocations



Source: Bloomberg and Factset as of February 27, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Portfolio allocations

This section shows the strategic and tactical asset allocations. The Global Asset Allocation (GAA) team creates strategic asset allocations (SAAs) 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 1 through Level 5 portfolios. GAA team then creates tactical allocations for all other profiles or subprofiles such as Global USD with Hedge Funds and Illiquids PE & RE Level 2 through Level 5 portfolios. These sample portfolios included below reflect 2023 SAAs and the tactical over/under weights expressed at the March 01, 2023 GIC meeting.

Global USD with Hedge Funds and 15% 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.

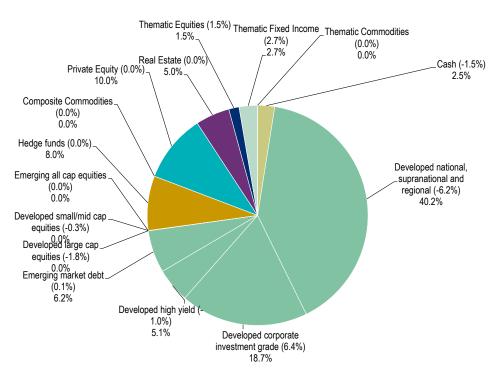
Active = the difference between tactical and strategic allocations. Minor differences may result due to roundiwng.

Classification	Strategi c (%)	Tactical* (%)	Active (%)
Cash	4.0	2.5	-1.5
Fixed Income	70.9	73.0	2.0
Developed	58.7	59.0	0.3
Investment Grade			
US	36.4	48.2	11.8
Government	16.3	19.8	3.5
Inflation-Linked	2.2	2.4	0.2
Short	4.7	5.8	1.0
Intermediate	6.8	6.9	0.2
Long	2.5	4.6	2.1
Securitized	11.7	12.8	1.2
Credit	8.5	15.6	7.1
Short	1.5	2.7	1.2
Intermediate	4.7	10.6	5.9
Long	2.3	2.3	0.0
Europe	17.0	9.0	-8.0
Government	13.2	5.9	-7.3
Credit	3.8	3.1	-0.7
Australia	0.4	0.4	0.0
Government	0.4	0.4	0.0
Japan	4.9	1.4	-3.5
Government	4.9	1.4	-3.5
Developed High Yield	6.1	5.1	-1.0
US	4.6	4.1	-0.5
Europe	1.5	0.9	-0.5
Emerging Market Debt	6.1	6.2	0.1
Asia	1.0	1.6	0.5
Local currency	0.5	0.5	0.0
Foreign currency	0.5	1.0	0.5
EMEA	3.1	2.3	-0.8
Local currency	1.5	0.7	-0.8
Foreign currency	1.5	1.5	0.0
LatAm	2.0	2.4	0.4
Local currency	1.0	1.0	0.0
Foreign currency	1.0	1.4	0.4
Thematic Fixed Income	0.0	2.7	2.7
US Bank Loans	0.0	0.0	0.0
Preferreds	0.0	2.7	2.7
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	2.1	1.5	-0.5
Developed Equities	2.1	0.0	-2.1
Developed Large	1.8	0.0	-1.8
Cap Equities			
US Canada	1.3 0.1	0.0 0.0	-1.3 -0.1
Canada UK	0.1	0.0	-0.1 -0.1
Switzerland	0.1	0.0	-0.1 -0.1
Europe ex UK ex	0.2	0.0	-0.2
Switzerland			
Asia ex Japan	0.1	0.0	-0.1
Japan Developed Small/	0.1	0.0	-0.1
Mid Cap Equities	0.3	0.0	-0.3
US	0.2	0.0	-0.2
Non-US	0.1	0.0	-0.1
Emerging All Cap Equities Asia	0.0 0.0	0.0 0.0	0.0 0.0
7 10.00	1		
China	0.0	0.0	0.0
Asia (ex China) EMEA	0.0 0.0	0.0 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	1.5	1.5
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
Global Pharma	0.0	1.5	1.5
Cyber Security	0.0	0.0	0.0
Fintech	0.0	0.0	0.0
Natural Resources	0.0	0.0	0.0
Oil Services	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	8.0	8.0	0.0
Private Equity	10.0	10.0	0.0
Real Estate	5.0	5.0	0.0
Total	100.0	100.0	0.0

Global USD with Hedge Funds and 15% 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 underweight position of -0.5%, global fixed income has an overweight of +2% and cash has an underweight of -1.5%.

Within equities, developed large cap equities are at an underweight position of -1.8% and small/mid cap equities are at an underweight position of -0.3%. Emerging market equities have neutral position. Thematic equities have an overweight of +1.5%.

Within fixed income, developed investment grade has an overweight position of +0.3%; developed high yield has an underweight position of -1.0% and emerging market debt has a slight overweight position of +0.1%. Thematic fixed income has an overweight of +2.7%.

Hedge Fund allocation in the tactial portfolio is 8%. Private Equity and Real Estate allocations are 10% and 5%, respectively. All these three asset classes positionings are neutral.

Global USD with Hedge Funds and 15% 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.

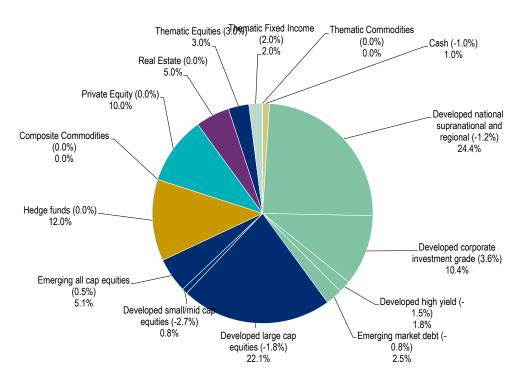
	Strategi	Tactical*	Active
Classification	c (%)	(%)	(%)
Cash	2.0	1.0	-1.0
Fixed Income	39.0	41.0	2.0
Developed	32.4	34.7	2.4
Investment Grade			
US	20.1	33.1	13.0
Government	9.0	17.6	8.7
Inflation-Linked	1.2	2.3	1.0
Short	2.6	4.8	2.1
Intermediate	3.7	7.2	3.5
Long	1.4	3.4	2.0
Securitized	6.4	6.1	-0.3
Credit	4.7	9.3	4.6
Short	0.8	1.8	1.0
Intermediate	2.6	6.2	3.6
Long	1.3	1.3	0.0
Europe	9.4	1.5	-7.9
Government	7.3	0.4	-6.9
Credit	2.1	1.1	-1.0
Australia	0.2	0.2	0.0
Government	0.2	0.2	0.0
Japan	2.7	0.0	-2.7
Government	2.7	0.0	-2.7
Developed High Yield	3.3	1.8	-1.5
US	2.5	1.5	-1.0
Europe	0.8	0.3	-0.5
Emerging Market Debt	3.3	2.5	-0.8
Asia	0.6	0.5	-0.1
Local currency	0.3	0.0	-0.3
Foreign currency	0.3	0.5	0.2
EMEA	1.7	0.9	-0.8
Local currency	0.8	0.1	-0.8
Foreign currency	0.8	8.0	-0.0
LatAm	1.1	1.1	-0.0
Local currency	0.5	0.5	-0.0
Foreign currency	0.5	0.5	-0.0
Thematic Fixed Income	0.0	2.0	2.0
US Bank Loans	0.0	0.0	0.0
Preferreds	0.0	2.0	2.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

p	r		
	Strategic	Tactical*	Active
Classification	(%) 32.0	(%) 31.0	(%) -1.0
Equities Developed Equities	32.0 27.4	31.0 22.9	-1.0 -4.5
Developed Large			
Cap Equities	23.9	22.1	-1.8
US	16.8	16.0	-0.8
Canada	0.9	0.9	-0.1
UK	1.0	1.0	-0.1
Switzerland	0.7	0.6	-0.1
Europe ex UK ex Switzerland	2.1	1.7	-0.4
Asia ex Japan	0.8	0.8	-0.1
Japan	1.5	1.2	-0.3
Developed Small/	3.5	0.8	-2.7
Mid Cap Equities			
US Non-LIC	2.1 1.5	0.7 0.1	-1.4 -1.3
Non-US Emerging All Cap Equities	1.5 4.6	5.1	-1.3 0.5
Asia Cap Equities	3.8	4.6	0.8
China	1.3	2.2	0.9
Asia (ex China)	2.5	2.3	-0.2
EMEA	0.3	2.3 0.1	-0.2 -0.2
LatAm	0.5	0.1	-0.2
Brazil	0.3	0.3	-0.0
LatAm ex Brazil	0.2	0.2	-0.0
Thematic Equities	0.0	3.0	3.0
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
Global Pharma	0.0	2.0	2.0
Cyber Security	0.0	1.0	1.0
Fintech	0.0	0.0	0.0
Natural Resources	0.0	0.0	0.0
Oil Services	0.0	0.0	0.0
Commodities	0.0	0.0 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 12.0	0.0 12.0	0.0 0.0
Hedge Funds Private Equity	12.0	12.0	0.0
Real Estate	5.0	5.0	0.0
Total	100.0	100.0	0.0

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

Global USD with Hedge Funds and 15% 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 underweight position -1.0%, global fixed income has an overweight of +2.0% and cash has an underweight of -1.0%.

Within equities, developed large cap equities have an underweight position of -1.8% and developed small/mid cap equities have an underweight position of -2.7%. Emerging market equities have an overweight position of +0.5%. Thematic equities have an overweight position of +3.0%.

Within fixed income, developed investment grade debt has an overweight position of +2.4%; developed high yield has an underweight position of -1.5%; emerging market debt has an underweight position of -0.8%. Thematic fixed income has an overweight position of +2.0%.

Hedge Fund allocation in the tactial portfolio is 12%. Private Equity and Real Estate allocations are 10% and 5%, respectively. All these three asset classes positionings are neutral.

Global USD with Hedge Funds and 15% 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.

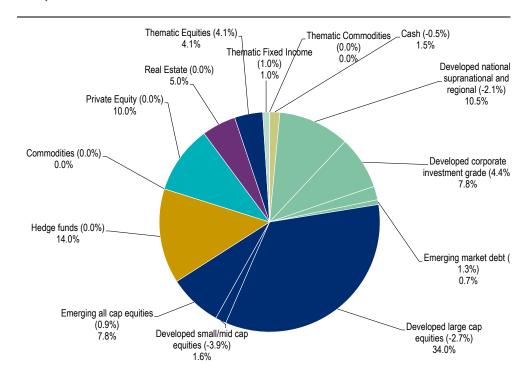
			Active
Classification	c (%)	(%)	(%)
Cash	2.0	1.5	-0.5
Fixed Income	20.0	22.0	2.0
Developed	16.0	18.3	2.3
Investment Grade US	9.9	18.2	8.3
	9.9 4.4	10.2	5.8
Government Inflation-Linked	4. 4 0.6	0.6	-0.0
Short	1.3	2.8	-0.0 1.5
Intermediate	1.8	4.2	2.3
	0.7	4.2 2.7	2.0
Long Securitized	3.2	0.3	-2.9
	2.3	0.3 7.8	-2.9 5.4
Credit	2.3 0.4	7.6 2.1	5.4 1.7
Short	1.3	5.5	4.2
Intermediate		5.5 0.1	4.∠ -0.5
Long	0.6 4.6		-0.5 -4.6
Europe		0.0	
Government	3.6	0.0	-3.6
Credit	1.0	0.0	-1.0
Australia	0.1	0.0	-0.1
Government	0.1	0.0	-0.1
Japan	1.3 1.3	0.0	-1.3
Government		0.0	-1.3
Developed High Yield	2.0	2.0	0.0
US	1.5	1.5	0.0
Europe	0.5	0.5	0.0
Emerging Market Debt	2.0	0.7	-1.3
Asia	0.3	0.4	0.0
Local currency	0.2	0.2	0.1
Foreign currency	0.2	0.2	-0.0
EMEA	1.0	0.0	-1.0
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	1.0	1.0
US Bank Loans	0.0	0.0	0.0
Preferreds	0.0	1.0	1.0
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	49.1	47.6	-1.5
Developed Equities	42.2	35.6	-6.6
Developed Large	36.8	34.0	-2.7
Cap Equities US	25.9	25.4	-0.5
Canada	25.9	1.3	-0.5 -0.1
UK	1.6	1.3	-0.3
Switzerland	1.0	0.6	-0.4
Europe ex UK ex	3.3	2.4	-0.9
Switzerland			
Asia ex Japan	1.3	1.2	-0.1
Japan	2.3	1.8	-0.5
Developed Small/ Mid Cap Equities	5.5	1.6	-3.9
US	3.2	1.4	-1.8
Non-US	2.3	0.2	-2.1
Emerging All Cap Equities	6.9	7.8	0.9
Asia	5.7	7.0	1.3
China	2.0	3.5	1.5
Asia (ex China)	3.7	3.5	-0.2
EMEA `	0.4	0.1	-0.3
LatAm	0.8	0.7	-0.0
Brazil	0.5	0.5	-0.0
LatAm ex Brazil	0.3	0.3	-0.0
Thematic Equities	0.0	4.1	4.1
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
Global Pharma	0.0	2.8	2.8
Cyber Security	0.0	1.4	1.4
Fintech	0.0	0.0	0.0
Natural Resources	0.0	0.0	0.0
Oil Services	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	14.0	14.0	0.0
Real Estate	5.0	5.0	0.0
Total	100.0	100.0	-0.0

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

Global USD with Hedge Funds and 15% 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 underweight position of -1.5%, global fixed income has an overweight position of +2.0% and cash has an underweight position of -0.5%.

Within equities, developed large cap equities have an underweight position of -2.7% and developed small/mid cap equities have an underweight position of -3.9%. Emerging market equities have an overweight of +0.9%. Thematic equities have an overweight of +4.1%.

Within fixed income, developed investment grade has an overweight position of +2.3%; developed high yield has a neutral position and emerging market debt has an underweight position of -1.3%. Thematic fixed income has an overweight of +1.0%.

Hedge Fund allocation in the tactial portfolio is 14%. Private Equity and Real Estate allocations are 10% and 5%, respectively. All these three asset classes positionings are neutral.

Global USD with Hedge Funds and 15% 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.

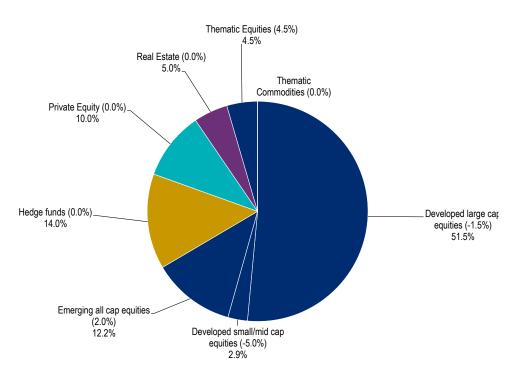
		Tactical*	Active
Classification	c (%)	(%)	(%)
Cash	0.0	0.0	0.0
Fixed income	0.0	0.0	0.0
Developed	0.0	0.0	0.0
Investment Grade	0.0		
US	0.0	0.0	0.0
Government	0.0	0.0	0.0
Inflation-Linked	0.0	0.0	0.0
Short	0.0	0.0	0.0
Intermediate	0.0	0.0	0.0
Long	0.0	0.0	0.0
Securitized	0.0	0.0	0.0
Credit	0.0	0.0	0.0
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
Preferreds	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

	Strategic	Tactical*	Active
Classification	(%)	(%)	(%)
Equities	71.0	71.0	0.0
Developed Equities	60.8	54.3	-6.5
Developed Large Cap Equities	53.0	51.5	-1.5
US	37.3	39.4	2.0
Canada	2.0	1.3	-0.7
UK	2.3	1.3	-1.0
Switzerland	1.5	0.7	-0.8
Europe ex UK ex Switzerland	4.7	3.7	-1.0
Asia ex Japan	1.8	1.9	0.0
Japan	3.3	3.3	-0.1
Developed Small/ Mid Cap Equities	7.9	2.9	-5.0
US	4.6	2.4	-2.2
Non-US	3.3	0.5	-2.8
Emerging All Cap Equities	10.2	12.2	2.0
Asia	8.4	10.8	2.4
China	2.9	5.3	2.4
Asia (ex China)	5.5	5.5	0.0
EMEA LatAm	0.6 1.1	0.2 1.1	-0.4
Brazil	0.7	0.7	-0.0 -0.0
LatAm ex Brazil	0.7	0.7	-0.0 -0.0
	0.4	4.5	
Thematic Equities			4.5
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
Global Pharma	0.0	3.0	3.0
Cyber Security	0.0	1.5	1.5
Fintech	0.0	0.0	0.0
Natural Resources	0.0	0.0	0.0
Oil Services	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	10.0	10.0	0.0
Real Estate	5.0	5.0	0.0
Total	100.0	100.0	0.0

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

Global USD with Hedge Funds and 15% 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 as well as cash are all at an overall neutral position.

Within equities, developed large cap equities have an underweight position of -1.5% and developed small/mid cap equities have an underweight position of -5.0%. Emerging market equities have an overweight of +2.0%. Thematic equities have an overweight of +4.5%.

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

Hedge Fund allocation in the tactial portfolio is 14%. Private Equity and Real Estate allocations are 10% and 5%, respectively. All these three asset classes positionings are neutral.

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.

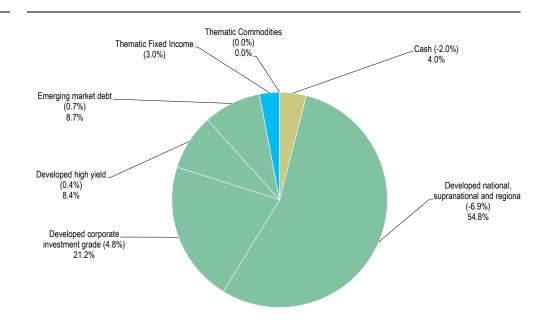
Classification	Strategi c (%)	Tactical* (%)	Active (%)
Cash	6.0	4.0	-2.0
Fixed Income	94.0	96.0	2.0
Developed Investment Grade	78.0	75.9	-2.1
US	48.4	57.5	9.1
Government	21.6	24.2	2.6
Inflation-Linked	3.0	2.8	-0.2
Short	6.3	8.1	1.8
Intermediate	9.0	8.0	-1.0
Long	3.4	5.4	2.0
Securitized	15.5	17.0	1.5
Credit	11.3	16.3	5.0
Short	1.9	2.9	1.0
Intermediate	6.3	10.3	4.0
Long	3.1	3.1	0.0
Europe	22.6	14.9	-7.7
Government	17.5	10.0	-7.5
Credit	5.1	4.9	-0.2
Australia	0.5	0.5	0.0
Government	0.5	0.5	0.0
Japan	6.5	3.0	-3.5
Government	6.5	3.0	-3.5
Developed High Yield	8.0	8.4	0.4
US	6.1	5.4	-0.7
Europe	1.9	3.0	1.1
Emerging Market Debt	8.0	8.7	0.7
Asia	1.4	2.1	0.7
Local currency	0.7	0.6	-0.1
Foreign currency	0.7	1.5	0.8
EMEA	4.0	3.3	-0.8
Local currency	2.0	1.3	-0.8
Foreign currency	2.0	2.0	0.0
LatAm	2.6	3.3	0.7
Local currency	1.3	1.3	0.0
Foreign currency	1.3	2.0	0.7
Thematic Fixed Income	0.0	3.0	3.0
US Bank Loans	0.0	0.0	0.0
Preferreds	0.0	3.0	3.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

	Strategic	Tactical*	Active
Classification	(%)	(%)	(%)
Equities	0.0	0.0	0.0
Developed Equities	0.0	0.0	0.0
Developed Large	0.0	0.0	0.0
Cap Equities 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
Global Pharma	0.0	0.0	0.0
Cyber Security	0.0	0.0	0.0
Fintech	0.0	0.0	0.0
Natural Resources	0.0	0.0	0.0
Oil Services	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Total	100.0	100.0	0.0

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

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





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

Core Positions

Global equities have an overal neutral position, global fixed income has an overweight of +2.0% and cash has an underweight of -2.0%.

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

Within fixed income, developed investment grade debt has an underweight position of -2.1%; developed high yield has a slight overweight position of +0.4% and emerging market debt has an overweight position of +0.7%. Thematic fixed income has an overweight position of +3.0%.

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.

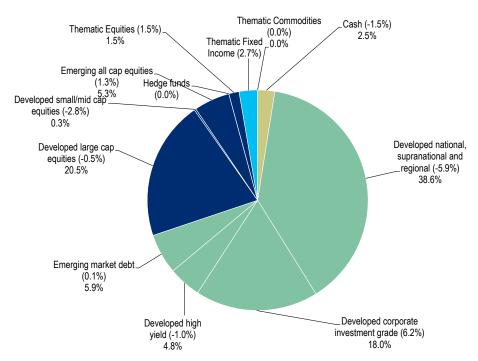
Classification	Strategi c (%)	Tactical* (%)	Active (%)
Cash	4.0	2.5	-1.5
Fixed Income	68.0	70.0	2.0
Developed			
Investment Grade	56.4	56.6	0.2
US	35.0	46.3	11.3
Government	15.6	19.0	3.4
Inflation-Linked	2.1	2.3	0.2
Short	4.6	5.6	1.0
Intermediate	6.5	6.6	0.2
Long	2.4	4.4	2.0
Securitized	11.2	12.3	1.1
Credit	8.2	15.0	6.9
Short	1.4	2.6	1.2
Intermediate	4.5	10.2	5.7
Long	2.3	2.3	0.0
Europe	16.3	8.7	-7.7
Government	12.7	5.7	-7.0
Credit	3.7	3.0	-0.7
Australia	0.4	0.4	0.0
Government	0.4	0.4	0.0
Japan	4.7	1.3	-3.4
Government	4.7	1.3	-3.4
Developed High Yield	5.8	4.8	-1.0
US	4.4	3.9	-0.5
Europe	1.4	0.9	-0.5
Emerging Market Debt	5.8	5.9	0.1
Asia	1.0	1.5	0.5
Local currency	0.5	0.5	-0.0
Foreign currency	0.5	1.0	0.5
EMEA	2.9	2.2	-0.8
Local currency	1.5	0.7	-0.8
Foreign currency	1.5	1.5	-0.0
LatAm	1.9	2.3	0.4
Local currency	0.9	0.9	-0.0
Foreign currency	0.9	1.3	0.4
Thematic Fixed Income	0.0	2.7	2.7
US Bank Loans	0.0	0.0	0.0
Preferreds	0.0	2.7	2.7
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

	Strategic	Tactical*	Active
Classification	(%)	(%)	(%)
Equities	28.0	27.5	-0.5 -3.3
Developed Equities Developed Large	24.0	20.7	-3.3
Cap Equities	20.9	20.5	-0.5
US	14.7	15.2	0.5
Canada	0.8	0.8	0.0
UK	0.9	0.9	0.0
Switzerland	0.6	0.5	-0.0
Europe ex UK ex Switzerland	1.9	1.4	-0.5
Asia ex Japan	0.7	0.7	0.0
Japan	1.3	0.9	-0.4
Developed Small/ Mid Cap Equities	3.1	0.3	-2.8
US	1.8	0.3	-1.5
Non-US Emerging All Cap Equities	1.3 4.0	0.0 5.3	-1.3 1.3
Asia Cap Equities	3.3	3.3 4.8	1.5
China	3.3 1.1	2.6	1.5
	2.2	2.0	0.0
Asia (ex China) EMEA	0.2	0.0	-0.2
LatAm	0.2	0.0	-0.2 0.0
Brazil	0.3	0.3	0.0
LatAm ex Brazil	0.3	0.3	0.0
Thematic Equities	0.0	1.5	1.5
'	0.0	0.0	0.0
Global Equity REITs			
US Mortgage REITs	0.0	0.0	0.0
Global Healthcare	0.0	0.0	0.0
Global Pharma	0.0	1.5	1.5
Cyber Security	0.0	0.0	0.0
Fintech	0.0	0.0	0.0
Natural Resources	0.0	0.0	0.0
Oil Services	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Total	100.0	100.0	0.0

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

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





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

Core Positions

Global equities have an underweight position of -0.5%, global fixed income has an overweight of +2.0% and cash has an underweight of -1.5%.

Within equities, developed large cap equities have an underweight position of -0.5% while developed small/mid cap equities have an underweight of -2.8%. Emerging market equities have an overweight of +1.3%. Thematic equities have an overweight of +1.5%.

Within fixed income, developed investment grade has an overweight position of +0.2%; developed high yield has an underweight position of -1.0% and emerging market debt has a slight overweight position of +0.1%. Thematic fixed income has an overweight position of +2.7%.

Global USD without Hedge Funds: Risk Level 3

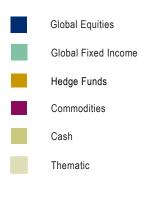
Risk Level 3 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. Risk Level 3 may be appropriate for investors willing to subject their portfolio to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

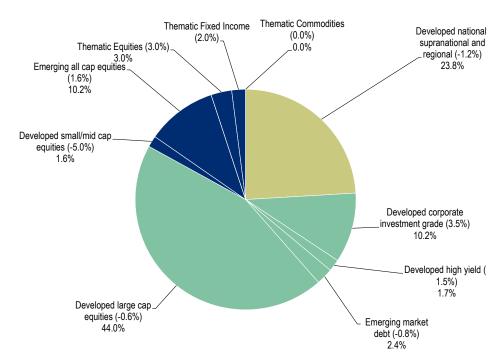
Classification	Strategi c (%)	Tactical* (%)	Active (%)
Cash	2.0	1.0	-1.0
Fixed Income	38.1	40.1	2.0
Developed Investment Grade	31.7	34.0	2.3
US	19.6	32.3	12.7
Government	8.8	17.3	8.5
Inflation-Linked	1.2	2.2	1.0
Short	2.6	4.7	2.1
Intermediate	3.6	7.0	3.4
Long	1.4	3.4	2.0
Securitized	6.3	6.0	-0.3
Credit	4.6	9.1	4.5
Short	0.8	1.8	1.0
Intermediate	2.5	6.0	3.5
Long	1.3	1.3	0.0
Europe	9.2	1.5	-7.7
Government	7.1	0.4	-6.7
Credit	2.1	1.1	-1.0
Australia	0.2	0.2	0.0
Government	0.2	0.2	0.0
Japan	2.7	0.0	-2.7
Government	2.7	0.0	-2.7
Developed High Yield	3.2	1.7	-1.5
US	2.5	1.5	-1.0
Europe	8.0	0.3	-0.5
Emerging Market Debt	3.2	2.4	-0.8
Asia	0.6	0.5	-0.1
Local currency	0.3	0.0	-0.3
Foreign currency	0.3	0.5	0.2
EMEA	1.6	0.9	-0.8
Local currency	0.8	0.1	-0.8
Foreign currency	0.8	8.0	-0.0
LatAm	1.0	1.0	-0.0
Local currency	0.5	0.5	-0.0
Foreign currency	0.5	0.5	-0.0
Thematic Fixed Income	0.0	2.0	2.0
US Bank Loans	0.0	0.0	0.0
Preferreds	0.0	2.0	2.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0

	Strategic	Tactical*	Active
Classification	(%)	(%)	(%)
Equities	59.9	58.9	-1.0
Developed Equities	51.3	45.7	-5.6
Developed Large	44.7	44.0	-0.6
Cap Equities			
US Canada	31.5 1.7	32.0 1.7	0.5 0.0
UK	1.7	1.7	0.0
Switzerland	1.3	1.2	-0.1
Europe ex UK ex			
Switzerland	4.0	3.4	-0.5
Asia ex Japan	1.5	1.5	0.0
Japan	2.8	2.3	-0.5
Developed Small/ Mid Cap Equities	6.6	1.6	-5.0
US	3.9	1.4	- 2.5
Non-US	2.8	0.3	-2.5
Emerging All Cap Equities	8.6	10.2	1.6
Asia	7.1	9.1	2.0
China	2.5	4.5	2.0
Asia (ex China)	4.6	4.6	-0.0
EMEA	0.5	0.1	-0.4
LatAm	1.0	1.0	-0.0
Brazil	0.6	0.6	-0.0
LatAm ex Brazil	0.3	0.3	-0.0
Thematic Equities	0.0	3.0	3.0
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
Global Pharma	0.0	2.0	2.0
Cyber Security	0.0	1.0	1.0
Fintech	0.0	0.0	0.0
Natural Resources	0.0	0.0	0.0
Oil Services	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5			
	0.0	0.0	0.0
Total	100.0	100.0	-0.0

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

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





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

Core Positions

Global equities have an underweight position of -1.0%, global fixed income has an overweight position of +2.0% and cash has an underweight position of -1.0%.

Within equities, developed large cap equities have an underweight position of -0.6% while developed small/mid cap equities have an underweight position of -5.0%. Emerging market equities have an overweight of +1.6%. Thematic equities have an overweight of +3.0%.

Within fixed income, developed investment grade debt has an overweight position of +2.3%; developed high yield has an underweight position of -1.5%; emerging market debt has an underweight position of -0.8%. 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.

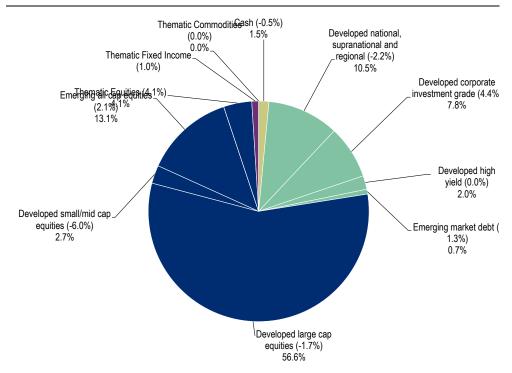
	Strategi	Tactical *	Activ e
Classification	c (%)	(%)	(%)
Cash	2.0	1.5	-0.5
Fixed Income	20.0	22.0	2.0
Developed Investment Grade	16.0	18.3	2.3
US	9.9	18.2	8.3
Government	4.4	10.2	5.8
Inflation-Linked	0.6	0.6	-0.0
Short	1.3	2.8	1.5
Intermediate	1.8	4.2	2.4
Long	0.7	2.7	2.0
Securitized	3.2	0.3	-2.9
Credit	2.3	7.8	5.4
Short	0.4	2.1	1.7
Intermediate	1.3	5.5	4.2
Long	0.6	0.1	-0.5
Europe	4.6	0.0	-4.6
Government	3.6	0.0	-3.6
Credit	1.0	0.0	-1.0
Australia	0.1	0.0	-0.1
Government	0.1	0.0	-0.1
Japan	1.3	0.0	-1.3
Government	1.3	0.0	-1.3
Developed High Yield	2.0	2.0	0.0
US	1.5	1.5	0.0
Europe	0.5	0.5	0.0
Emerging Market Debt	2.0	0.7	-1.3
Asia	0.3	0.4	0.0
Local currency	0.2	0.2	0.1
Foreign currency	0.2	0.2	-0.0
EMEA	1.0	0.0	-1.0
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	-0.1
Thematic Fixed Income	0.0	1.0	1.0
US Bank Loans	0.0	0.0	0.0
Preferreds	0.0	1.0	1.0
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	78.0	76.5	-1.5
Developed Equities	67.0	59.3	-7.7
Developed Large Cap Equities	58.3	56.6	-1.7
US	41.1	42.2	1.1
Canada	2.2	2.2	-0.0
UK	2.5	2.2	-0.3
Switzerland	1.6	1.0	-0.6
Europe ex UK ex	5.2	3.9	-1.3
Switzerland Asia ex Japan	2.0	2.0	-0.0
Japan	3.7	3.0	-0.0 -0.7
Developed Small/			
Mid Cap Equities	8.7	2.7	-6.0
US	5.0	2.3	-2.8
Non-US	3.6	0.4	-3.3
Emerging All Cap Equities	11.0	13.1	2.1
Asia	9.1	11.7	2.6
China	3.2	5.8	2.7
Asia (ex China)	6.0	5.9	-0.0
EMEA	0.7	0.1	-0.5
LatAm	1.2	1.2	0.0
Brazil	0.8	0.8	0.0
LatAm ex Brazil	0.4	0.4	0.0
Thematic Equities	0.0	4.1	4.1
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
Global Pharma	0.0	2.8	2.8
Cyber Security	0.0	1.4	1.4
Fintech	0.0	0.0	0.0
Natural Resources	0.0	0.0	0.0
Oil Services	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Total	100.0	100.0	-0.0

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

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





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

Core Positions

Global equities have an underweight position of -1.5%, global fixed income has an overweight of +2.0% and cash has an underweight of -0.5%.

Within equities, developed large cap equities have an underweight position of -1.7% while developed small/mid cap equities have an underweight position of -6.0%. Emerging market equities have an overweight of +2.1%. Thematic equities have an overweight position of +4.1%.

Within fixed income, developed investment grade debt has an overweight position of +2.3%; 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 +1.0%.

Global USD without Hedge Funds: Risk Level 5

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

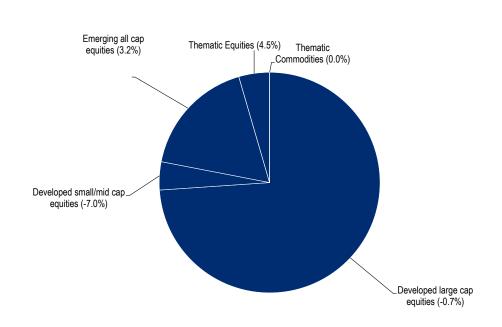
Classification	Strategi c (%)	Tactical* (%)	Active (%)
Cash	0.0	0.0	0.0
Fixed income	0.0	0.0	0.0
Developed	0.0	0.0	0.0
Investment Grade			
US	0.0	0.0	0.0
Government	0.0	0.0	0.0
Inflation-Linked	0.0	0.0	0.0
Short	0.0	0.0	0.0
Intermediate	0.0	0.0	0.0
Long	0.0	0.0	0.0
Securitized	0.0	0.0	0.0
Credit	0.0	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
Preferreds	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	85.7	78.0	-7.7
Developed Large Cap Equities	74.6	73.9	-0.7
US US	52.6	56.5	4.0
Canada	2.8	1.9	-1.0
UK	3.3	1.9	-1.4
Switzerland	2.1	1.0	-1.1
Europe ex UK ex	6.6	5.3	-1.3
Switzerland			
Asia ex Japan	2.6	2.7	0.1
Japan Developed Small/	4.7	4.7	0.0
Mid Cap Equities	11.1	4.1	-7.0
US	6.5	3.5	-3.0
Non-US	4.6	0.7	-4.0
Emerging All Cap Equities	14.3	17.5	3.2
Asia	11.8	15.5	3.7
China	4.1	7.6	3.5
Asia (ex China)	7.7	7.9	0.2
EMEA	0.9	0.4	-0.5
LatAm	1.6	1.6	0.0
Brazil	1.0	1.0	0.0
LatAm ex Brazil	0.6	0.6	0.0
Thematic Equities	0.0	4.5	4.5
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
Global Pharma	0.0	3.0	3.0
Cyber Security	0.0	1.5	1.5
Fintech	0.0	0.0	0.0
Natural Resources	0.0	0.0	0.0
Oil Services	0.0	0.0	0.0
Commodities	0.0	0.0	0.0
Composite Commodities	0.0	0.0	0.0
Thematic Commodities	0.0	0.0	0.0
Gold	0.0	0.0	0.0
Thematic 2	0.0	0.0	0.0
Thematic 3	0.0	0.0	0.0
Thematic 4	0.0	0.0	0.0
Thematic 5	0.0	0.0	0.0
Total	100.0	100.0	-0.0

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

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





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

Core Positions

Global equities, global fixed income as well as cash are all at an overall neutral position.

Within equities, developed large cap equities have an underweight position of -0.7% and developed small/mid cap equities have an underweight position of -7.0%. Emerging market equities have an overweight of +3.2%. Thematic equities have an overweight position of +4.5%.

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

Asset Allocation Definitions

ASSET CLASSES	Benchmarked against
Global equities	MSCI All Country World Index, which represents 48 developed and emerging equity markets. Index components are weighted by market capitalization.
Global bonds	Bloomberg Barclays Capital Multiverse (Hedged) Index, which contains the government -related portion of the Multiverse Index, and accounts for approximately 14% of the larger index.
Hedge funds	HFRX Global Hedge Fund Index, which is designed to be representative of the overall composition of the hedge fund universe. It comprises all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage and relative value arbitrage. The strategies are asset-weighted based on the distribution of assets in the hedge fund industry.
Commodities	Dow Jones-UBS Commodity Index, which is composed of futures contracts on physical commodities traded on US exchanges, with the exception of aluminum, nickel and zinc, which trade on the London Metal Exchange (LME). The major commodity sectors are represented including energy, petroleum, precious metals, industrial metals, grains, livestock, softs, agriculture and ex-energy.
	The Thomson Reuters / Core Commodity Index is designed to provide timely and accurate representation of a long-only, broadly diversified investment in commodities through a transparent and disciplined calculation methodology.
Cash	Three-month LIBOR, which is the interest rates that banks charge each other in the international inter-bank market for three-month loans (usually denominated in Eurodollars).
Equities	
•	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.
	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.
	MSCI World Small Cap Index, which is a capitalization-weighted index that measures small cap stock performance in 23 developed equity markets.
Emerging market	MSCI Emerging Markets Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure equity market performance of 22 emerging markets.
Bonds	
	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.
	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.
	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 Bloomberg Barclays Global High Yield Corporate Index, Provides a broad-based measure of the global high yield fixed high yield income markets. It is also a component of the Multiverse Index and the Global Aggregate Index.

Securitized Citi World Broad Investment Grade Index (WBIG)—Securitized, which is a subsector of the WBIG. The index includes global investment grade collateralized debt denominated in the domestic currency, including mortgage -backed securities, covered bonds (Pfandbriefe) and asset-backed securities. The index is rebalanced monthly.

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

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

Other miscellaneous definitions

Asset Backed A security whose income payments and hence value are derived from and collateralized (or "backed") by a specified pool Securities (ABS) of underlying assets such as consumer credit card debt or auto loans.

Commercial Commercial mortgage-backed securities (CMBS) are a type of mortgage-backed security that is secured by mortgages on

Securities

Mortgage Backed commercial properties, instead of residential real estate.

(CMBS)

High Yield High yield corporate bonds are bonds with a credit rating less than BBB- (S&P) or Baa3 (Moody's), and are debt securities Corporate Bonds issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company,

(HY) which is typically money to be earned from future operations.

Investment Grade Investment grade corporate bonds are bonds with a credit rating equal to or above BBB- (S&P) or Baa3 (Moody's), and Corporate Bonds are debt securities issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of (IG) the company, which is typically money to be earned from future operations.

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

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

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

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

- 1 The ratings from Aa to Ca by Moody's may be modified by the addition of a 1, 2, or 3 to show relative standing within the category
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Additionally, the underlying collateral supporting non-Agency MBS may default on principal and interest payments. In certain cases, this could cause the income stream of the security to decline and result in loss of principal. Further, an insufficient level of credit support may result in a downgrade of a mortgage bond's credit rating and lead to a higher probability of principal loss and increased price volatility. Investments in subordinated MBS involve greater credit risk of default than the senior classes of the same issue. Default risk may be pronounced in cases where the MBS security is secured by, or evidencing an interest in, a relatively small or less diverse pool of underlying mortgage loans.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements. Price volatility may also occur from other factors including, but not limited to, prepayments, future prepayment expectations, credit concerns, underlying collateral performance and technical changes in the market.

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