PGIM QUANTITATIVE SOLUTIONS

Q2

March 2023

Q2 2023 OUTLOOK

PGIM Quantitative Solutions Multi-Asset Team

EXECUTIVE SUMMARY

Economic Outlook

- The global economy started 2023 on an unexpectedly positive note. The US economy was on a strong footing, supported by a robust labor market and a reduced drag from high energy prices that peaked in mid-2022.
- Euro area growth held up better than anticipated over the winter, partly due to unseasonably warmer weather. Economic activity in China rebounded swiftly after the December 2022 relaxation of its extreme COVID lockdown policy.
- The failure of Silicon Valley Bank and two other US regional banks, along with the shotgun wedding of UBS and Credit Suisse arranged by the Swiss National Bank, has brought systemic worries to the front.
- While the bank crises appear limited in scope for now, the odds of recession have notably increased from before the banking sector turmoil. Tighter lending standards will further crimp economic growth even if the banking crisis does not spread.
- On the inflation front, there is evidence of weaker goods inflation dragging down headline inflation. But stickier prices, like core services excluding housing, are expected to prevent inflation from swiftly falling back to the US Federal Reserve's (Fed) 2% target.
- The Fed has the unenviable task of trying to engineer a further decline in inflation, still far above its 2% target, while simultaneously maintaining depositor confidence in a suddenly shaken banking system.
- A faster pace of hikes by the European Central Bank as it remains committed to its 2% medium-term inflation target, potentially sets the stage for disappointing growth in 2023 and more headwinds for the European banking segment.
- The Bank of Japan is in transition, with incoming Governor Kazuo Ueda expected to focus on policy continuity in the near term but eventually embark on policy changes, such as the end of yield curve control.
- China has the potential to post an upside growth surprise following the government's fast-tracked reopening. With China's inflation still low, and the "two sessions" meeting behind us, policymakers there have more of a free hand to boost the economic recovery.

Market Outlook

- Global markets were off to the races in January with broad-based gains across equities, sovereign bonds, and credit. Investor risk appetite was boosted by a decline in energy prices, particularly in Europe, and the surprisingly fast reopening in China.
- However, uncertainty around inflation and Fed policy led to a tug-of-war between risk-on and risk-off in markets, even before the banking sector blowups occurred in mid-March. Long-term bond yields fell precipitously as rising risk aversion gripped markets.
- US equity market valuations still do not fully price in possible downside scenarios, despite the visible recession signals like a deeply inverted yield curve and a tightening Fed.
- With an increased possibility of a tail-risk situation, we expect equity valuations to adjust to this new reality as historically high earnings and profit margins likely deteriorate in an environment of increased economic risk.
- Non-US equities have a relatively better risk-reward tradeoff. While Europe and Japan have more favorable starting points with forward PE ratios comfortably below historical median levels, these markets are also more cyclically oriented and sensitive to downside economic risks.
- China seems to be a bright spot. While China-based stocks have lagged so far this year, market valuations are attractive and the country's economic reopening is expected to pick up steam on the back of easing monetary policy and measures to support growth.
- Real estate remains a concern, especially within the commercial sector, which has to contend with expensive valuations and low occupancy rates. Banking sector stress could further tighten credit given the significant commercial real estate exposure in banks' loan books.
- As a cyclical asset, commodities will likely struggle in the face of a broad economic slowdown. While China's reopening is a positive, rising recession worries are contributing to near-term volatility. However, we remain positive on this space in the medium to long term.
- The team is defensively positioned across multi-asset portfolios: overweight in cash and bonds and underweight on risk assets.

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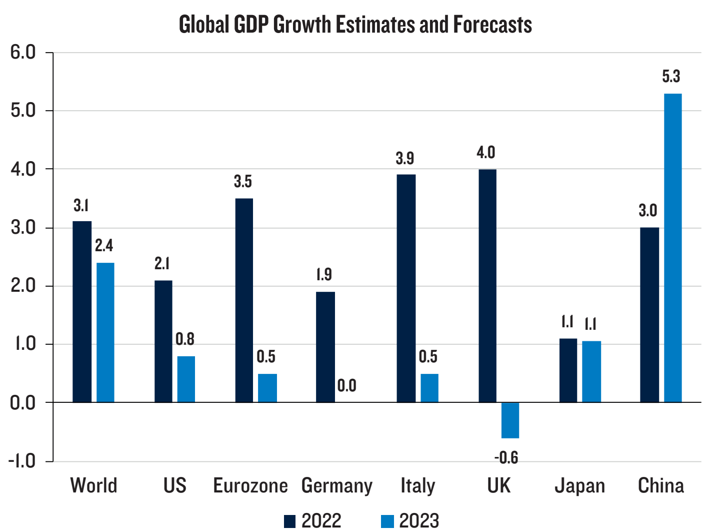
Recession Risk Rises Amid Banking Crisis

The global economy started 2023 on an unexpectedly positive note. The US economy was on a strong footing, supported by a robust labor market and a reduced drag from high energy prices that peaked in mid-2022. Euro area growth held up better than anticipated over the winter, partly due to unseasonably warmer weather, while the Japanese economy benefited from improving consumption after the easing of COVID-related restrictions. In China, economic activity rebounded swiftly after the December 2022 relaxation of its extreme COVID lockdown policy. While Developed Market headline inflation continued to moderate in the beginning of 2023, resilient labor markets and still-elevated service sector inflation kept major central banks on a tightening path. Toward the end of the first quarter of 2023, however, the failure of several US regional banks (see page 4 - The Ides of March sidebar) resulted in a substantial market reassessment of the future path of central bank policy.

The US Federal Reserve (Fed) has the unenviable task of trying to engineer a further decline in inflation, still far above its 2% target, while simultaneously maintaining depositor confidence in a suddenly shaken banking system. The Fed's aggressive rate hikes combined with easing supply constraints contributed to a moderation in core inflation, which had peaked in September 2022 before easing into early 2023. Just as the Fed slowed the pace of rate hikes and signaled a lower potential terminal rate in early February, inflation readings came in hotter than expected. While the pace of headline inflation declined on a year-over-year basis in February, monthly changes remained elevated. More importantly, core services inflation excluding housing, a metric the Fed has recently been focusing on, also continued to increase at a solid pace. The pressure on the housing market has come in part from the hot labor market and low unemployment rate, which prompted Chair Powell to reiterate the Fed's focus on controlling inflation and pushed up rate hike expectations in early March. However, these expectations would later be unwound as the banking troubles emerged.

Consensus expectations for 2023 US Gross Domestic Product (GDP) growth are still modestly positive (Figure 1) due to support from the strong labor market. However, leading indicators are declining, and tighter monetary policy has already taken a toll on interest-rate-sensitive industries such as real estate.

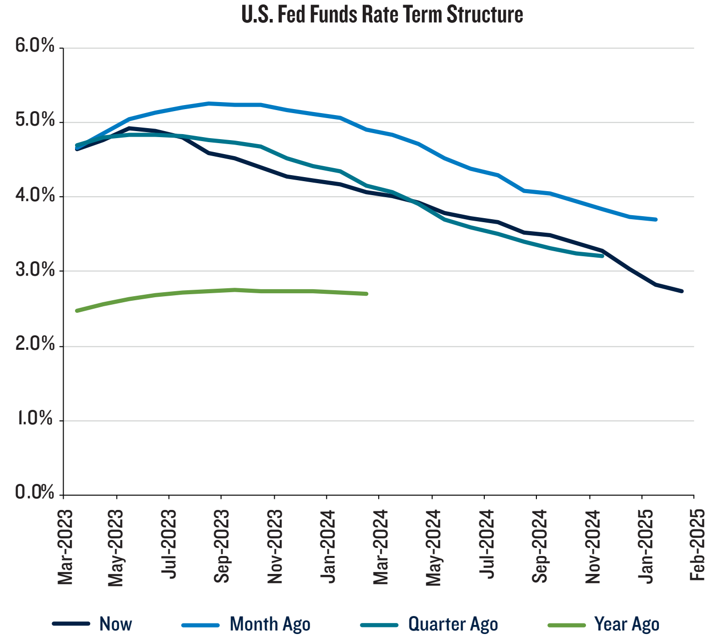
Figure 1: Growth Expectations Weak and Declining Except for China



Source: Bloomberg as of 3/17/2023

The yield curve, a historically reliable indicator of recessions, has been whacked by volatile Fed rate expectations (Figure 2), with the 10-year/2-year spread inverted at its most extreme levels since Paul Volcker's early-1980s reign as Chair of the Fed. The Near-Term Forward Spread, a recession indicator favored by the Fed, also inverted deeply in 2023. The US economy will likely slow in coming quarters on the lagged impact of prior tightening measures, and while a recession is still not inevitable, the odds of one are material.

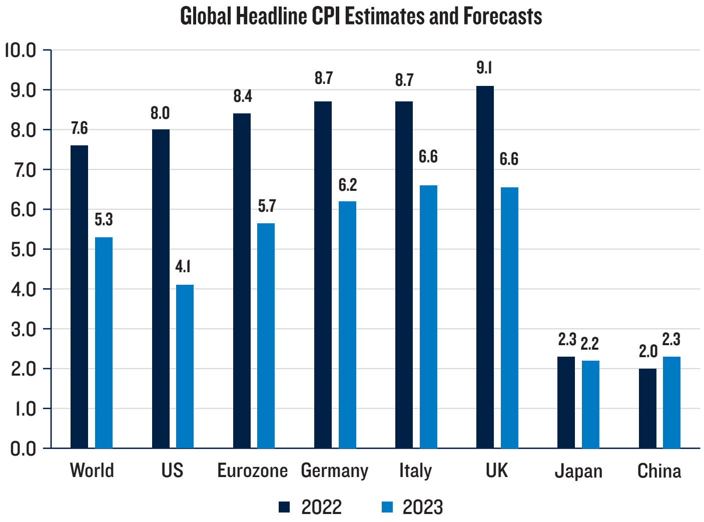
Figure 2: Fed Funds Rate Expectations Volatile



Source: Datastream as of 3/16/2023

On the inflation front, there is evidence of weaker goods inflation dragging down headline inflation. But stickier prices, like core services excluding housing, are expected to prevent inflation from swiftly falling back to the Fed's 2% target. The current Bloomberg consensus forecast is for US inflation to average around 4% in 2023 (Figure 3). The housing sector is reacting with a lag to the Fed's rate hikes with rents slower to adjust than other, more flexible prices. While the Fed's 2022 policy focus was on inflation, the balance of risks has shifted between growth and inflation in the wake of the banking sector turmoil. After peaking in mid-March, prospects of further Fed rate hikes have materially decreased as potentially tighter bank credit is likely to do some of the Fed's work in slowing the economy. However, rate cuts might have to wait given still-high inflation.

Figure 3: Inflation: Lower Than Last Year But Still Too High for Comfort



Source: Bloomberg as of 3/17/2023

As the tide goes out, it's not just a few US regional banks that have been caught swimming naked. In Europe, the Swiss National Bank was forced to offer Credit Suisse a $50bn lifeline, allowing the bank some breathing room before UBS stepped in with an acquisition plan. However, the European Central Bank (ECB) kept its promise to raise policy rates by 50bps at its mid-March meeting, bringing the main refinancing rate to 3.5%. Euro area inflation had climbed due to energy cost spikes following Russia's invasion of Ukraine, and while easing energy prices slowed headline inflation heading into 2023, core inflation remains elevated. The ECB is committed to its 2% medium-term inflation target but has promised to be data-dependent going forward. Nevertheless, reaching 2% inflation may require a faster pace of rate hikes, potentially setting the stage for disappointing growth in 2023 and more headwinds for the European banking segment

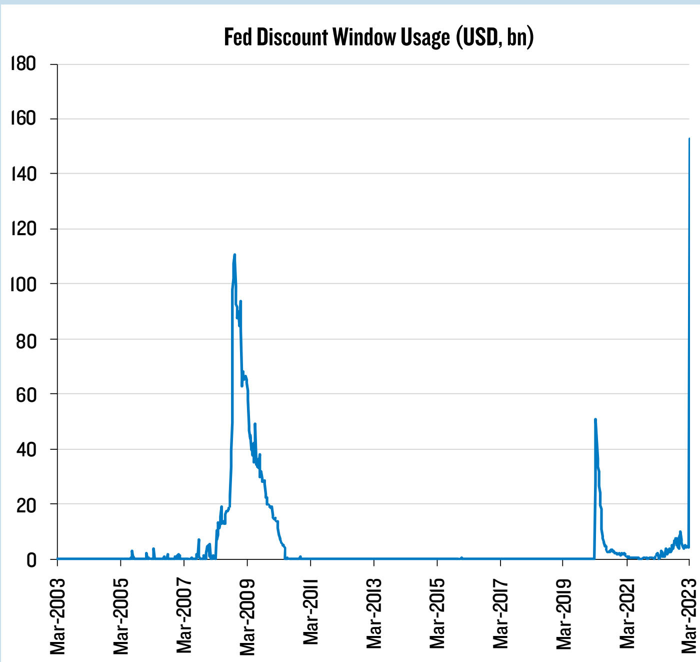
Japan's inflation, while not as hot as in the US and Europe, has also risen, reaching levels not seen since the 1990s. In response, the Bank of Japan (BoJ) tweaked its monetary policy, allowing a wider range for the 10-year JGB to trade, which effectively serves as a tightening. The BoJ itself is in transition, with incoming Governor Kazuo Ueda set to take the helm in April. Ueda, a BoJ insider, isn't expected to deviate immediately from the bank's ultra-accommodative monetary policy, but his appointment does potentially pave the way for policy changes, such as the end of yield curve control.

The economic problems faced by developed economies include strong aggregate demand that has hindered the disinflation process desired by central banks and more recently, banking sector woes as a result of aggressive monetary tightening. China's problems, in contrast, stem from excessive COVID-related restrictions and pressure from the ailing real estate sector. Recognizing the impact that the restrictions were having on the broader economy, the government fast-tracked the reopening, setting the stage for a recovery in 2023. While Developed Market policymakers are constrained by high inflation, China's inflation is still low, so policymakers there have more of a free hand to boost the economic recovery. Although the recently concluded "two sessions" meeting saw a GDP growth target of around 5% for 2023, stronger-than-expected growth could be one potential upside surprise.

The Ides of March – Fifteen Years After Bear Stearns

The failure of Silicon Valley Bank and two other US regional banks, along with the shotgun wedding of UBS and Credit Suisse arranged by the Swiss National Bank, illustrate the old adage that "when the Fed taps the brakes, someone always flies through the windshield." Global central banks and regulators have responded forcefully to the burgeoning crisis with the Fed opening the discount window (Figure 4) and guaranteeing deposits at the affected banks, in an effort to control contagion and stem sprouting systemic risks. Still, the risk of a full-fledged banking crisis remains, and additional flare-ups depend on whether the Fed will be successful in cutting off potential tail risks lurking in the banking sector and potentially the shadow banking segment.

Figure 4: Deposit Flight Hits U.S. Regional Banks



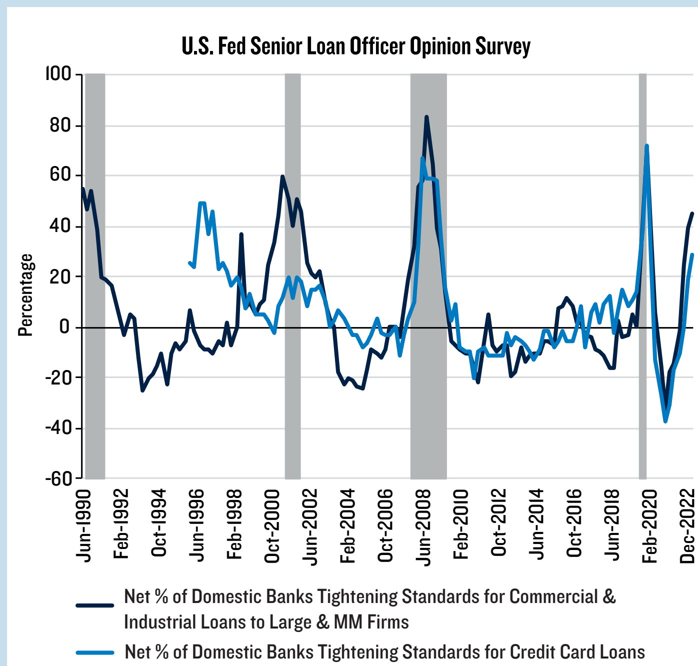
Source: Bloomberg as of 3/20/2023

The recent US bank failures appear to be the result of a concentrated deposit base as well as classic mismanagement of assets and liabilities, rather than traditional banking loans going sour. While the efforts implemented by authorities were necessary to prevent an escalation of the crises, they are insufficient to permanently eliminate the vulnerabilities of small- and mid-sized banks if still-spooked depositors move their deposits to larger banks presumed to be "too big to fail," and the credit quality of loan books deteriorates given the elevated risk of recession.

Banks are likely to see the ongoing impact of higher rates on highly leveraged firms and on companies in interest-sensitive sectors such as real estate and consumer. Exposure to Commercial Real Estate (CRE) is a key risk, particularly for smaller banks that have a larger share of their loan books in CRE. While CRE has been under pressure since the pandemic due to climbing vacancies, high valuations, and rising interest rates, efforts by smaller banks to restructure their balance sheets in the current environment could result in slower credit growth and constitute an additional headwind to avoiding a recession in coming quarters.

Historically, bank crises impact economies through disruption to payments, negative wealth effects, and sharply tighter credit conditions, resulting in significant contraction in economic activity. A Congressional Budget Office study estimated that the US savings and loans crisis cut GDP by up to 0.6%. Lending standards to businesses and consumers have already tightened over the past few quarters (Figure 5), and any further measures by banks to shore up balance sheets could result in additional lending restrictions, which would adversely impact the economy.

Figure 5: U.S. Banks Tighten Lending Standards



Source: Haver Analytics as of Q1 2023

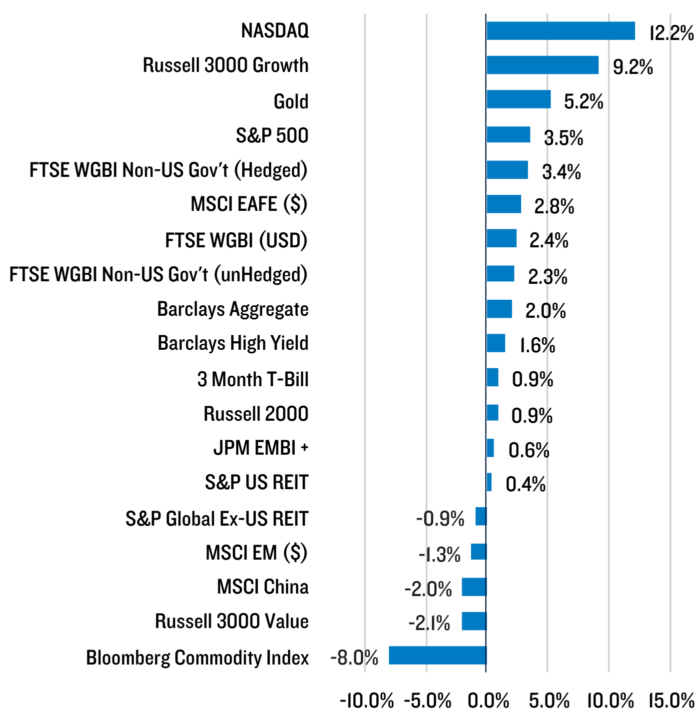
Outlook Clouded by Heightened Macro Uncertainty

Global markets were off to the races in January with broad-based gains across equities, sovereign bonds, and credit. Investor risk appetite was boosted by a decline in energy prices, particularly in Europe, and the surprisingly fast reopening in China. Growing expectations that central banks might be nearing the end of their current rate hike cycle boosted risk assets, especially growth stocks. However, the rally reversed course as inflation readings remained high, leading investors to ramp up rate hike expectation and contributing to the whiplash of losses across asset classes. Uncertainty around inflation and Fed policy has led to a tug-of-war between risk-on and risk-off, even before serious vulnerabilities in the regional banking sector occurred in mid-March. Subsequently, long-term yields fell precipitously as rising risk aversion gripped markets.

Despite the sharp increase in market volatility, equities have posted solid gains so far in the first quarter, with the S&P 500 Index up +3.5% and the Nasdaq up a strong +12.2% (Figure 6). Meanwhile the US 10-year bond yield, which was north of 4% in early March, has fallen to below 3.5%. Gold has benefited from elevated risk aversion and lower real yields and is up around 5.2% for the quarter to date, while credit has posted modest gains. Commodities have lagged other asset classes amid heightened recession worries, while Emerging Market equities have fallen slightly for the quarter as increased risk aversion offset the bump from optimism about reopening in China.

Figure 6: Solid Gains Mask Volatility in Risk Assets

2023 Year-to-Date Total Returns

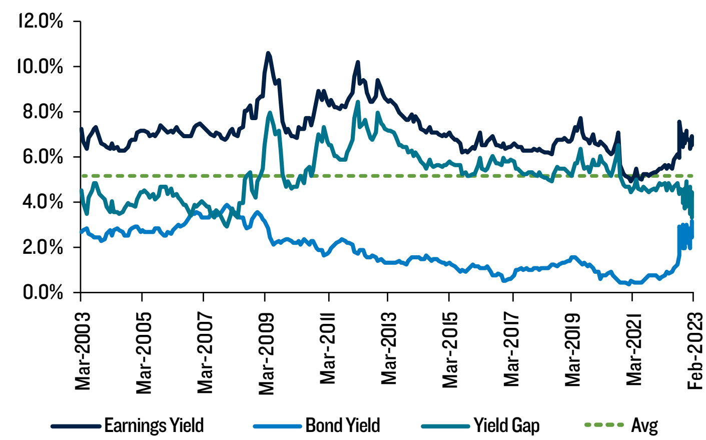


Source: Factset as of 3/16/2023

The equity risk premium declined during most of 2022, helped by a resilient US economy and optimism earlier in the year. While risk premium (Figure 7) have increased somewhat year to date, so have risks. As highlighted in previous outlooks, US equity market valuations do not fully price in possible downside scenarios, despite the visible recession signals such as a deeply inverted yield curve and a tightening Fed. While the March bank failures were the first sign of stress in the banking sector, commercial real estate poses a potential credit risk for coming quarters (see page 4 - The Ides of March sidebar).

Figure 7: Equity Risk Premium Fails to Reflect High Uncertainty

Earnings Yield Gap for Global Equities

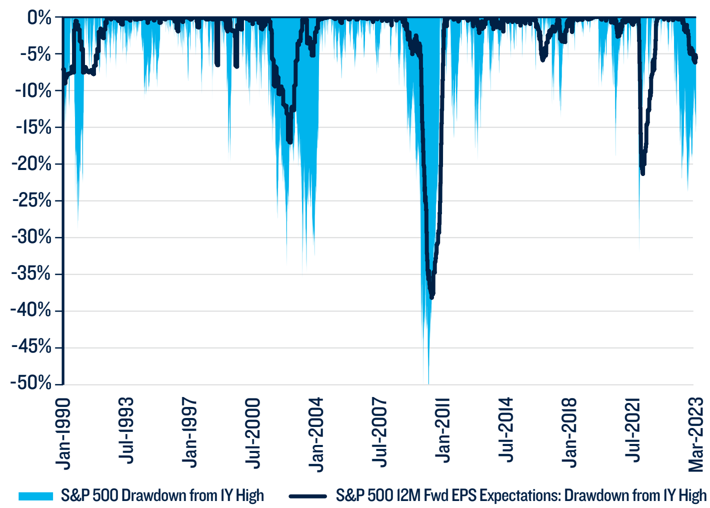


Source: Factset as of 2/28/2023

With an increased possibility of a tail-risk situation, we expect equity risk premium to adjust to this reality. Even assuming negligible impact on earnings, a risk repricing would see valuations fall, or equivalently, equity risk premium rise. In reality, earnings are likely to suffer amid increased economic risk and historically high and deteriorating profit margins. Already, earnings revisions are trending lower and likely have further to go (Figure 8).

Figure 8: Earnings Expectations Likely to Be Revised

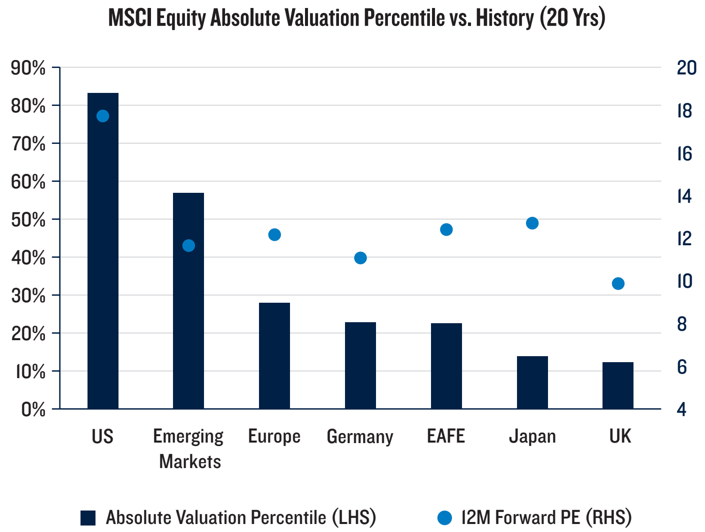
Big Discrepancy: Earnings Expectations Don't Reflect Equity Market Decline



Source: Datastream as of 3/16/2023

The risk-reward tradeoff for non-US equities is more attractive than for those in the US. Europe and Japan have more favorable starting points, with forward PE ratios comfortably below median levels, compared to the top quartile of US equities (Figure 9). Despite much better valuations, these markets are more cyclically oriented than markets in the US and are therefore more sensitive to downside economic risks. Within Emerging Markets, Asia, and specifically China, seem to be bright spots. While China-based stocks have lagged so far this year, forward-looking expectations are positive. Market valuations are attractive, and the country's economic reopening is expected to pick up steam on the back of easing monetary policy and measures to support growth. However, other Emerging Markets will likely be more sensitive to a slowdown in Developed Market credit growth, especially in Central Europe and Latin America. We are therefore cautious on those exposures.

Figure 9: Lower EAFE Valuations Attractive Relative to U.S. and Emerging Markets



Source: Factset as of 3/16/2023

Slower credit growth, tightening financial conditions, and rising prospects of recession will likely have a material impact on equity sectors and styles with higher sensitivity to cyclical factors. These would include sectors like financials and consumer discretionary, as well as small-cap stocks. Likewise, value equities are traditionally aligned with the business cycle and would also be disproportionately affected by increasing risk aversion. While this seemingly makes the case for higher-quality areas of the equity market, valuations in that space have risen to levels that make them potentially unattractive.

In our previous quarterly outlook, we highlighted real estate as a potential concern, particularly within the commercial sector, where valuations remain expensive and lower occupancy trends in offices and retail segments persist. Stress amid regional banks could manifest in further credit tightening given the significant commercial real estate lending in their loan books. Meanwhile, the residential and industrial sectors remain relatively attractive and should suffer less from a credit crunch.

Should the risk-off market environment of the past several months endure, the US dollar may temporarily resume its mantle as a safe-haven currency despite the recent large drop in yields and expectations of monetary easing on the horizon. The relative strength, however, will likely be against more fragile regions, such as Europe and commodity-centric currencies. Given the comparably safer banking environment in Japan, and the arguably even-safer-haven currency of the Swiss Franc, the outperformance of the dollar will be mixed, and we remain secular dollar bears.

As a cyclical asset, commodities will likely struggle in the face of a broad economic slowdown. However, we expect China's ongoing recovery from multi-year lockdowns will continue to provide additional demand to industrial and energy-related commodities. In addition, the transition toward greener infrastructure will remain supported by traditional energy sources and industrial commodities. While tighter bank-related lending could be a headwind in the near term, fiscal programs targeting green infrastructure in the US and overseas continue to support commodity demand. As Russia's unresolved war with Ukraine persists beyond its first anniversary, its effect on global energy markets continues to be felt, though a mild winter in Europe provided a temporary respite. Near-term volatility is likely rising on prospects of slower demand, but we remain positive on commodities in the medium to long term.

PGIM QUANTITATIVE SOLUTIONS

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