The Global Investment Strategy View

We explore the outlook for economies and markets and provide year-ahead views across asset classes.

June 2023

The views expressed herein may differ from other JPMorgan Chase & Co. affiliates and employees. This constitutes our judgment based on current market conditions and is subject to change without notice. This has not been prepared with any particular investor in mind, and it may not be suitable for all investors. Investors should speak to their financial representatives before engaging in any investment product or strategy. This material should not be regarded as research or as a J.P. Morgan Research Report. Outlooks and past performance are not reliable indicators of future results. Please read additional regulatory status, disclosures, disclaimers, risks and other important information at the end of this material.

INVESTMENT AND INSURANCE PRODUCTS ARE:
* NOT FDIC INSURED * NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY * NOT A DEPOSIT OR OTHER OBLIGATION OF, OR GUARANTEED BY, JPMORGAN CHASE BANK, N.A. OR ANY OF ITS AFFILIATES * SUBJECT TO INVESTMENT RISKS, INCLUDING POSSIBLE LOSS OF THE PRINCIPAL AMOUNT INVESTED
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The View</td>
<td>1</td>
</tr>
<tr>
<td>Year-End 2023 &amp; Q2 2024 Outlook Numbers</td>
<td>10</td>
</tr>
<tr>
<td>Macro Views</td>
<td>11</td>
</tr>
<tr>
<td>Equity Views</td>
<td>14</td>
</tr>
<tr>
<td>Rates Views</td>
<td>17</td>
</tr>
<tr>
<td>Credit Views</td>
<td>18</td>
</tr>
<tr>
<td>FX Views</td>
<td>22</td>
</tr>
<tr>
<td>Commodity Views</td>
<td>27</td>
</tr>
<tr>
<td>Our mission</td>
<td>30</td>
</tr>
<tr>
<td>Definitions of Indices and Terms</td>
<td>31</td>
</tr>
<tr>
<td>Key risks</td>
<td>33</td>
</tr>
</tbody>
</table>
KEY TAKEAWAYS

- As recession approaches - and as we continue to see potential across asset classes - we are defensive but not fearful. Our high-conviction investment ideas include: long-duration fixed income, preferreds for systemically important final institutions (SIFI), mid-cap equities, European equities and private credit.

- Investors have priced in a late-cycle U.S. economy. One clear sign of that sentiment: an inverted yield curve, with cash rates higher than 10-year U.S. Treasury yields.

- We expect the U.S. recession to begin in the fourth quarter, not the third quarter, a revision of our outlook of a month ago. The global picture is mixed. China’s reopening began strongly in Q1, and while the recovery’s momentum has faltered, we think it will prove durable. The euro area economy has been remarkably resilient, although inflation remains sticky.

- We strongly prefer core duration to cash. Historically, duration outperforms cash in the two years after the Federal Reserve reaches the end of its hiking cycle.¹

- A small group of mega-cap tech stocks account for all of the year-to-date rally in the S&P 500. Their valuations rose and the rest of S&P 500 declined, in aggregate. That disparity gives active managers a wide range of stocks with lower multiples from which to pick winners (and avoid losers). On a sector basis, we continue to favor healthcare, industrials, technology and parts of real estate.

- We are bullish on the European equity market, where many sectors enjoy valuation discounts versus U.S. peers – even as we note the persistence of investors’ “home bias.”

Our Global Investment Strategy View integrates the knowledge and analysis of our economists, investment strategists and asset class strategists. The View takes shape at a monthly Forum where the team debates and hones its views and outlooks.

¹ Bloomberg Finance L.P.
THE VIEW

What’s in the market price for investors? A late-cycle U.S. economy. Financial conditions have tightened over the past month, with U.S. Treasury (UST) yields higher across the curve and the S&P 500 slightly lower. The yield curve continues to be inverted (cash rates are higher than 10-year UST yields). Market pricing is consistent with about a 5% federal fed funds rate, which is well above consensus estimates of where interest rates will likely be in a normal business environment (neutral rates). Put differently, market pricing looks like standard fare for the late stages of a business cycle.

The U.S. equity risk premium (ERP) suggests bonds continue to offer the most value, relative to the equity earnings yield of the S&O 500 Index, since the global financial crisis (GFC). But look what happens if we exclude “mega-cap stocks” (Meta, Microsoft, Apple, Amazon, Nvidia and Google, which together represent about 25% of S&P 500 market capitalization). When we compare the earnings yield of the remaining 494 names in the index to 10-year UST yield, bonds continue to offer value relative to equities but the premium is less dramatic.

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
The recession obsession: We expect a U.S. economic contraction in Q4 2023 (versus our month ago outlook of Q3 2023). We expect the U.S. economy to enter a recession in Q4 after proving more resilient to Fed tightening than we had anticipated. Over the last three months, payroll gains have averaged 225,000 jobs per month, pushing the unemployment rate to 3.4%, (a 50-year low). What’s more, trend inflation is running at 4%-4.5%, and wage data suggest inflation is unlikely to fall much further without job losses.

While it has taken longer than expected, growth is now below trend, and we see evidence that restrictive rates will likely slow growth further.

1) **Banks have failed.** It’s easy to suggest failed banks were “poorly run” or “not sustainable business models,” but in a lower rate environment it is less likely that those vulnerabilities would have been exposed.

2) Equipment capex spending is slightly negative year-over-year, with further weakness likely ahead. One firm’s capital investment is another’s revenue. As capital investment slows, so too, does overall revenue. Stresses in the banking sector and tight credit conditions are likely to accelerate the slowdown.

3) Consumer credit card delinquencies are inflecting higher, albeit from a low level. With spending growth outpacing nominal income growth, consumers increasingly turn to debt to keep spending. With rates at these levels and nominal income growth slowing, spending will likely cool.

4) Construction activity is set to slow. Completions of new single-family homes are outpacing new home starts, a historical rarity and generally consistent with economic contractions.

**The U.S. recession roadmap (while delayed) seems on track.** There are four key steps along the way. **Step 1:** Financial conditions tighten. That’s done. **Step 2:** Interest rate sensitive sectors deteriorate. That’s done as well. **Step 3:** Corporate fundamentals deteriorate. That’s happening now. Average S&P 500 earnings fell around 2.5% year-over-year in Q1 2023. It marked the second consecutive quarter in which the average S&P 500 stock reported negative earnings growth, while the median company managed to deliver some earnings growth. Most of that differential reflects performance in the technology sector, which will likely show negative earnings growth for a fourth consecutive quarter in Q2 2023.

**Step 4:** Companies lay off workers to defend profits and cash flow. That’s in Q4 2023. **Step 5:** Defaults rise and inflation slows to reach the Fed’s mandate. We see this happening sometime in 2024.

We now look for another Fed rate hike in June and/or July, at which point we think the Fed will pause. Beyond restrictive rates, an erosion in banking sector confidence is helping to slow the U.S. economy via higher borrowing costs.

Borrowing costs will likely be pressured higher still when the U.S. Treasury issues more debt. We expect more than $1 trillion of Treasury borrowing in the wake of the agreement to raise the debt ceiling. That borrowing surge is likely to raise money market rates and crowd out private sector borrowing. We expect the Fed to start cutting rates around year-end 2023 in response to a deteriorating growth and employment picture. We continue to see little evidence of a pending financial crisis; rather, we expect a monetary policy driven slowdown.

---

The Global Investment Strategy View

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
Core duration > cash
We make a simple argument for choosing core duration over cash: If you like 5% yields on your money market account, consider locking it in for a longer tenor. The Fed is nearing the end of its hiking cycle. This means cash investors will be reinvesting in what is likely to be a lower rate environment. We note that the Fed usually cuts rates by about 300 basis points (bps) in the 12 months following the onset of a recession.

In making the case for duration we highlight two points:

- History suggests the more duration the better. Over the past seven hiking cycles, extending duration outperformed money markets by an average of 14% in the 24 months after the last rate hike. For municipal bonds, the outperformance was even greater, on an estimated tax equivalent basis.

- The insurance characteristics of bonds are back – fixed income can once again provide portfolio protection. Over the last 20 years, hiking cycles have generally caused the negative correlation between stocks and bonds to temporarily turn positive (so stocks and bonds lost value at the same time). However, around the end of the hiking cycle, the negative correlation between stocks and bonds has historically reasserted itself.
THE VIEW

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. **Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material.** Please refer to “Definition of Indices and Terms” for important information. **Past performance is no guarantee of future results and investors may get back less than the amount invested.** It is not possible to invest directly in an index.

**U.S. equities: Alpha > beta.** Year-to-date, the S&P 500 is up 9%, but it's a tale of two markets. A small group of mega cap tech stocks accounted for all of the rally in the overall S&P 500 Index. They've rallied, on average, 70%. Less than 30% of S&P 500 companies are beating the index year-to-date, a narrowness last seen in 1999.

Over the past year, mega cap stock valuations rose and the rest of S&P 500 declined. The valuation gap persists. The consensus next 12-month S&P 500 price to earnings (P/E) ratio for the information technology sector (majority mega-cap stocks) is two standard deviations above its 10-year median (26x versus 18x). Meanwhile, the S&P 500 P/E ratio excluding mega-cap stocks trades below its 10-year median (14x versus 16x).

This wide divergence gives active managers the opportunity to choose among lower multiple stocks across a wide range of sectors. As always, the opportunity to pick market winners is twinned with the need to avoid market losers. (Some stocks are attractive for a good reason.)

As we assess the outlook for the U.S. market overall, we expect the S&P 500 to trade at about 4,500 by mid-year 2024 despite our base case view that the economy will have gone into a recession. Relative to 2021 (the year of the post-COVID S&P 500 earnings rebound), we are expecting a more middling 3% average annualized earnings growth rate for 2022–2024. This sets up what could be a multi-year slog back to year-end 2021 highs. By mid-2024, corporate earnings will likely be on the rebound, and valuations for the 494 S&P 500 stocks that
are not mega-cap powerhouses should be able to expand from currently subdued levels.

We favor mid-cap stocks over their large cap counterparts. Both traditionally offer earnings resiliency, but mid-cap stocks offer valuation support. On a sector basis, we continue to favor healthcare, industrials, technology and parts of real estate. Our recession base case means the path to 4,500 is likely to be volatile (another element in the case for active management and structured investments). Realized S&P 500 volatility usually increases when markets move from late cycle to end cycle.

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
**Fight home bias – add European equites.** Year-to-date, European equities have outperformed the United States in euro and USD terms; we expect continued modest outperformance. Unfortunately, around half of our U.S. clients are materially underweight Europe. We make a case for continued European outperformance (and note the interesting discussion from Michael Cembalest, Chairman of Market and Investment Strategy, in “Too Long at the Fair,” *Eye on the Market*, May 23, 2023):

1) **Earnings resiliency.** Europe avoided an energy-led recession over the winter. Since then, energy prices have declined markedly; lower energy prices and pent-up savings will likely serve as a tailwind to consumption. As a result, we have raised our 2023 and 2024 European earnings expectations, and now see positive earnings growth in both years. Aggressive European Central Bank (ECB) tightening would present an obvious headwind, but it is not our base case.

2) **Valuations are attractive.** European equities trade at a 13x P/E, one standard deviation below the 10-year median (14.5x). Relative to the S&P 500, European equities trade at a 30% discount to the S&P 500 and a 12% discount to the S&P 500 ex U.S. mega-cap stocks (which is arguably a better comparison).

3) **Consistent dividends.** Investors can access a 3% annual dividend yield in Europe versus about 1.5% in the rest of the world. ³

4) **A currency kicker for USD based investors.** We expect USD weakness as U.S. and European interest rate differentials converge. Our base case is EURUSD of 1.15 by mid-2024.

³ Bloomberg Finance L.P. Data as of May 26, 2023.

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. *Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested.* It is not possible to invest directly in an index.
All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. **Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information.** **Past performance is no guarantee of future results and investors may get back less than the amount invested.** It is not possible to invest directly in an index.
All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/- 10bps range, rates have a +/- 25bps range, and all other outlooks are within the range that is provided. **Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material.** Please refer to “Definition of Indices and Terms” for important information. **Past performance is no guarantee of future results and investors may get back less than the amount invested.** It is not possible to invest directly in an index.

**Defensive, not fearful. Our high conviction investment ideas:**

- Long-duration core fixed income.
- SIFI Subordinated bank capital.
- Mid-cap U.S. equities.
- European equites.
- Private credit.
YEAR-END 2023 & Q2 2024 OUTLOOK NUMBERS

June 2023

<table>
<thead>
<tr>
<th>Macro^</th>
<th>2023 YE</th>
<th>2024 YE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>3.3%*</td>
<td>2.2%</td>
</tr>
<tr>
<td>Eurozone</td>
<td>4.0%</td>
<td>2.1%</td>
</tr>
<tr>
<td>China</td>
<td>1.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Real GDP Growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>0.4%*</td>
<td>0.5%*</td>
</tr>
<tr>
<td>Eurozone</td>
<td>0.6%*</td>
<td>0.7%</td>
</tr>
<tr>
<td>China</td>
<td>4.3%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Equities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>2023 YE</td>
<td>Mid-2024</td>
</tr>
<tr>
<td>Price</td>
<td>4,250-4,350*</td>
<td>4,450-4,550*</td>
</tr>
<tr>
<td>P/E forward multiple</td>
<td>18.5x</td>
<td>18.25x*</td>
</tr>
<tr>
<td>Stoxx Europe 600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>480-495</td>
<td>495-505*</td>
</tr>
<tr>
<td>P/E forward multiple</td>
<td>13.5x</td>
<td>13.5x*</td>
</tr>
<tr>
<td>TOPIX</td>
<td>2,020-2,060*</td>
<td>2,060-2,100*</td>
</tr>
<tr>
<td>P/E forward multiple</td>
<td>13.5x*</td>
<td>13.5x*</td>
</tr>
<tr>
<td>MSCI Asia ex-Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>660-715</td>
<td>690-760*</td>
</tr>
<tr>
<td>P/E forward multiple</td>
<td>12.0x</td>
<td>12.0x*</td>
</tr>
<tr>
<td>MSCI China</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>75-78*</td>
<td>78-82*</td>
</tr>
<tr>
<td>P/E forward multiple</td>
<td>11.0x*</td>
<td>11.0x*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rates &amp; Credit Spreads</th>
<th>United States</th>
<th>2023 YE</th>
<th>Mid-2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eff. fed funds rate</td>
<td>5.00%-5.25%*</td>
<td>3.25%-3.50%*</td>
<td></td>
</tr>
<tr>
<td>ON SOFR</td>
<td>5.15%*</td>
<td>3.40%*</td>
<td></td>
</tr>
<tr>
<td>2-year UST</td>
<td>3.75%*</td>
<td>2.75%*</td>
<td></td>
</tr>
<tr>
<td>5-year UST</td>
<td>3.50%*</td>
<td>2.85%*</td>
<td></td>
</tr>
<tr>
<td>10-year UST</td>
<td>3.25%*</td>
<td>2.95%*</td>
<td></td>
</tr>
<tr>
<td>30-year UST</td>
<td>3.65%*</td>
<td>3.30%*</td>
<td></td>
</tr>
<tr>
<td>2s/10s spread</td>
<td>-0.50%*</td>
<td>0.20%*</td>
<td></td>
</tr>
<tr>
<td>JPM U.S. Investment Grade</td>
<td>175*</td>
<td>185*</td>
<td></td>
</tr>
<tr>
<td>JPM U.S. High Yield</td>
<td>650*</td>
<td>700*</td>
<td></td>
</tr>
</tbody>
</table>

| Europe |         |         |
| ECB deposit rate | 3.75% | 3.75%* |
| 5-year German yield | 2.50% | 2.20%* |
| 10-year German yield | 2.25%* | 2.00%* |
| BoE Bank Rate | 5.50%* | 5.50%* |
| 10-year UK Gilt | 3.50% | 3.25%* |
| EUR IG | 170 | 185* |
| EUR HY | 595 | 625* |

| EM |         |         |
| EMBI Global | 425* | 450* |
| CEMBI Broad | 385* | 400* |
| JACI IG | 160* | 175* |
| JACI HY | 1100* | 1135* |

<table>
<thead>
<tr>
<th>Commodities</th>
<th>2023 YE</th>
<th>Mid-2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold ($ / oz)</td>
<td>$2,000-$2,100</td>
<td>$2,000-$2,100*</td>
</tr>
<tr>
<td>Brent ($ / barrel)</td>
<td>$88-$93</td>
<td>$88-$93*</td>
</tr>
<tr>
<td>BCOM Index</td>
<td>110-115*</td>
<td>110-115*</td>
</tr>
<tr>
<td>Natural gas ($/MMBtu)</td>
<td>$3.50-$4.50</td>
<td>$3.50-$4.50*</td>
</tr>
</tbody>
</table>

*Outlook change as of June 2023.

Indices are not investment products and may not be considered for investments.

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
MACRO VIEWS

U.S. Growth

A monetary-policy-induced U.S. recession beginning in the fourth quarter of 2023 and lasting for three quarters is now our base case. (A month ago, we anticipated a Q3 start.) Despite the change in timing, we see the same 1.5% peak to trough decline in GDP.

The economy has been resilient, but there are signs of underlying vulnerability. Today, the labor market is fairly tight, roughly similar to past labor markets about six months prior to a recession, but it may have begun to soften. Temporary employment, a leading indicator, has been declining in recent months. Moreover, a higher unemployment rate will likely be needed to bring the labor market back into balance. Unemployment claims remain stable, but they are higher than they were at the end of 2022.

What we’re watching: Payrolls, unemployment claims and indicators of capex trends, such as PMIs and cap goods orders.

Our view: 0.4% (Q4 YoY) real GDP growth in 2023
0.5% (Q4 YoY) in 2024

U.S. Inflation

Recent firm inflation prints and higher than expected historical revisions signal that inflation is running ahead of prior expectations. The Fed must now fight approximately 4.5% inflation versus prior expectations of a 3%–3.5% range. While we think inflation has likely peaked, it remains some distance from the Fed’s 2% mandate.

Goods inflation continues to be soft, while services inflation remains somewhat sticky in labor-intensive industries. Wages are still rising at around a 4.5%–5% pace. Owners’ equivalent rent and rent inflation rates appear to have fallen from their highs, and further declines are expected.

What we’re watching: Wage growth, real-time measures of rent, and services ex-rental inflation.

Our view: 3.3% (Q4 YoY) core PCE in 2023
2.2% (Q4 YoY) in 2024

U.S. historical and expected inflation

YoY core PCE, %


All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
**Eurozone Growth**

We maintain our outlook for no recession in the eurozone, but risks have risen. Rates continue to be restrictive, and the ECB has not signaled any intention of pulling back on its tightening efforts. Recession or no recession, eurozone growth will likely be slower due to higher energy prices and tighter credit conditions. But the economy will likely be buttressed by a healthy consumer and services spending.

In the United Kingdom, falling energy prices and strength in the consumer have similarly lifted activity so far this year. However, some softening in PMI data in May suggests that restrictive rates are still feeding through to the economy, and we expect that to continue to slow growth this year.

**What we’re watching:** Consumer spending, credit conditions, energy prices

**Our view:** 0.6% (Q4 YoY) real GDP growth in 2023

0.7% (Q4 YoY) in 2024

**Eurozone Inflation**

While headline inflation has declined with lower energy prices, core inflation remains too high and seems increasingly sticky as the services sector heats up and wage growth continues to be strong. Headline inflation may be close to 2% by the end of this year, but we do not expect core inflation to converge to the ECB’s target until 2024. Lower energy prices will likely eventually feed through to core inflation measures, but strong wage growth will continue to be a risk. As financial instability risks fade and inflation risks skew to the upside, we now expect the ECB to hike policy rates another 50bps to 3.75%.

In the United Kingdom, April CPI came in much higher than consensus expectations, a cause for concern particularly as the sources of inflationary pressure have broadened out. Wage growth that is still running at approximately 6% is a notable risk for U.K. inflation. Still, we expect prices to moderate for the remainder of the year.

**What we’re watching:** Wages, services inflation, energy prices

**Our view:** 4.0% (Q4 YoY) core HICP in 2023

2.1% (Q4 YoY) in 2024

---

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
China: Growth and Inflation

Recent economic data proved disappointing relative to consensus expectations. Investors had also hoped Chinese policymakers would show a greater bias toward easing. As a result, analysts are scaling back what now look to have been overly optimistic outlooks. Market sentiment will likely present a challenge over the near term.

We have consistently said that China’s economy will likely not be firing on all cylinders this year, and that it could take time for the recovery to become more broad based. We maintain this view, and expect a moderate recovery for the Chinese economy.

The recovery in consumer spending looks to be in its early stages. The overall unemployment rate is falling, and income growth expectations are bottoming out. These should eventually support consumption. The youth unemployment rate is elevated, but that mainly reflects a skill mismatch. (It also has a declining impact on the overall labor market due to an aging population.) On the other hand, exports and manufacturing have shown resilience even in a developed market downturn. We are more cautious on the housing sector, which is stabilizing, but at low levels.

China is experiencing only minimal inflation. Reopening price hikes have been more than offset by falling commodity prices. But unlike the market consensus, we do not expect a surge in policy support to stimulate growth.

What we’re watching: How consensus expectations evolve, signs of improving labor demand, resilience of exports and manufacturing sector.

Our view:

4.3% (Q4 YoY) real GDP growth in 2023
4.7% (Q4 YoY) in 2024

1.7% (Q4 YoY) inflation growth in 2023
2.1%(Q4 YoY) in 2024

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
EQUITY VIEWS

U.S. Equities

We raised our U.S. corporate earnings estimates by $8 (3.8%) for 2023 and $2 for 2024. That decision reflects our assessment of the Q1 earnings season and our view that a U.S. recession will begin in Q4 instead of Q3. Our estimates fall slightly below consensus for 2023 and 6% below consensus for 2024.

We maintained our optimistic earnings view despite fears of a U.S. banking crisis or further tightening in lending standards. Defying some expectations, financial conditions have remained steady, and corporate managements expressed a “less pessimistic view” of their businesses heading into the conference season and the U.S. debt ceiling negotiation. Given still-bearish investor positioning, we are hopeful that markets can exceed the upper end of the range established over the past 13 months.

What we’re watching: Artificial intelligence, mid-cap tech, the equal-weighted S&P 500, mid-caps on relative valuation and quality metrics. And given current risks, volatility, and modest return potential to history, we’re keeping an eye on structured notes.

Our view: S&P 500 $4,250-$4,350 by year-end 2023
$4,450-$4,550 by mid-2024
**Europe Equities**

European companies delivered another quarter of positive y/y growth during the first-quarter earnings season. We are increasing our earnings by €1.8 (5%) for 2023 and €2.1 (6%) for 2024. This leaves us slightly below consensus for 2023 and 4% below consensus for 2024. We lower – slightly - our next 12 months (NTM) P/E from 14x-14.5x to 13.5x due to better earnings growth and stickier inflation. The market is currently trading at around 12.5x NTM P/E. That represents a more than 30% discount to the U.S. market, which we expect to narrow closer to 26%-27%.

**What we’re watching:** Industrials, energy, technology and luxury, France and the United Kingdom, European national champions

**Our view:** SXXP €480-495 by year-end 2023
€495-505 by mid-2024

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
**Asia Equities**

Japanese equity indices reached 30-year highs over the past month. Stocks found support in a U.S. economy more resilient than expectations, a stronger U.S. dollar, inexpensive valuations, and catch-up versus European equities (historically highly correlated). We continue to expect a U.S. recession to take place toward the end of 2023, and for USDJPY to weaken to 118-122 by June 2024. With earnings revisions remaining firmly negative, we view the Topix as fully valued.

The economic recovery in China remains bumpy, and while earnings for the larger internet platforms in China during 1Q23 were slightly better than expectations, this was not yet enough to drive earnings upgrades. We remain confident that earnings growth is achievable, but patience is required. This has led us to roll our MSCI China and CSI300 YE23 outlooks of 78-82 and 4,700-4,900 to June 2024, still offering attractive upside potential on a 12-month basis.

Risk/reward for the Indian market is improving as valuations for the Indian equity market are no longer elevated, but 2023 earnings growth estimates of 24%-25% could have some downside risk.

**What we’re watching:** Korean equities are likely benefiting from improving fundamentals in the memory market. Taiwan equities could see accelerating earnings growth as semiconductor demand recovers in 3Q23. Chinese equities may remain inexpensive and have the potential to offer above-average returns on a 12-month basis as the economic recovery progresses.

**Our view:**
Topix: 2,020-2,060 by year-end 2023
2,060-2,100 by mid-2024
MSCI AxJ: 660-715 by year-end 2023
690-760 by mid-2024
MSCI China: 75-78 by year-end 2023
78-82 by mid-2024
CSI 300: 4,500-4,700 by year-end 2023
4,700-4,900 by mid-2024
MSCI India: 2,010-2,120 by year-end 2023
2,170-2,310 by mid-2024
MSCI ASEAN: 665-700 by year-end 2023
690-740 by mid-2024

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. **Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.**
RATES VIEWS

U.S. Rates

The U.S. economy is proving to be more resilient than expected. Payroll growth is trending at 225,000 jobs, wages are elevated (keeping nominal income growth high), and core inflation is running around 4%-4.5%. Concerns about banking sector stresses have eased, but we do expect tighter lending conditions. The surge in Treasury issuance that we expect will follow the debt limit agreement could crowd out investment elsewhere and thus help slow the economy. As investors are well aware, the Fed is looking to slow the pace of economic growth.

We expect another hike from the Fed in either June or July. Before the central bank decides to pause, payroll growth likely needs to slow below 200,000 jobs (as we expect will occur over the short term). Given our view that a recession will begin in the fourth quarter, we expect rate cuts near the end of 2023. We note that the Treasury curve embeds little expectation of cuts in 2023 and rates across the curve have risen over the last month. Market pricing seems to assume that the Fed will keep the fed funds rate above 3.35% for 10 years. We break with that consensus and expect rates to decline across the curve.

What we’re watching: The labor market and signs that tight financial conditions will likely restore supply and demand balance.

Our view: 3.25% (+/− 25bps) by year-end 2023
2.95% (+/− 25bps) by mid-2024

Europe Rates

Eurozone economic activity has slowed, yet inflation is proving to be even stickier than in the United States. We expect the ECB to reach its peak policy rate of 3.75% in Q3 2023; with risks skewed to more hikes. We anticipate no ECB rate cuts through mid-year 2024. German yields have increased, but continue to trade in their year-to-date range. Curve inversion will likely become more pronounced as the terminal rate approaches.

In the United Kingdom, the Bank of England (BoE) is eager to end its hiking cycle, which has played out as the U.K. economy has lagged its peers since the start of the pandemic. However, persistent inflationary pressures and a robust labor market will likely keep the central bank hiking for a while longer. We expect a terminal rate of 5.5%.

What we’re watching: Whether the war in Ukraine or a commodity shock send markets on a more bearish turn.

We’re also considering if central banks have the luxury to pivot toward focusing on the growth outlook.

Our view:
10Y Bund: 2.25% (+/− 25bps) by year-end 2023
2.0% (+/− 25bps) by mid-2024

10Y Gilt: 3.50% (+/− 25bps) by year-end 2023
3.25% (+/− 25bps) by mid-2024

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
CREDIT VIEWS

U.S. Credit

Investors have chosen not to price recession risks despite several bank failures and a material tightening in bank lending standards. However, business fundamentals are deteriorating under the surface, and we think these problems will become more acute this summer as the Fed makes what we expect will be its last rate hike for the cycle. We came into the year expecting a recession in 2023, with its effects hitting credit markets toward the 2H of the year. As mentioned, we now think a downturn will begin in 4Q.

U.S. banks seem to be well capitalized, but duration mismatch issues in securities portfolios have called attention to some capital deficiencies. We expect to see more differentiation among banks on this issue.

As the credit cycle rolls through corporate credit, it will expose weak issuers and likely lead to increasing defaults into 2024.

What is our view on portfolio positioning? We prefer to add core fixed income, both investment grade (IG) and municipals. In our view, adding duration to diminish reinvestment risk is attractive, as the Fed tends to cut 6-7 months after pausing. Maintaining ample liquidity can allow us to take advantage of market dislocations. We generally favor owning credits with cash flow generation that allows the issuer to self-finance.

What we’re watching: Persistent U.S. inflation, the credit cycle, and investment grade’s correlation to U.S. Treasuries.

Our view:

US IG (spread) 175bps (+/- 25bps) by year-end 2023
185bps (+/- 25bps) by mid-2024

US HY (spread) 650bps (+/- 25bps) by year-end 2023
700bps (+/- 25bps) by mid-2024

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
Europe Credit

We favor defensive positioning and up-in-quality trades, preferring investment grade over high yield (HY). IG and HY markets currently trade toward the tighter end of their recent ranges, and we expect to see wider spreads a year from now, particularly in HY.

The ECB will soon likely pause its rate increases as it nears the end of its hiking cycle. Credit spreads tend to peak well after the last rate hike as growth weakens and the economy softens after a period of swift monetary tightening.

Why have HY spreads so far remained relatively tight? We think market technicals - the lack of primary supply - are the main reason. Going forward, we believe supply issues could be a cause of concern for HY investors.

Net issuance YTD stands at just €1 billion. Cash balances have eroded and access to capital markets for European HY credits remains limited. As the maturity wall is steepening, low-credit-quality B/CCC maturities will move from 4% of total outstanding debt in 2024 to 12% in 2025. Default rates have already started to rise, reaching 1.2% in April after prior months of negligible rates.

We expect HY default rates to continue to creep higher, hitting an estimated 3.5% in the year ahead. While leverage has been stable among HY issuers overall, we have clearly seen more fragility among HY issuers in the first quarter. In problem sectors such as real estate, pricing for certain credits reflects the potential for serious problems.

What we’re watching: We believe short-dated IG offers attractive value in both EUR and GBP, with very limited credit or rates risk. In IG financials, fundamentals are sound for well known European banks, which continue to trade wide to corporates. Corporate hybrids are a fundamentally defensive asset class, where credit risk is low.

Our view:

EU IG (spread) 170bps (+/- 25bps) by year-end 2023
185bps (+/- 25bps) by mid-2024

EU HY (spread) 595bps (+/- 25bps) by year-end 2023
625bps (+/- 25bps) by mid-2024

---


All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
Asia Credit

Asia IG benefited from better risk sentiment globally with spreads tightening by 7bps in April, recovering half of the widening that had occurred March. While spreads in Asia IG are fair at ~148bps versus our year-end outlook of 185bps, a high absolute yield of 5.21% and short duration of 4.8 years is likely to generate decent return (YTD return 3.2%).

In Asia HY, spreads have widened by 45bps, dragged down by problems in China’s property sector, which have hurt overall investor sentiment. Contracted sales proved the sector’s bright spot, rising 31% on a year-over-year basis. Under the hood, market divergence persists. China’s state-owned enterprises (SOEs) rose 76% on a y/y basis, while non-distress private names fell 8% and distress names declined 39% y/y. We expect 2023 would be the year for recovery and restructuring. The Asia HY index spread of >1,000bps still implies high default risk. In short, credit selection is important.

What we’re watching: We’re keeping an eye on China reopening baskets, including China TMT, Hong Kong Credits and Macau Gaming. Outside of China, we like the commodity story of Indonesia and the long-term growth opportunity for India.

Our View:

Asia IG (spread) 160bps (+/- 25bps) by year-end 2023
175bps (+/- 25bps) by mid-2024

Asia HY (spread) 1,100bps (+/- 25bps) by year-end 2023
1,135bps (+/- 25bps) by mid-2024

---

5 Bloomberg Finance L.P. Data as of May 26, 2023.

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
EM Credit

Unusually, in this cycle, emerging market (EM) credit is not at the epicenter of the risk spectrum, as it is impacted mainly by the headwinds surrounding stresses in the developed world banking sector. EM banks are less levered than they have been in the past, and generally they face less potential for deposit shifting than many of their DM counterparts.

Nevertheless, the EM credit complex, sovereign and corporate, has suffered in recent months, as it usually does in a global risk-off scenario. EMBI spreads widened around 50bps (current level: 404bps) and CEMBI moved ~60bps (current level: 346bps) wider since their lows in February 2023. We expect some modest further widening in both EMBI and CEMBI, but we believe investors will be able to identify a fair amount of value in the EM credit space.

Chinese policy will likely help EM countries on the margin, as the government’s commitment to stimulus has removed some tail risk. But China is unlikely to once again allocate 25%+ of GDP to real estate activity, given the country’s broad home ownership (over 90% versus OECD average of 70%) and China’s negative demographics (aging populations).

Turning to FX (the subject of the following section), EM currencies will likely benefit as the U.S. dollar weakens. We think a weakening USD should support EM credit spreads in the latter half of the year.

What we’re watching: EM energy credits, as they offer very attractive spreads, given the overall aversion to the region in a financial conditions tightening cycle. Also: corporate hybrids, and contrarian trades.

Our view:

EMBI (spread) 425bps (+/- 25bps) by year-end 2023
450bps (+/- 25bps) by mid-2024

CEMBI (spread) 385bps (+/- 25bps) by year-end 2023.
400bps (+/- 25bps) by mid-2024

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
FX VIEWS

US Dollar
The U.S. dollar found support in May as rates markets priced out prior expectations of near-term rate cuts and forecasters tapered their upward revisions for growth in Europe and China. As investors lean further into the late-cycle playbook and U.S. rates and growth "catch down" to rest of the world, we believe the dollar should continue to unwind its excessive overvaluation over the medium term. The dollar still screens ~10% overvalued against interest rate differentials and historical averages.

We acknowledge that it could be a gradual and choppy path forward, given the complexity in global growth dynamics. In addition, recession risks and weaker risk sentiment limit where investors can express a short dollar view. We continue to see the risk/reward calculus favors trading USD weaker against alternative reserve currencies (EUR, JPY and CHF). At the same time, we take a cautious view of trading the dollar weaker against high beta currencies and EM FX.

What we’re watching: U.S. growth momentum, ROW (Europe & China) economic surprise indices

Our view: DXY: 99 (97-101) by year-end 2023
97 (95-99) by mid-2024

Euro
In May, the euro retreated from its highs amid broad dollar strength. After a few months of upside surprises in euro area growth and inflation, rates markets have priced in a hawkish path for the ECB that includes ongoing hikes into September. More recently, the Economic Surprise Index looks to have stabilized, and market narratives shifted on the margin, given a rebound in U.S. rates.

At current levels, EURUSD still looks 10% undervalued against interest rate differentials over the longer term. We continue to expect medium-term EUR appreciation, albeit at a slower pace, as U.S. data moves lower and global investors rebalance long-held U.S. overweights.

What we’re watching: Europe growth momentum, ECB hiking expectations, portfolio flows/positioning (closing underweights in European fixed income)

Our view: 1.13 (1.11 - 1.15) by year-end 2023
1.15 (1.13 - 1.17) by mid-2024

![U.S. dollar history chart]


All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
The Global Investment Strategy View

**British Pound**

Sterling stabilized over the past month amid broad USD strength. From here, the BoE may stay relatively hawkish, as it recently revised up its growth and inflation outlook, lending some support to the currency. That said, U.K. fundamentals are among the most vulnerable in the G10, characterized by high inflation, weak growth and a large current account deficit. Our FX model, which is based on interest rate differentials, global equities, and the broadly defined value of the U.S. dollar, now implies modest upside for GBP. We would consider underweighting GBP exposure relative to other ex-USD core G10 currencies, and see EURGBP ultimately breaching 0.90.

**What we’re watching:** BOE hiking expectations, global risk sentiment, energy prices.

**Our view:** 1.25 (1.23-1.27) by year-end 2023
1.27 (1.25-1.29) by mid-2024

---

**Swiss Franc**

We stay bullish on CHF, given its strong fundamentals and safe-haven nature. In Switzerland, inflation remains sticky and broad-based. We continue to focus on the fact that any retreat from policy accommodation the Swiss National Bank (SNB) takes (such as its ongoing rate hikes and outright FX selling/CHF buying) means a tolerance—or even a pursuit of FX appreciation.

Taking into account this market backdrop, as well as Switzerland’s current account surplus (one of the largest in the G10), we see CHF outperforming high-beta G10 peers. In our view, CHF looks to be one of the prime candidates for diversifying overweight USD exposures. However, given the eurozone’s better than expected economic outlook, we would focus long CHF exposure elsewhere rather than versus EUR.

**What we’re watching:** Global growth revisions, SNB intervention.

**Our view:**

USDCHF: 0.88 (0.86-0.90) by year-end 2023
0.86 (0.84 - 0.88) by mid-2024
EURCHF: 1.00 (0.98-1.02) by year-end 2023
1.00 (0.98-1.02) by mid-2024
Japanese Yen

The yen weakened in May, given the rebound in rate differentials against the dollar. Over the past two years, the 10-year UST-JGB rate differential explains over 90% of the movement in USDJPY. We continue to expect USDJPY to decline meaningfully. That move would reflect narrower rate differentials amid diminished Fed hawkishness, along with the possibility that the Bank of Japan (BoJ) changes its yield curve control policy at some point this year.

While BoJ policy normalization will likely be a long and gradual process, any adjustment to the current policies could bring upside to JGB yields, further narrowing rate differentials. We favor long JPY positions against USD and higher-beta, risk-sensitive currencies with 6-12 month tenor via loss-limited options structures.

What we’re watching: Japan inflation, BoJ policy guidance, USD yields.

Our view: 125 (123-127) by year-end 2023
120 (118-122) by mid-2024

Chinese Yuan

We revised up our USDCNH outlook in the wake of slowing growth momentum in China. April activity data came in broadly below expectations. While we don’t foresee a major easing from the People’s Bank of China (PBOC), markets could continue to price in rate cuts if the recovery stays lukewarm. That would make long CNH a negative carry trade and discourage exporters from converting foreign currency back to the yuan.

From a capital flow perspective, we haven’t seen a significant pick-up in capital inflows so far this year despite the economic reopening. In addition, it is difficult to see a clear path ahead for FX pricing, as geopolitical concerns remain front and center for market participants. This backdrop, together with the balance of payment challenges that prevented us from becoming bullish on CNH at the start of the year (i.e., export slowdown, resumption of outbound tourism), prompted us to turn less constructive on the currency in May.

What we’re watching: Domestic recovery, capital flows, PBoC policy moves.

Our view: 7.10 (7.00 – 7.20) by year-end 2023
7.00 (6.90 – 7.10) by mid-2024

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
G10 Commodity FX

As we embrace the late-cycle FX playbook, we generally see commodity FX as currencies to trade from the short side:

**CAD:** In our view, growth headwinds from tightening U.S. credit conditions could disproportionately impact Canada and leave the Bank of Canada (BoC) on hold. That would likely translate into less supportive carry.

**AUD:** As the Australian economy remains resilient and inflation moves lower, we are neutral on AUD. We keep an eye out for a potential boost to the currency from a comeback in China tourism. But we think weaker global risk sentiment would constrain any potential gains.

**NZD:** We remain bearish on NZD, as domestic growth challenges outweigh support from expectations of tightening from the Reserve Bank of New Zealand (RBNZ).

**What we’re watching:** Commodity prices, global growth outlook, central bank divergence

**Our view:**
- CAD: 1.38 (1.36-1.40) by year-end 2023
- AUD: 0.70 (0.68-0.72) by year-end 2023
- NZD: 0.62 (0.60–0.64) by year-end 2023

---

Scandi FX

The high-beta nature of Scandinavian currencies leaves them vulnerable in today’s late-cycle environment. We favor shorting Scandi FX against non-USD low-yielders.

**NOK:** In the case of the Norwegian krone, declining natural gas prices, soft domestic growth data amid tighter policy and more restrictive global financial conditions are not a recipe for currency appreciation.

**SEK:** Sweden’s Riksbank has turned decidedly hawkish of late, explicitly aiming to strengthen the krone to help cool inflation. However, we note a less than favorable outlook on the growth and housing market front (in the G10, Swedish households have among the highest level of debt service relative to disposable income). This leaves us skeptical that SEK can strengthen on a sustainable basis.

**What we’re watching:** Commodity prices, global growth outlook, housing activity in both countries.

**Our view:**
- EURNOK: 11.00 (10.80–11.20) by year-end 2023
- EURSEK: 11.20 (11.00–11.40) by year-end 2023

---

Scandi FX history

<table>
<thead>
<tr>
<th>NOK, SEK per EUR</th>
<th>May ‘22</th>
<th>Aug ‘22</th>
<th>Nov ‘22</th>
<th>Feb ‘23</th>
<th>May ‘23</th>
</tr>
</thead>
<tbody>
<tr>
<td>EURNOK</td>
<td>11.00</td>
<td>11.00</td>
<td>11.00</td>
<td>11.00</td>
<td>11.00</td>
</tr>
<tr>
<td>EURSEK</td>
<td>11.20</td>
<td>11.20</td>
<td>11.20</td>
<td>11.20</td>
<td>11.20</td>
</tr>
</tbody>
</table>


*JPM Investment Bank Outlook

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
Emerging Market FX

A late-cycle environment does not generally favor EMFX, though pockets of the bloc could find resilience with attractive carry. As we have explained, our weaker USD view focuses on underweighting USD against alternative reserve currencies. The more growth-sensitive of that group would remain vulnerable to weakening risk sentiment.

As we assess the terrain:

**Latam**: Robust carry and falling global yields make for a resilient environment for Latin American local assets. We prefer monetizing volatility to directional FX exposure, as politics never strays far from center stage.

**BRL**: Manageable external imbalances relative to history and a robust banking sector provide support to the Brazilian real. Still, investors cannot overlook the potential impact of a looming U.S. recession. We see limited downside from here but our conviction is low.

**MXN**: The Mexican currency offers the best risk/reward in the region, in our view, given a persistent carry advantage (we see cuts in other jurisdictions), relatively firm external and fiscal balances, and quieter politics.

**EMEA**: We are neutral on this part of the complex, and would instead focus attention on Latin American markets.

**ILS**: The Israeli shekel finds fundamental support from the country’s balance of payments, but that will likely prove a secondary driver so long as equity volatility is high. Finally, USD/ILS remains highly correlated to U.S. financial conditions.

**Asia**: In the Asia complex, we are incrementally more positive than we were a month ago. We favor countries with a greater exposure to China demand/tourism (i.e., the Thai Baht (THB), and Indonesian Rupiah (IDR) over the Indian rupee (INR) and Philippine peso (PHP)). **TWD**: We see a stable outlook for the Taiwan dollar in light of improved exports with China, but the currency remains vulnerable to the global manufacturing downturn. A geopolitical premium will likely persist. **SGD**: We are neutral on the Singapore dollar against the U.S. dollar. But we still favor long SGD versus its trade-weighted basket given SGD’s attractive carry. The Monetary Authority of Singapore (MAS) is expected to remain on hold through 2023 as core CPI has likely peaked.

**What we’re watching**: Overall risk sentiment, global trade outlook, central bank divergence.

**Our view**:

- **BRL**: 5.35 (5.15–5.55) by year-end 2023
- **MXN**: 19.35 (19.15–19.55) by year-end 2023
- **ILS**: 3.40 (3.30–3.50) by year-end 2023
- **TWD**: 31.25 (31.00–31.50) by year-end 2023
- **SGD**: 1.32 (1.30–1.34) by year-end 2023

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
COMMODITY VIEWS

**BCOM Index**

Commodities overall have continued to underperform. After losing 4.5% on the month-to-date, they are down 13% YTD. Markets have unwound all of last year’s gains, but it feels difficult to call a bottom as long as Chinese data remain weak. Once again, natural gas, diesel and nickel rank as the sector’s biggest losers. Sugar, coffee and gold are the few commodities that have managed a gain on the year.

Negative carry has been a persistent feature of the index since late January as sellers lower prices in exchange for immediate delivery. The negative carry amounts to 1.3%, a significant drop from last year’s 13% positive carry.

Stepping back, the big picture is clear: Commodity investors are pricing in a recession and expressing disappointment in the pace of China’s reopening.

**What we’re watching:** China industrial production, and stimulus from the Chinese government.

**Our view:** 110-115 by year-end 2023
110-115 by mid-2024

---

**Gold**

Gold failed to make new highs after retreating twice at the $2,063 level, and it has slid lower on the month, losing 1.5%. It is still up 7.6% on the year, and we think it is worth considering buying on dips towards $1,925.

As a hedge against debt ceiling stress, gold did not shine. For now, higher interest rates and a stronger dollar have halted the metal’s advance. However, if markets look toward a Fed rate cut scenario and the dollar resumes its downward drift, it would likely be supportive for gold prices. As always, a resurgence of geopolitical stress could provide a further boost.

Finally, as we track investor positioning, we note that retail investors have added to positions in May. Still, they remain below last year’s extended highs and by no means suggest an over-owned risk asset.

**What we’re watching:** Fed rate cuts, U.S. recession.

**Our view:** $2,000-$2,100 by year-end 2023
$2,000-$2,100 by mid-2024
Crude Oil

Oil markets struggled last month, losing 5.6% across the Texas Intermediate (WTI) and Brent benchmarks. What explains the price decline? Quite simply, the market remains in surplus, and as long as that holds, oil will likely languish.

Producers are focusing on rising costs pressuring margins and a drop in production in the Permian. They fail to consider important recent developments impacting pricing. These include: new production from Brazil, Ghana and Norway, continued releases from the U.S. Strategic Petroleum Reserve (SPR) and the pause before OPEC cuts took effect.

However, we think markets are approaching the end of the oil surplus. The SPR releases will end in June. OPEC cuts have begun, as evidenced by significant cuts in exports and statements from Texas producers declaring that the break-even price for new production has risen to at least $60–$65 per barrel (bbl). As most producers aim for margins of at least 20%, they need to see the price of WTI oil stable above $72–$77/bbl.

For hedging purposes, backwardation in the oil price curve (the forward price of a futures contract is below the spot price) means no new U.S. supply is expected for now. However, in May, the U.S. Department of Energy asked for offers on 3 million barrels, to be delivered in August, to resupply the SPR.

What we’re watching: How successful the administration is in tendering for the SPR rebuild, OPEC cuts.

Our view: Brent: $88–$93 by year-end 2023

$88–$93 by mid-2024
**Natural gas**

Natural gas prices fell again in May, down 4% for the month. High production levels and benign weather patterns pressured prices lower. We expect production declines to begin after June. Until then, we struggle to see prices recover.

On the demand front, Europe currently has ample supplies to meet its demand, and the lack of robust activity in China means a slowdown in demand for liquefied natural gas (LNG). We remain confident this will change, but it will likely take a little longer than anticipated.

**What we’re watching:** The weather. Extreme heat or cold will drive the price, and we will wait patiently for production to begin to decline.

**Our view:** $3.50-$4.50 by year-end 2023

$3.50-$4.50 by mid-2024

---

**Agricultural commodities**

At the last possible minute, Russia agreed to renew the Black Sea Grain Initiative, which enables the safe export of grain from Ukrainian ports. This decision eased pressure on corn and wheat prices, which declined 7% and 2%, respectively. Despite the drop in energy prices, food prices globally remain elevated.

In addition, we note that the market continues to mark down the geopolitical risk that could potentially lead to supply shocks. This could be a misjudgment if export markets prove to be more vulnerable than current prices would suggest. Finally, it appears that U.S. wheat producers faced poor winter conditions, which could put upward pressure on prices. Corn prices could also move higher following a tightening in corn stocks to the lowest levels since 2013-14.

**What we’re watching:** La Niña weather conditions for clues on export production declines and possible new land based options for Ukrainian exports.

**Our view:**

Corn: 760-860 cts by mid-2024

Wheat: 770-820 cts by mid-2024

---

All outlook estimates represent the midpoint of our range. GDP and inflation numbers have a +/-10bps range, rates have a +/-25bps range, and all other outlooks are within the range that is provided. Estimates, forecasts and comparisons are for illustrative purposes and are as of the dates stated in the material. Please refer to “Definition of Indices and Terms” for important information. Past performance is no guarantee of future results and investors may get back less than the amount invested. It is not possible to invest directly in an index.
OUR MISSION

The Global Investment Strategy Group provides industry-leading insights and investment advice to help our clients achieve their long-term goals. They draw on the extensive knowledge and experience of the Group’s economists, investment strategists and asset-class strategists to provide a unique perspective across the global financial markets.

THE TEAM

Executive Sponsor
Clay Erwin
Global Head of Investments
Sales & Trading

Global Investment Strategy Group
Tom Kennedy
Chief Investment Strategist

Elyse Ausenbaugh
Global Investment Strategist

Christopher Baggini
Global Head of Equity Strategy

Nur Cristiani
Head of LatAm Investment Strategy

Kristin Kallergis Rowland
Global Head of Alternative Investments

Jacob Manoukian
Head of U.S. Investment Strategy

Grace Peters
Head of EMEA Investment Strategy

Xavier Vegas
Global Head of Credit Strategy

Alex Wolf
Head of Asia Investment Strategy
DEFINITIONS OF INDICES AND TERMS

Currencies and Central Banks

- **USD** – US dollar
- **DXY** – U.S. Dollar Index indicates the general initial value of the USD. The index measures this by averaging the exchange rates between the USD and major world currencies.
- **EUR** – Euro
- **JPY** – Japanese yen
- **GBP** – British pound
- **CHF** – Swiss franc
- **CAD** – Canadian dollar
- **AUD** – Australian dollar
- **NOK** – Norwegian krone
- **MXN** – Mexican peso
- **BRL** – Brazilian real
- **CNH** – Offshore deliverable renminbi
- **CNY** – Onshore non-deliverable renminbi
- **RMB** – Chinese renminbi
- **KRW** – Korean won
- **INR** – Indian rupee
- **SGD** – Singapore dollar
- **SEK** – Swedish krona
- **XAU** – Gold
- **RUB** – Russian ruble
- **TRY** – Turkish lira
- **BCB** – Central Bank of Brazil
- **BoC** – Bank of Canada
- **BoE** – Bank of England
- **BOJ** – Bank of Japan
- **CBR** – Central Bank of Russia
- **CBRT** – Central Bank of the Republic of Turkey
- **CBRA** – Central Bank of the Republic of Argentina
- **ECB** – European Central Bank
- **Fed** – Federal Reserve
- **SNB** – Swiss National Bank

Additional abbreviations

- **Bbl** – Barrel
- **Bps** – Basis points
- **Bcf** – Billion cubic feet
- **BoP** – Balance of Payments
- **BTP** – Italian government bonds
- **Bund** – German government bonds
- **CFTC** – Commodity Futures Trading Commission
- **COVID-19** – Coronavirus disease 2019
- **DM** – Developed Markets
- **EM** – Emerging Markets
- **EMEA** – Europe, Middle East and Africa
- **FDI** – Foreign Direct Investment
- **FX** – Foreign Exchange
- **G10** – The Group of Ten is made up of 11 industrial countries that consult and cooperate on economic, monetary and financial matters
- **GDP** – Gross Domestic Product
- **HY** – High yield
- **IG** – Investment grade
- **JGB** – Japan government bond
- **LATAM** – Latin America
- **OPEC** – Organisation of the Petroleum Exporting Countries
- **Oz.** – Ounce
- **REER** – Real Effective Exchange Rate
- **UK** – United Kingdom
- **UST** – U.S. Treasury note
- **WTI** – Western Texas Intermediate
- **YTD** – Year-to-date
Note: Indices are for illustrative purposes only, are not investment products, and may not be considered for direct investment. Indices are an inherently weak predictive or comparative tool. All indices denominated in U.S. dollars unless noted otherwise.

The Bloomberg Commodity Index (BCOM) is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector and group level for diversification. Roll period typically occurs from 6th-10th business day based on the roll schedule.

The Bloomberg USAgg Index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate pass-throughs), ABS and CMBS (agency and non-agency).

The Citi Economic Surprise Indices measure data surprises relative to market expectations. A positive reading means that data releases have been stronger than expected and a negative reading means that data releases have been worse than expected.

The J.P. Morgan Asia Credit Index (JACI) aids in evaluating investment opportunities in fixed rate USD denominated bonds issued in Asia ex Japan region. It follows a traditional market capitalization technique similar to the EMBI and the CEMBI Index series.

The MSCI AC Asia ex Japan Index captures large and mid-cap representation across two of three Developed Markets countries (excluding Japan) and eight Emerging Markets countries in Asia. With 609 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. Developed Markets countries in the index include: Hong Kong and Singapore. Emerging Markets countries include: China, India, Indonesia, Korea, Malaysia, the Philippines, Taiwan and Thailand.

The MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. The index consists of 23 developed market country indexes.

The Standard and Poor’s 500 Index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. The index was developed with a base level of 10 for the 1941–43 base period.

The STOXX Europe 600 Index (SXXP Index): An index tracking 600 publicly traded companies based in one of 18 EU countries. The index includes small cap, medium cap, and large cap companies. The countries represented in the index are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Holland, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

TOPIX, also known as the Tokyo Stock Price Index, is a capitalization-weighted index of all companies listed on the First Section of the Tokyo Stock Exchange.
KEY RISKS

- Investments in commodities may have greater volatility than investments in traditional securities. The value of commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Investing in commodities creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

- Investing in alternative assets involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

- The price of equity securities may rise or fall due to the changes in the broad market or changes in a company’s financial condition, sometimes rapidly or unpredictably. Equity securities are subject to “stock market risk” meaning that stock prices in general may decline over short or extended periods of time.

- Investing in fixed income products is subject to certain risks, including interest rate, credit, inflation, call, prepayment and reinvestment risk. Any fixed income security sold or redeemed prior to maturity may be subject to substantial gain or loss.

- Preferred securities are typically long dated securities with call protection that fall in between debt and equity in the capital structure. Preferred securities carry various risks and considerations which include: concentration risk; interest rate risk; lower credit ratings than individual bonds; a lower claim to assets than a firm’s individual bonds; higher yields due to these risk characteristics; and “callable” implications meaning the issuing company may redeem the stock at a certain price after a certain date.

- Investors should understand the potential tax liabilities surrounding a municipal bond purchase. Certain municipal bonds are federally taxed if the holder is subject to alternative minimum tax. Capital gains, if any, are federally taxable. The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax (AMT).

- Holders of foreign securities can be subject to foreign exchange risk, exchange-rate risk and currency risk, as exchange rates fluctuate between an investment’s foreign currency and the investment holder’s domestic currency. Conversely, it is possible to benefit from favorable foreign exchange fluctuations.

- International investments may not be suitable for all investors. International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations. International investing can be more volatile.

- Investments in emerging markets may not be suitable for all investors. Emerging markets involve a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations. Investments in emerging markets can be more volatile.

- Not all option strategies are suitable for all investors. Certain strategies may expose investors to significant potential risks and losses. For additional risk information, please request a copy of “Characteristics and Risks of Standardized Options.” We advise investors to consult their tax advisors and legal counsel about the tax implications of these strategies. Investors are urged to carefully consider whether options or option-related products or strategies are suitable for their needs. In discussion of options and other strategies, results and risks are based solely on hypothetical examples cited; actual results and risks will vary depending on specific circumstances. Investors are urged to consider carefully whether option or option-related products in general, as well as the products or strategies discussed herein are suitable to their needs. In actual transactions, the client’s counterparty for OTC derivatives applications is JPMorgan Chase Bank, N.A. and its affiliates. For a copy of the “Characteristics and Risks of Standardized Options” booklet, please contact your J.P. Morgan Advisor.

- Structured products involve derivatives and risks that may not be suitable for all investors. The most common risks include, but are not limited to, risk of adverse or unanticipated market developments, issuer credit quality risk, risk of lack of uniform standard pricing, risk of adverse events involving any underlying reference obligations, risk of high volatility, risk of illiquidity/little to no secondary market, and conflicts of interest. Before investing in a structured product, investors should review the accompanying offering document,
prospectus or prospectus supplement to understand the actual terms and key risks associated with the each individual structured product. Any payments on a structured product are subject to the credit risk of the issuer and/or guarantor. Investors may lose their entire investment, i.e., incur an unlimited loss. The risks listed above are not complete. For a more comprehensive list of the risks involved with this particular product, please speak to your J.P. Morgan team. If you are in any doubt about the risks involved in the product, you may clarify with the intermediary or seek independent professional advice.

- The risks listed above are not complete. For a more comprehensive list of the risks involved with this particular product, please speak to your J.P. Morgan team.

This material is for information purposes only, and may inform you of certain products and services offered by private banking businesses, part of JPMorgan Chase & Co. (“JPM”). Products and services described, as well as associated fees, charges and interest rates, are subject to change in accordance with the applicable account agreements and may differ among geographic locations. Not all products and services are offered at all locations. If you are a person with a disability and need additional support accessing this material, please contact your J.P. Morgan team or email us at accessibility.support@jpmorgan.com for assistance. Please read all Important Information.

GENERAL RISKS & CONSIDERATIONS

Any views, strategies or products discussed in this material may not be appropriate for all individuals and are subject to risks. Investors may get back less than they invested, and past performance is not a reliable indicator of future results. Asset allocation/diversification does not guarantee a profit or protect against loss. Nothing in this material should be relied upon in isolation for the purpose of making an investment decision. You are urged to consider carefully whether the services, products, asset classes (e.g. equities, fixed income, alternative investments, commodities, etc.) or strategies discussed are suitable to your needs. You must also consider the objectives, risks, charges, and expenses associated with an investment service, product or strategy prior to making an investment decision. For this and more complete information, including discussion of your goals/situation, contact your J.P. Morgan team.

NON-RELIANCE

Certain information contained in this material is believed to be reliable; however, JPM does not represent or warrant its accuracy, reliability or completeness, or accept any liability for any loss or damage (whether direct or indirect) arising out of the use of all or any part of this material. No representation or warranty should be made with regard to any computations, graphs, tables, diagrams or commentary in this material, which are provided for illustration/reference purposes only. The views, opinions, estimates and strategies expressed in this material constitute our judgment based on current market conditions and are subject to change without notice. JPM assumes no duty to update any information in this material in the event that such information changes. Views, opinions, estimates and strategies expressed herein may differ from those expressed by other areas of JPM, views expressed for other purposes or in other contexts, and this material should not be regarded as a research report. Any projected results and risks are based solely on hypothetical examples cited, and actual results and risks will vary depending on specific circumstances. Forward-looking statements should not be considered as guarantees or predictions of future events.

Nothing in this document shall be construed as giving rise to any duty of care owed to, or advisory relationship with, you or any third party. Nothing in this document shall be regarded as an offer, solicitation, recommendation or advice (whether financial, accounting, legal, tax or other) given by J.P. Morgan and/or its officers or employees, irrespective of whether or not such communication was given at your request. J.P. Morgan and its affiliates and employees do not provide tax, legal or accounting advice. You should consult your own tax, legal and accounting advisors before engaging in any financial transactions.

IMPORTANT INFORMATION ABOUT YOUR INVESTMENTS AND POTENTIAL CONFLICTS OF INTEREST

Conflicts of interest will arise whenever JPMorgan Chase Bank, N.A. or any of its affiliates (together, “J.P. Morgan”) have an actual or perceived economic or other incentive in its management of our clients’ portfolios to act in a way that benefits J.P. Morgan. Conflicts will result, for example (to the extent the following activities are permitted in your account): (1) when J.P. Morgan invests in an investment product, such as a mutual fund, structured product, separately managed account or hedge fund issued or managed by JPMorgan Chase Bank, N.A. or an affiliate, such as J.P. Morgan Investment Management Inc.; (2) when a J.P. Morgan entity obtains services, including trade execution and trade clearing, from an affiliate; (3) when J.P. Morgan receives payment as a result of purchasing an investment product for a client’s account; or (4) when J.P. Morgan receives payment for providing services (including shareholder servicing, recordkeeping or custody) with respect to investment products purchased for a client’s portfolio. Other conflicts will result because of relationships that J.P. Morgan has with other clients or when J.P. Morgan acts for its own account.

Investment strategies are selected from both J.P. Morgan and third-party asset managers and are subject to a review process by our manager research teams. From this pool of strategies, our portfolio construction teams select those strategies we believe fit our asset allocation goals and forward-looking views in order to meet the portfolio’s investment objective.

As a general matter, we prefer J.P. Morgan managed strategies. We expect the proportion of J.P. Morgan managed strategies will be high (in fact, up to 100 percent) in strategies such as, for
KEY RISKS

example, cash and high-quality fixed income, subject to applicable law and any account-specific considerations.

While our internally managed strategies generally align well with our forward-looking views, and we are familiar with the investment processes as well as the risk and compliance philosophy of the firm, it is important to note that J.P. Morgan receives more overall fees when internally managed strategies are included. We offer the option of choosing to exclude J.P. Morgan managed strategies (other than cash and liquidity products) in certain portfolios.
LEGAL ENTITY, BRAND & REGULATORY INFORMATION

In the United States, bank deposit accounts and related services, such as checking, savings and bank lending, are offered by JPMorgan Chase Bank, N.A. Member FDIC.

JPMorgan Chase Bank, N.A. and its affiliates (collectively “JPMCB”) offer investment products, which may include bank managed investment accounts and custody, as part of its trust and fiduciary services. Other investment products and services, such as brokerage and advisory accounts, are offered through J.P. Morgan Securities LLC (“JPMS”), a member of FINRA and SIPC. Annuities are made available through Chase Insurance Agency, Inc. (CIA), a licensed insurance agency, doing business as Chase Insurance Agency Services, Inc. in Florida. JPMCB, JPMS and CIA are affiliated companies under the common control of JPM. Products not available in all states.

In Germany, this material is issued by J.P. Morgan SE, with its registered office at Taunusstor 1 (TaunusTurm), 60310 Frankfurt am Main, Germany, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB). In Luxembourg, this material is issued by J.P. Morgan SE – Luxembourg Branch, with registered office at European Bank and Business Centre, 6 route de Treves, L-2633, Senningenberg, Luxembourg, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Luxembourg Branch is also supervised by the Commission de Surveillance du Secteur Financier (CSSF); registered under R.C.S Luxembourg B255938. In the United Kingdom, this material is issued by J.P. Morgan SE – London Branch, registered office at 25 Bank Street, Canary Wharf, London E14 5JP, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – London Branch is also supervised by the Financial Conduct Authority and Prudential Regulation Authority. In Spain, this material is distributed by J.P. Morgan SE, Sucursal en España, with registered office at Paseo de la Castellana, 31, 28046 Madrid, Spain, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE, Sucursal en España is also supervised by the Spanish Securities Market Commission (CNMV); registered with Bank of Spain as a branch of J.P. Morgan SE under code 1567. In Italy, this material is distributed by J.P. Morgan SE – Milan Branch, with its registered office at Via Cordusio, n.3, Milan 20123, Italy, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Milan Branch is also supervised by Bank of Italy and the Commissione Nazionale per le Società e la Borsa (CONSOB); registered with Bank of Italy as a branch of J.P. Morgan SE under code 8076; Milan Chamber of Commerce Registered Number: REA MI 2536325. In the Netherlands, this material is distributed by J.P. Morgan SE – Amsterdam Branch, with registered office at World Trade Centre, Tower B, Strawinskylaan 1135, 1077 XX, Amsterdam, The Netherlands, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Amsterdam Branch is also supervised by De Nederlandsche Bank (DNB) and the Autoriteit Financiële Markten (AFM) in the Netherlands. Registered with the Kamer van Koophandel as a branch of J.P. Morgan SE under registration number 72610220. In Denmark, this material is distributed by J.P. Morgan SE – Copenhagen Branch, filial af J.P. Morgan SE, Tyskland, with registered office at Kalvebod Brygge 39-41, 1560 København V, Denmark, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Copenhagen Branch, filial af J.P. Morgan SE, Tyskland is also supervised by Finanstilsynet (Danish FSA) and is registered with Finanstilsynet as a branch of J.P. Morgan SE under code 29010. In Sweden, this material is distributed by J.P. Morgan SE – Stockholm Bankfilial, with registered office at Hamngatan 15, Stockholm, 11147, Sweden, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Stockholm Bankfilial is also supervised by Finansinspektionen (Swedish FSA); registered with Finansinspektionen as a anch of J.P. Morgan SE. In France, this material is distributed by JPMorgan Chase Bank, N.A. – Paris Branch, registered office at 14, Place Vendome, Paris 75001, France, registered at the Registry of the Commercial Court of Paris under number 712 041 334 and licensed by the Autorité de contrôle prudentiel et de resolution (ACPR) and supervised by the ACPR and the Autorité des Marchés Financiers. In Switzerland, this material is distributed by J.P. Morgan (Suisse) SA, with registered address at rue du Rhône, 35, 1204, Geneva, Switzerland, which is authorised and supervised by the Swiss Financial Market Supervisory Authority (FINMA) as a bank and a securities dealer in Switzerland.

This communication is an advertisement for the purposes of the Markets in Financial Instruments Directive (MiFID II) and the Swiss Financial Services Act (Finsa). Investors should not subscribe for or purchase any financial instruments referred to in this advertisement except on the basis of information contained in any
applicable legal documentation, which is or shall be made available in the relevant jurisdictions (as required).

In Hong Kong, this material is distributed by JPMCB, Hong Kong branch. JPMCB, Hong Kong branch is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission of Hong Kong. In Hong Kong, we will cease to use your personal data for our marketing purposes without charge if you so request. In Singapore, this material is distributed by JPMCB, Singapore branch. JPMCB, Singapore branch is regulated by the Monetary Authority of Singapore. Dealing and advisory services and discretionary investment management services are provided to you by JPMCB, Hong Kong/Singapore branch (as notified to you). Banking and custody services are provided to you by JPMCB Singapore Branch. The contents of this document have not been reviewed by any regulatory authority in Hong Kong, Singapore or any other jurisdictions. You are advised to exercise caution in relation to this document. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice. For materials which constitute product advertisement under the Securities and Futures Act and the Financial Advisers Act, this advertisement has not been reviewed by the Monetary Authority of Singapore. JPMorgan Chase Bank, N.A., a national banking association chartered under the laws of the United States, and as a body corporate, its shareholder’s liability is limited.

With respect to countries in Latin America, the distribution of this material may be restricted in certain jurisdictions. We may offer and/or sell to you securities or other financial instruments which may not be registered under, and are not the subject of a public offering under, the securities or other financial regulatory laws of your home country. Such securities or instruments are offered and/or sold to you on a private basis only. Any communication by us to you regarding such securities or instruments, including without limitation the delivery of a prospectus, term sheet or other offering document, is not intended by us as an offer to sell or a solicitation of an offer to buy any securities or instruments in any jurisdiction in which such an offer or a solicitation is unlawful. Furthermore, such securities or instruments may be subject to certain regulatory and/or contractual restrictions on subsequent transfer by you, and you are solely responsible for ascertaining and complying with such restrictions. To the extent this content makes reference to a fund, the Fund may not be publicly offered in any Latin American country, without previous registration of such fund’s securities in compliance with the laws of the corresponding jurisdiction.

JPMorgan Chase Bank, N.A. (JPMCBNA) (ABN 43 074 112 011/ AFS Licence No: 238367) is regulated by the Australian Securities and Investment Commission and the Australian Prudential Regulation Authority. Material provided by JPMCBNA in Australia is to “wholesale clients” only. For the purposes of this paragraph the term “wholesale client” has the meaning given in section 761G of the Corporations Act 2001 (Cth). Please inform us if you are not a Wholesale Client now or if you cease to be a Wholesale Client at any time in the future.

JPMS is a registered foreign company (overseas) (ABN 109293610) incorporated in Delaware, U.S.A. Under Australian financial services licensing requirements, carrying on a financial services business in Australia requires a financial service provider, such as J.P. Morgan Securities LLC (JPMS), to hold an Australian Financial Services Licence (AFSL), unless an exemption applies. JPMS is exempt from the requirement to hold an AFSL under the Corporations Act 2001 (Cth) (Act) in respect of financial services it provides to you, and is regulated by the SEC, FINRA and CFTC under US laws, which differ from Australian laws. Material provided by JPMS in Australia is to “wholesale clients” only. The information provided in this material is not intended to be, and must not be, distributed or passed on, directly or indirectly, to any other class of persons in Australia. For the purposes of this paragraph the term “wholesale client” has the meaning given in section 761G of the Act. Please inform us immediately if you are not a Wholesale Client now or if you cease to be a Wholesale Client at any time in the future.

This material has not been prepared specifically for Australian investors. It:

- may contain references to dollar amounts which are not Australian dollars;
- may contain financial information which is not prepared in accordance with Australian law or practices;
- may not address risks associated with investment in foreign currency denominated investments; and
- does not address Australian tax issues.

References to “J.P. Morgan” are to JPM, its subsidiaries and affiliates worldwide. “J.P. Morgan Private Bank” is the brand name for the private banking business conducted by JPM. This material is intended for your personal use and should not be circulated to or used by any other person, or duplicated for non-personal use, without our permission. If you have any questions or no longer wish to receive these communications, please contact your J.P. Morgan team.

© 2023 JPMorgan Chase & Co. All rights reserved.