Economic and Market Outlook

June 2023

Midyear economic outlook: Sticky inflation most everywhere

Introduction

The themes we highlighted in the Vanguard Economic and Market Outlook for 2023: Beating Back Inflation—persistent inflation, tight labor markets, rising policy interest rates—remain at midyear. Developed market economies have proved resilient. Labor markets have remained strong, leading to slower-than-expected disinflation. Wage pressures have moderated but remain persistent, especially in service industries. As a result, central banks have needed to raise monetary policy rates somewhat higher than we had anticipated.

We expect continued progress in the fight against inflation, with central banks having to keep interest rates in restrictive territory for longer. And with that, we anticipate some economic weakness in the months ahead.

The last mile to target inflation may take some time

There's progress in the fight against inflation. But it's too early to declare victory. Vanguard foresees developed market core inflation (which excludes food and energy prices) continuing to fall through the end of 2023 from recent generational highs. But we expect it will only be late 2024 or even 2025 before inflation falls back to central banks' targets, which are mostly around 2%.

"We believe central banks have more work to do," said Andrew Patterson, Vanguard senior international economist. "We've always said inflation wouldn't come down magically, even as post-pandemic supply chain issues were resolved. The pandemic accelerated demographics-driven changes to labor markets. Strong demand for workers who can command higher pay than historical standards requires monetary policy that is clearly restrictive. The last leg of inflation reduction to central bank targets may be the most challenging."

That last leg is also likely to vary by region, said Rhea Thomas, a Vanguard economist. "The initial catalysts for the surge in inflation were global in nature," Thomas said. "The pace at which inflation travels that last mile to target will depend more heavily on local drivers: how restrictive policy tightening is in each country or region, and local demand, labor market, and housing dynamics."

Thomas noted that central bankers in Australia, Canada, and now the United States have paused in what had been a relentless cycle of rate hikes. Hikes have since resumed in Australia and Canada, and the Federal Reserve policymakers have hinted they will resume lifting rates as well.

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Inflation, policy elevate the risk of recession

In the United States, the recovery from the shortest recession in more than 150 years—a two-month downturn in early 2020—has endured one of the most aggressive interest rate-hiking cycles in Federal Reserve history. Recent growth has been stable at about 2%, annualized. We still assign a high probability to a recession, though the odds have risen that it could be delayed from 2023 to 2024. Shelter inflation should slow in the second half of 2023 and return to its pre-pandemic pace by 2024. Slowing momentum in labor markets should also lower ex-shelter services inflation later this year.

In our initial outlook for 2023, we described a weakening of the labor market (along with slowing growth) as a necessary condition for falling rates of inflation. The labor market has had its own idea, remaining resilient even as disinflation has continued. Unemployment remains below 4%, where it stood when the Fed started its current rate-hiking cycle. We continue to expect some softening.

Given the long and variable lags between monetary policy shifts and discernible changes in economic activity, Federal Reserve policymakers could decide that the 500 basis points (5 percentage points) of interest rate hikes they've enacted since March 2022 are enough to knock inflation down to their 2% target. But we view at least one more rate increase as probable.

Mexico

In Mexico, we expect the rate of year-over-year economic growth to slow from roughly 4% in recent quarters to less than 1.8% or 1.9% by year-end. As we suggested in our initial 2023 outlook, the rate of growth in U.S. inventories (excluding autos) has slowed in 2023 and, in turn, so have exports from Mexico to the United States—the destination for 70% of Mexico's exports.

The headline level of price increases has been moderating faster than the core rate, which excludes food and energy prices and may provide a clearer portrait of underlying price trends. By either measure, inflation remains well above the central bank's 3% target. We expect core inflation of 5.6%, year-over-year, at the end of 2023.

We expect the Bank of Mexico to maintain its current, 11.25% rate target through year-end, for a few reasons. Interest rates already exceed the rate of inflation, which has been falling, and falling inflation with stable nominal rates means higher real (inflation-adjusted) rates, which may restrict growth. Rate cuts are likely in 2024, as the central bank moves to bolster the economy.

"The labor market remains strong," the Bank of Mexico said in its May policy statement, and we agree. Its strength does not preclude some softening, however, which we expect as the effects of tight monetary policy—in the United States as well as Mexico—continue to build. We expect an unemployment rate of 3.5% at year-end.

Canada

Although economic growth in Canada has recently surprised to the upside, our proprietary leading indicators index remains in negative territory. We expect a mild recession as the effects of higher interest rates spread. The Canadian economy depends heavily on its larger, southern counterpart, and if year-over-year growth in 2023 differs from our forecast of 0.8%, we believe it's likely to disappoint.

We expect the rate of core inflation to continue moderating this year, reaching 3.2% by year-end. But upside risks remain, in part because shelter costs account for a relatively large share of household spending and because the home loan market is dominated by variable-rate and short-term fixed-rate loans.

A surprise June interest rate hike by the Bank of Canada brought the annualized rate on overnight loans between banks to 4.75%. We expect at least one more rate hike in 2023 and, thus, a policy rate of at least 5% by year-end. Given high levels of household debt and the sensitivity of housing costs to rates, monetary policy is restrictive and becoming more so as inflation recedes.

Since spiking to a pandemic-induced peak of 14% in 2020, unemployment has slid to 5%—well below its longer-term average of about 7%. We expect it rise to 5.5% by year-end, as monetary policy further tightens and the economy slows.

Euro area

In the euro area, we expect the slight economic contraction in the fourth quarter of 2022 and the first quarter of 2023, likely caused by the energy crisis, to give way to a new but short-lived expansion. Another downturn is likely to arrive this year or next, as the lagged effects of monetary policy tightening are realized.

By any measure, euro area inflation has declined meaningfully. Falling energy prices should help the headline inflation rate to further ease in coming months. Service-price inflation, linked to wage growth, is stickier and central to our expectation that core inflation will end 2023 at 3.3%, still well above the ECB's 2% target.

The ECB has hiked interest rates by 400 basis points (4 percentage points) in 12 months. We expect one or two additional increases in 2023. Currently 3.5%, a deposit rate of 3.75%–4% would represent a restrictive policy stance. (The deposit rate is the annualized rate of interest paid by the ECB on banks' overnight deposits.) It would exceed our inflation forecast and be more than twice our 1.5%–2% estimate of the region's neutral rate of interest, a theoretical rate that neither stimulates nor inhibits growth.

After peaking in 2020 at 8.6% amid the COVID-19 pandemic, the unemployment rate eased to 6.5% in April 2023. We foresee a partial retracement to 7%–7.5% by year-end, as the ECB's inflation-fighting campaign passes the one-year mark.

United Kingdom

As in other markets, we've been surprised by the resilience of the U.K. economy. Our initial forecast of a 2023 contraction in the production of goods and services has given way to an estimate of no year-over-year change in output. As elsewhere, we believe a recession remains more likely than a soft landing.

By a variety of measures, notably rates of employment and wage growth, the labor market displayed strength in the opening months of 2023. Yet consumers have not been confident about future employment. We expect a modest rise in unemployment in the second half of the year, to 4%–4.5% at year-end.

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Strengthening services inflation has driven core inflation in the U.K. to more than 30-year highs, whereas core inflation is retreating in many other developed markets. We expect core services inflation to drive broader headline inflation in the year ahead as price increases for food, energy, and other goods wane. We expect both core and headline inflation to average 5.3% in 2023, more than a percentage point higher than our view at the start of the year.

We've recently raised our forecast for the Bank of England's terminal rate by three-quarters of a percentage point, to a year-end level of 5.5%–5.75%, given stronger-than-expected inflation data, the continued tight labor market, and accelerating wage growth. We maintain our view that rates will not be cut until mid-2024 at the earliest.

China

In China, we now expect year-over-year economic growth of 5.5%–6% in 2023, more than we anticipated at the start of the year. But the bulk of those gains have already occurred, meaning that a slower growth is coming in the second half of the year. Full-year growth above a conservative government target is likely, but three years of policy uncertainty will weigh on confidence.

The labor market has improved steadily since China's post-pandemic reopening, with the headline unemployment rate declining to 5.2%. However, youth unemployment has climbed to a record high, posing a downside risk to growth. We forecast a year-end headline rate of unemployment of 4.7%.

Lower energy and pork prices have contributed to weak inflation readings. A rebound later this year is likely as credit demand strengthens and food and energy prices stabilize. Still, we have nearly halved our initial inflation forecast, to 1% on a year-over-year basis at year-end.

A recent People's Bank of China cut to 2.65% for the key 1-year medium-term lending facility should have little tangible economic effect. We believe an additional 10–20 basis points (0.1–0.2 percentage point) of cuts are likely. But China's challenge is a lack of demand for money, not a lack of supply. The likelihood of aggressive fiscal stimulus is low because of an increasing local government debt burden.

Australia

In Australia, monetary policy rates continue to climb amid sticky inflation. Our 2023 growth forecast of 1%–1.5%, year-over-year, is little changed from the start of the year. But tepid first-quarter growth and our expectation for subdued consumption in the coming quarters skew risks to the downside. We place a 40% probability on recession in the next 12 months—below that of many developed markets but still significant.

An unemployment rate that has flirted with near-50-year lows is likely to rise in the second half of the year, to 4% at year-end, and further, to 4.75%, in 2024 as financial conditions tighten. The RBA will be attuned to unit labor costs, which have risen as productivity growth has been subdued. An increase in productivity will be required for wage growth to remain consistent with the RBA's inflation target.

Despite some mixed signals recently, we believe inflation has peaked; our forecast for its pace at year-end, 4.5%, is unchanged. Still, recent higher-than-expected inflation readings suggest higher interest rates will be required to dampen demand. We foresee inflation falling to the high end of the central bank's 2%–3% target range only in late 2024 or 2025.

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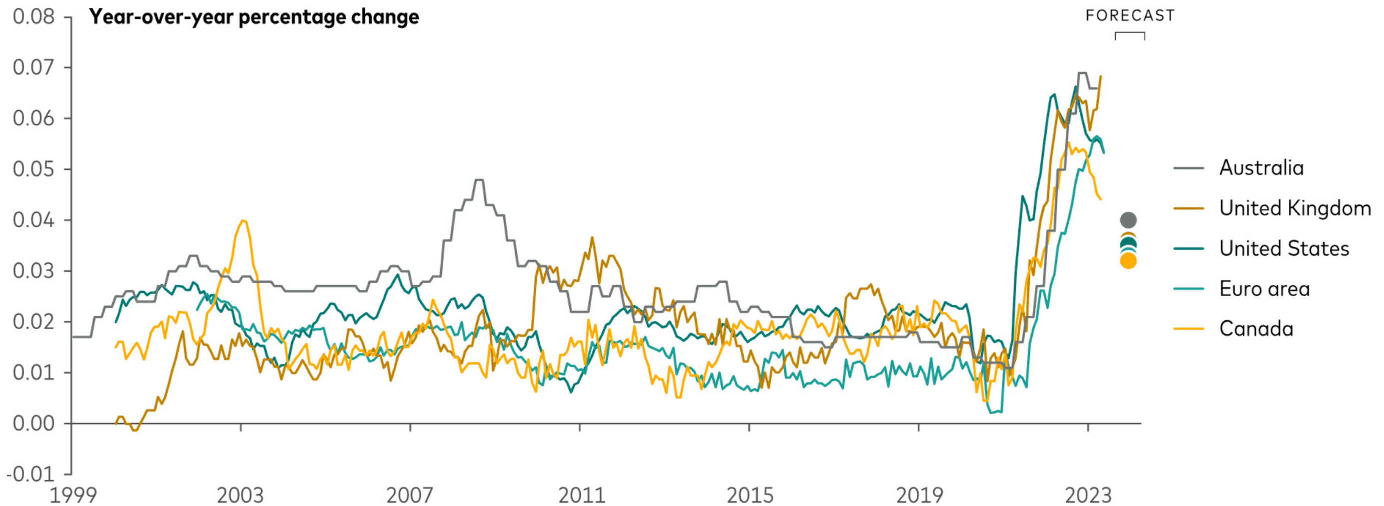
A historically aggressive effort to slow the Australian economy—and thereby quell inflation—almost certainly will continue. The Reserve Bank of Australia (RBA) raised its cash rate target a dozen times between May 2022 and June 2023. We foresee two more rate hikes, taking the rate target to 4.6% by year-end, higher by 25 basis points (0.25 percentage point) than our view at the start of the year amid signs of sticky inflation.

Our perception of economic conditions in emerging markets varies by region.

- In **Latin America**, inflation appears to have peaked, but we expect central banks to lower their interest rate targets slowly. We anticipate full-year 2023 growth around 1.5%, slowing moderately in 2024. We foresee Latin America core inflation persisting around 6.3% in both 2023 and 2024.
- The challenges facing the euro area and the United Kingdom are magnified in **developing Europe**. We expect growth of around 1% in 2023 and just below that level in 2024 in the greater Central Europe and Africa regions and core inflation to remain in double digits.
- We expect **emerging Asia** to boast sharply higher growth than the rest of the world's emerging markets. We foresee growth of 5.25% this year, cooling somewhat to 5% in 2024. The outlook is based on China's strong first-quarter growth and resilient activity globally. Compared with emerging markets globally, emerging Asia faces tame inflation of less than 2% in 2023, meaning central banks don't need to restrict activity to constrain prices.

Slow but sure progress on inflation



Notes: We use year-over-year changes the core consumer price index (CPI) for all locations except Australia, where we use trimmed mean CPI. Year-end 2023 figures are Vanguard forecasts.
Sources: Vanguard calculations, using data from the U.S. Bureau of Labor Statistics, Statistics Canada, Eurostat, the U.K. Office for National Statistics, and the Australian Bureau of Statistics accessed through Macrobond on June 15, 2023.

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Vanguard's forecasts for year-end 2023

	2023 economic growth	2023 inflation	2023 monetary policy**	2023 unemployment rate
United States	0.75%	3.3%	5.25% - 5.5%	4.5%
Canada	0.8%	3.2%	5%	5.5%
Mexico	1.8% - 1.9%	5.6%	11.25%	3.5%
United Kingdom	0%	4.9%	5.5% - 5.75%	4% - 4.5%
Euro area	0.5%	3.3%	3.75% - 4%	7% - 7.5%
China	5.5% - 6%	1%	2.45% - 2.55%	4.7%
Australia	1% - 1.5%	4.5%	4.6%	4%

*Inflation forecasts are for core inflation, which excludes volatile energy and food prices, except for Australia, where we measure headline inflation, which includes food and energy.
**Our forecast for the United States year-end monetary policy rate reflects the low end of the Federal Reserve's federal funds target range.
Notes: Figures related to economic growth, inflation, monetary policy, and unemployment rate are Vanguard forecasts for the end of2023. Growth and inflation are comparisons with the end of the preceding year; monetary policy and unemployment rate are absolute levels.
Source: Vanguard, as of June 26, 2023.

Expected 10-year asset class returns

Equity markets around the world generally have rallied strongly—with the notable exception of China, the dominant emerging market by total value—since we issued Vanguard Economic and Market Outlook for 2023: Beating Back Inflation. For most investors around the world, the gains have reduced the expected returns of global equities excluding local markets.

Bond markets worldwide also generally have recorded solid gains—if only in nominal, not inflation-adjusted terms—since late 2022. Relative to our initial forecast, expected returns generally declined slightly.

Bucking the global trend of strong equity and solid bond performance, markets in the United Kingdom struggled in the first half of 2023. Falling equity valuations and rising bond yields boosted our expectations for 10-year annualized returns in British pounds. Widening interest rate differentials between the U.K. and the United States improved the outlook for global equities and bonds excluding British issues.

Our forecasts are derived from a May 31, 2023, running of the Vanguard Capital Markets Model®. Figures are based on a 2-point range around the 50th percentile of the distribution of return outcomes for equities and a 1-point range around the 50th percentile for fixed income.

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Following are our 10-year annualized return forecasts. Forecasts are from the perspective of local investors in local currencies.

EQUITIES	RETURN PROJECTION
U.S. stocks	4.1%–6.1%
Ex-U.S. stocks	6.5% - 8.5%
Euro-area stocks	3.8% - 5.8%
Ex-euro-area stocks	3.5% - 5.5%
U.K. stocks	4.5%–6.5%
Ex-U.K. stocks	5.8% - 7.8%
Australian stocks	4.3% - 6.3%
Ex-Australia stocks	5.0% - 7.0%
Mexican stocks	6.9% - 8.9%
Global ex-U.S. developed market stocks	9.9% - 11.9%
Canadian stocks	4.9% - 6.9%
Ex-Canada stocks	4.5% - 6.5%
Chinese stocks	7.5% – 9.5%
Ex-China stocks	5.0% - 7.0%

BONDS	RETURN PROJECTION
U.S. bonds	3.8% -4.8%
Ex-U.S. bonds (USD hedged)	3.7% - 4.7%
Euro-area bonds	2.3% - 3.3%
Ex-euro-area bonds (EU hedged)	2.3% - 3.3%
U.K. bonds	4.3% – 5.3%
Ex-U.K. bonds (GBP hedged)	4.3% – 5.3%
Australian bonds	3.4% - 4.4%
Ex-Australia bonds(AUD hedged)	3.6% - 4.6%
Mexican bonds	10.4% - 11.4%
Ex-Mexico bonds (MXN hedged)	9.2% - 10.2%
Canadian bonds	3.3% - 4.3%
Ex-Canad bonds (CAD hedged)	3.1% - 4.1%
Chinese bonds	2.4% - 3.4%

IMPORTANT: The projections or other information generated by the Vanguard Capital Markets Model regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for each modeled asset class. Simulations are as of May 31, 2023. Results from the model may vary with each use and over time. For more information, please see the Notes section below.

Notes:

All investing is subject to risk, including the possible loss of the money you invest. Diversification does not ensure a profit or protect against a loss in a declining market. Be aware that fluctuations in the financial markets and other factors may cause declines in the value of your account. There is no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income. Past performance is no guarantee of future results.

Investments in stocks and bonds issued by non-U.S. companies are subject to risks including country/regional risk and currency risk. These risks are especially high in emerging markets.

Bond funds are subject to the risk that an issuer will fail to make payments on time, and that bond prices will decline because of rising interest rates or negative perceptions of an issuer's ability to make payments.

About the Vanguard Capital Markets Model

IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. VCMM results will vary with each use and over time.

The VCMM projections are based on a statistical analysis of historical data. Future returns may behave differently from the historical patterns captured in the VCMM. More important, the VCMM may be underestimating extreme negative scenarios unobserved in the historical period on which the model estimation is based.

The Vanguard Capital Markets Model® is a proprietary financial simulation tool developed and maintained by Vanguard's Investment Strategy Group. The model forecasts distributions of future returns for a wide array of broad asset classes. Those asset classes include U.S. and international equity markets, several maturities of the U.S. Treasury and corporate fixed income markets, international fixed income markets, U.S. money markets, commodities, and certain alternative investment strategies. The theoretical and empirical foundation for the Vanguard Capital Markets Model is that the returns of various asset classes reflect the compensation investors require for bearing different types of systematic risk (beta). At the core of the model are estimates of the dynamic statistical relationship between risk factors and asset returns, obtained from statistical analysis based on available monthly financial and economic data. Using a system of estimated equations, the model then applies a Monte Carlo simulation method to project the estimated interrelationships among risk factors and asset classes as well as uncertainty and randomness over time. The model generates a large set of simulated outcomes for each asset class over several time horizons. Forecasts are obtained by computing measures of central tendency in these simulations. Results produced by the tool will vary with each use and over time.

The primary value of the VCMM is in its application to analyzing potential client portfolios. VCMM asset-class forecasts—comprising distributions of expected returns, volatilities, and correlations—are key to the evaluation of potential downside risks, various risk–return trade-offs, and the diversification benefits of various asset classes. Although central tendencies are generated in any return distribution, Vanguard stresses that focusing on the full range of potential outcomes for the assets considered, such as the data presented in this paper, is the most effective way to use VCMM output.

The VCMM seeks to represent the uncertainty in the forecast by generating a wide range of potential outcomes. It is important to recognize that the VCMM does not impose "normality" on the return distributions, but rather is influenced by the so-called fat tails and skewness in the empirical distribution of modeled asset-class returns. Within the range of outcomes, individual experiences can be quite different, underscoring the varied nature of potential future paths. Indeed, this is a key reason why we approach asset-return outlooks in a distributional framework.

Notes:

Indexes used in Vanguard Capital Markets Model simulations

The long-term returns of our hypothetical portfolios are based on data for the appropriate market indexes as of December 31, 2021; December 31, 2022; and May 31, 2023. We chose these benchmarks to provide the most complete history possible, and we apportioned the global allocations to align with Vanguard's guidance in constructing diversified portfolios. Asset classes and their representative forecast indexes are as follows:

U.S. equities: MSCI US Broad Market Index.
Global ex-U.S. equities: MSCI All Country World ex USA Index.
U.S. aggregate bonds: Bloomberg U.S. Aggregate Bond Index.
Global ex-U.S. bonds: Bloomberg Global Aggregate ex-USD Index.

Canadian equities: MSCI Canada Total Return Index.
Global ex-Canada equities: MSCI All Country World Index ex-Canada in CAD.
Canadian aggregate bonds: Bloomberg Canadian Issues 300MM Index.
Global ex-Canada bonds: Bloomberg Global Aggregate ex-Canada Index (CAD Hedged).

Euro area equities: MSCI European Economic and Monetary Union (EMU) Index.
Global ex-euro area equities: MSCI AC World ex EMU Index.
Euro area aggregate bonds: Bloomberg Euro-Aggregate Bond Index.
Global ex-euro area bonds: Bloomberg Global Aggregate ex Euro Index.

UK equities: Bloomberg Equity Gilt Study from 1900 through 1964, Thomson Reuters Datastream UK Market Index from 1965 through 1969; MSCI UK thereafter.
Global ex-UK equities: S&P 90 Index from January 1926 through March 3, 1957; S&P 500 Index from March 4, 1957 through 1969; MSCI World ex UK Index from 1970 through 1987; MSCI AC World ex UK thereafter.
UK aggregate bonds: Bloomberg Sterling Aggregate Bond Index.
Global ex-UK bonds: Standard & Poor's High Grade Corporate Index from 1926 through 1968, Citigroup High Grade Index from 1969 through 1972, Lehman Brothers US Long Credit AA Index from 1973 through 1975, Bloomberg US Aggregate Bond Index from 1976 through 1990, Bloomberg Global Aggregate Index from 1990 through 2001; Bloomberg Global Aggregate ex GBP Index thereafter.

China equities: MSCI China A Onshore Index.
Global equities ex-China: MSCI All Country World ex China Index.
China aggregate bonds: ChinaBond Aggregate Index.

Australian equities: MSCI Australia Index.
Global ex-Australia equities: MSCI All Country World ex-Australia Index.
Australian bonds: Bloomberg Australian Aggregate Bond Index.
Global ex-Australia bonds: Bloomberg Global Aggregate ex-AUS Bond Index.

Mexico equities: MSCI Mexico Index.
Global ex-U.S. developed market equities: MSCI World ex US Index.
Mexico sovereign bonds: S&P/BMV Sovereign MBONOS Bond Index.
Global bonds ex-Mexico: Bloomberg Global Aggregate Index.

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