Vanguard®

MAY 2022

Market perspectives

Vanguard's monthly economic and market update

KEY HIGHLIGHTS

- We expect the Federal Reserve to raise rates sooner, with **the equivalent of six-to-eight 25-basis-point hikes** to the federal funds rate target in 2022.
- Risks to U.S. growth specifically from oil prices have moderated in recent weeks, and we still expect **full-year GDP growth of around 3.5%.**
- Vanguard expects the **U.S. unemployment rate to fall to its 3.5% pre-pandemic level** in the second quarter and even further by year-end.

Asset-class return outlooks

Our 10-year, annualized, nominal return projections are shown below. The shaded figures marked with an asterisk (*) reflect a February 28, 2022, running of the Vanguard Capital Markets Model® (VCMM) for broad equity and fixed income asset classes only. Outlooks for the remaining sub-asset classes reflect a December 31, 2021, running of the VCMM. Please note that the figures are based on a 1.0-point range around the rounded 50th percentile of the distribution of return outcomes for equities and a 0.5-point range around the rounded 50th percentile for fixed income.

EQUITIES	RETURN PROJECTION	MEDIAN VOLATILITY
U.S. equities*	2.8%–4.8%	16.8%
Global equities ex-U.S. (unhedged)*	5.7%–7.7%	18.4%
U.S. value	2.8%–4.8%	19.0%
U.S. growth	–1.2%–0.8%	17.5%
U.S. large-cap	1.9%–3.9%	16.3%
U.S. small-cap	2.3%–4.3%	22.2%
U.S. real estate investment trusts	1.8%–3.8%	19.2%
Global ex-U.S. developed markets equities (unhedged)	5.1%–7.1%	16.3%
Emerging markets equities (unhedged)	4.3%–6.3%	26.8%

FIXED INCOME	RETURN PROJECTION	MEDIAN VOLATILITY
U.S. aggregate bonds*	1.9%–2.9%	4.6%
U.S. Treasury bonds*	1.6%–2.6%	4.8%
U.S. credit bonds*	2.4%–3.4%	5.8%
U.S. cash*	1.5%–2.5%	1.1%
Global bonds ex-U.S. (hedged)*	1.8%–2.8%	3.9%
U.S. high-yield corporate bonds	2.3%–3.3%	10.3%
U.S. Treasury Inflation-Protected Securities	1.2%–2.2%	4.6%
Emerging markets sovereign bonds	2.5%–3.5%	10.5%
U.S. inflation	1.6%–2.6%	2.3%

Data as of February 28, 2022. Data as of December 31, 2021.

These probabilistic return assumptions depend on current market conditions and, as such, may change over time.

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 February 28, 2022, and December 31, 2021. Results from the model may vary with each use and over time. For more information, see page 4.

Source: Vanguard Investment Strategy Group.

Region-by-region outlook

Risks to growth include oil prices, the war in Ukraine, and COVID-19

United States

Recent developments have been consistent with Vanguard's view for full-year GDP growth around 3.5% in the United States. We're keeping a close eye, however, on interest rates, monetary policy, and their potential growth effects.

- Risks to growth specifically from oil prices have moderated in recent weeks, with oil trading within the $95 to $105 per barrel range that we see as consistent with above-trend 2022 GDP growth.
- GDP grew at an annual rate of 6.9% in the fourth quarter, up from 2.3% third-quarter growth, according to the Bureau of Economic Analysis' final estimate.
- For all of 2021, real GDP grew by 5.7%, compared with a contraction of 3.4% in 2020, when the pandemic set in.

Euro area

The growth environment in the euro area is challenged by the war in Ukraine, the resulting higher energy prices, reduced confidence, and somewhat tighter financial conditions. We continue to foresee full-year growth in a range of 2.5% to 3%, lower than our outlook before the war for growth around 3.5%.

- Consumer confidence at its lowest since the start of the COVID-19 pandemic and diminished business confidence help inform our view, as do the somewhat offsetting effects anticipated from additional fiscal stimulus.
- For the fourth quarter, GDP grew by 0.3% on a seasonally adjusted basis compared with the third quarter.

China

Worsening COVID-19 outbreaks have led to lockdowns affecting more people in China than at any other point since 2020 and purchasing managers' index readings imply that a sharp economic slowdown took hold in March.

- China set an official 2022 growth target "around 5.5%" at the early-March National People's Congress, the lowest growth target it has ever set. Vanguard maintains its forecast for 2022 China growth around 5%.
- Fiscal and monetary stimulus early in the year boosted the economy in January and February, offsetting the March weakness.

Emerging markets

Vanguard continues to see economic growth around 5.5% in emerging markets broadly in 2022, but high food and energy prices related to the war in Ukraine place risks firmly to the downside.

- Energy prices have risen steadily since the start of the year but have moderated at elevated levels recently. And although higher commodities prices do benefit some emerging economies, they're a negative taken in the aggregate.
- Higher food prices have stoked tensions in some emerging markets.
- Expectations for central bank rate cuts next year in economies that have raised rates this year speak to the slowdown risk.

Energy, food, and housing costs drive inflation higher

Core inflation may be nearing its peak

The Consumer Price Index (CPI) in the United States rose by 8.5% in March compared with a year earlier, higher than a 7.9% year-on-year gain in February. That gain alongside a seasonally adjusted month-on-month gain of 1.2% was largely in line with market expectations.

- Gasoline, food, and shelter contributed the most to the broad increase. Core CPI, which excludes volatile food and energy prices, rose by 6.5% compared with a year earlier.
- Separately, the core Personal Consumption Expenditures Price Index (PCE), the Federal Reserve's preferred inflation indicator in considering monetary policy, rose 0.4% in February, a slower pace of increase than the 0.5% reading in each of the four preceding months.
- Vanguard believes that core inflation may have neared its peak, but that elevated headline inflation, reflecting not just high energy prices but also accelerating food prices, is likely to be an increasingly important factor in the Federal Reserve's policy calculus.

We expect the Fed to raise rates sooner

Inflation and wage pressures prompt action

Accelerating inflation and a still-tightening labor market have led us to revise our view on the Federal Reserve. We foresee the equivalent of six to eight 25-basis-point hikes to the federal funds rate target in 2022, with the potential for one or two 50-basis-point hikes in the mix. (Any 50-point hike would count as two of our anticipated 2022 hikes.)

- The change of view is a bringing forward of anticipated rate hikes from 2023 into 2022. We continue to foresee a terminal rate around 3%, though we're evaluating inflation, wage, and labor-market conditions for evidence that an even higher terminal rate may be in order.
- As early as its May 4 meeting, the Fed could announce that it will start to reduce its balance sheet by a level that would quickly rise to as much as $95 billion per month.
- Should investors adjust their portfolios in response to the U.S. Federal Reserve enacting the first in what is likely to be a series of interest rate hikes? For most investors, the answer will be no, other than regular rebalancing. But history shows that certain sub-asset classes have consistently outperformed during rising real rate environments.
- The current environment may present opportunities for those investors who have the ability and willingness to take some active risk and be a little more targeted in their approach.

Prolonged and persistent periods of real rate increases favor some sub-asset classes

		Feb. 1, 1975–June 30, 1976	July 1, 1980–Aug. 31, 1981	Jan. 1, 1983–Sept. 30, 1984	Oct. 1, 1992–Dec. 31, 1994	Sept. 1, 2002–July 31, 2007	Aug. 1, 2014–April 30, 2019
Above-median relative returns on average	High-quality value	1	1	1	1	1	4
	International equities	—	—	2	1	1	1
	Emerging markets	—	—	—	4	1	2
	Value stocks	1	3	1	2	2	3
	U.S. equities	2	2	2	2	M	1
	Small-cap stocks	—	1	3	1	2	2
	High-quality growth	2	2	M	4	3	1
Below-median relative returns on average	Growth stocks	3	3	3	3	3	4
	High-yield bonds	—	—	4	2	4	M
	Home prices	4	M	3	3	4	2
	Commodities	M	4	4	M	3	3
	Low-quality growth	3	4	4	4	2	3
	U.S. aggregate bonds	4	4	2	3	4	4

Key: Top quartile = 1 | Second quartile = 2 | Median = M | Third quartile = 3 | Fourth quartile = 4

Sources: Vanguard calculations, based on data from the U.S. Treasury, the U.S. Bureau of Economic Analysis, Bloomberg; CRSP; Kenneth R. French's website, at mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html; Robert Shiller's website, at aida.wss.yale.edu/~shiller/data.htm; Standard & Poor's; MSCI; Dow Jones; and Russell, as of December 31, 2021. **Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.**

Unemployment should continue falling

We may dip below pre-pandemic levels by the end of 2022

The unemployment rate in the United States fell to 3.6% in March, just a shade above its pre-pandemic low, as job creation remained strong.

- Vanguard expects the unemployment rate to fall to its 3.5% pre-pandemic level in the second quarter and even further by year-end.
- Job resignations—as measured by the "quits" rate—are likely to remain high through 2022, and that wages are likely to follow.

UNEMPLOYMENT RATE

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All investing is subject to risk, including possible loss of principal.

Diversification does not ensure a profit or protect against a loss.

Prices of mid- and small-cap stocks often fluctuate more than those of large-company stocks.

High-yield bonds generally have medium- and lower-range credit quality ratings and are therefore subject to a higher level of credit risk than bonds with higher credit quality ratings.

Investments in bonds are subject to interest rate, credit, and inflation risk.

Investments in stocks or 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.

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 primary investment research and advice teams. 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 from as early as 1960. 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.

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