

Market perspectives: December 2021

Key highlights

- Vanguard expects the U.S. economic recovery to continue in 2022, though at a naturally slower pace.
- The Fed's tapering program sets the stage for what Vanguard believes will be a late 2022 interest rate hike.
- We foresee inflation persisting above 2% toward the end of 2022, but broad wage gains taking hold could potentially push it higher.

Asset-class return outlooks

The greatest change in our outlooks from the June 30 running of the Vanguard Capital Markets Model[®] (VCMM) was in emerging markets equities. Large price declines in the intervening months lowered valuations, which are reflected in a 10-year forecast range that is 60 basis points higher in the September 30 running. In fixed income, yields increased marginally in the third quarter, allowing for a marginal rise in forecasts for many fixed income sub-asset classes.

Our 10-year, annualized, nominal return projections, as of September 30, 2021, are shown below. 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	2.3%–4.3%	16.7%
U.S. value	3.1%–5.1%	19.2%
U.S. growth	–0.9%–1.1%	17.5%
U.S. large-cap	2.2%–4.2%	16.3%
U.S. small-cap	2.2%–4.2%	22.5%
U.S. real estate investment trusts	1.9%–3.9%	19.1%
Global equities ex-U.S. (unhedged)	5.2%–7.2%	18.4%
Global ex-U.S. developed markets equities (unhedged)	5.3%–7.3%	16.4%
Emerging markets equities (unhedged)	4.2%–6.2%	26.8%
Fixed income	Return projection	Median volatility
U.S. aggregate bonds	1.4%–2.4%	4.6%
U.S. Treasury bonds	1.2%–2.2%	4.7%
U.S. credit bonds	1.6%–2.6%	4.7%
U.S. high-yield corporate bonds	2.2%–3.2%	10.4%
U.S. Treasury Inflation-Protected Securities	1.0%–2.0%	7.0%
U.S. cash	1.2%–2.2%	1.2%
Global bonds ex-U.S. (hedged)	1.3%–2.3%	3.8%
Emerging markets sovereign	2.3%–3.3%	10.1%
U.S. inflation	1.5%–2.5%	2.3%

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 September 30, 2021. Results from the model may vary with each use and over time. For more information, see the Notes section.

Source: Vanguard Investment Strategy Group.

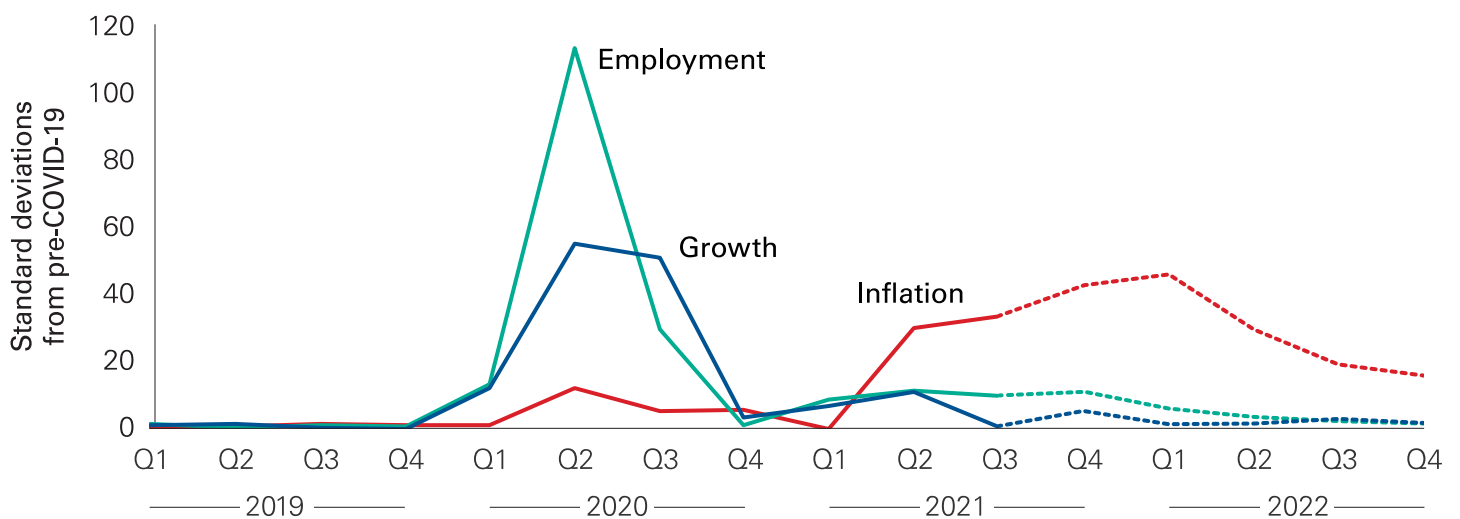
The U.S. recovery continues but pace slackens

United States

Growth appears to have stabilized in the fourth quarter as COVID-19 cases have come down from their third-quarter peaks, and we continue to see fourth-quarter growth around 5.5%.

- We expect economic recovery to continue in 2022, though at a naturally slower pace as the easiest gains will already have been captured. We foresee growth of around 4% for 2022.
- Conditions for continuing U.S. growth look favorable, even relative to pre-pandemic conditions.
- Unlike the abrupt shutdown of the economy early in the pandemic, the reopening has been a more drawn-out process and, as such, the near term will continue to be excessively volatile, adding a high degree of uncertainty to the longer-run implications (see figure).

The key drivers of U.S. inflation are sending mixed signals



Notes: The chart depicts the absolute difference in standard deviation of observed readings from the 2019 trend. Dotted lines represent Vanguard forecasted values.

Sources: Vanguard forecast and calculations, based on Refinitiv data. As of November 12, 2021.

Euro area

Vanguard expects the pace of growth to moderate, a natural slowing at this stage of economic recovery from the pandemic.

- COVID-19 continues to be a concern—new cases topped 50,000 in Germany for the first time on November 11—and high energy prices weigh on household finances.
- A rapid unwinding of supply bottlenecks that would boost manufacturing represents a risk to the upside, one especially pertinent to the euro area.
- Vanguard continues to see full-year 2021 euro area growth around 5% and 2022 growth around 4%.

China

We foresee growth in the fourth quarter of around 1% compared with the third quarter, below trend, and of around 5% for all of 2022, below market expectations for growth around 5.5%.

- We expect consumption recovery to remain muted, the property downturn to deepen and infrastructure investment to accelerate only after the National People's Congress in March.
- We expect the government to target growth around 5.5% for 2022; as such, we anticipate that it will need to tolerate an undershooting of its target or to introduce further stimulus measures.

Emerging markets

Positive health developments lead Vanguard to hold an above consensus view on 2022 growth in emerging markets of around 5.5% in 2022.

- We anticipate that Latin America and emerging Asia, regions with high vaccine acceptance, will have vaccinated almost all eligible individuals who want to be vaccinated by the end of 2021.
- We expect the percentage of the vaccinated population to lag significantly behind in emerging Europe, where vaccine acceptance is low.
- We foresee vaccination rates in Africa, which have consistently lagged those of other regions, surpassing those in emerging Europe in the first half of 2022.

The Fed begins its tapering program

The gradual removal of pandemic-era monetary policy accommodation in the United States has begun with the Federal Reserve's announcement on November 3 that it would start to scale back its bond-buying program.

- The Fed said it would reduce its purchases of Treasury securities by \$10 billion per month and of agency mortgage-backed securities by \$5 billion per month so that November purchases total \$70 billion and \$35 billion, respectively, with a similar monthly reduction in purchases thereafter.
- At such a pace, the Fed's asset-purchase program will have wound down by the middle of 2022. The Fed said it was prepared to adjust the pace of purchases—up or down—as the economic outlook warranted.
- The move sets the stage for what Vanguard believes will be a late 2022 interest rate hike. If inflation evolves as Vanguard forecasts, it likely has already met its lift-off test and the Fed will turn its attention to the labor market to gauge the appropriate time for a rate hike

What's next for U.S government funding?

The threat of a U.S. government shutdown, a U.S. debt default, or both could arise in early December.

- To avoid a shutdown in December, an omnibus appropriations bill funding the discretionary portion of the budget for the remainder of the fiscal year or another continuing resolution would need to be signed.
- Meanwhile, Congress passed and the president on October 14 signed legislation to raise the U.S. debt ceiling by \$480 billion, an amount expected to allow the government to pay its bills until at least December 3.
- The consequences of a U.S. debt default would be enormous—although Vanguard believes a U.S. debt default is unlikely.

Inflation likely to stay above 2%

Vanguard's medium-term outlook for inflation in the United States hasn't materially changed despite a stronger-than-expected reading in October, although near-term inflation is likely to be pressured higher.

- Core Consumer Price Index (CPI), which excludes volatile food and energy prices, reached 0.6% in October and 4.6% year-on-year. Strong readings over recent months have increased the possibility that supply constraints, labor shortages, and the effects of the economy's reopening will take further time to normalize.
- We foresee inflation persisting above 2% toward the end of 2022. A risk that inflation persists at or above 3% by year-end 2022 would depend on broad wage gains taking hold.
- Vanguard sees the likelihood of strong wage gains in certain pandemic-affected sectors such as leisure and hospitality, but we see the risk of such strong gains across all industries as low.

Unemployment continues falling

With inflation likely to have already met the Federal Reserve's criterion for an interest rate hike, we expect labor market developments to command attention in the coming months.

- The unemployment rate fell from 4.8% to 4.6% in October, but we don't expect the Fed to rely solely on that indicator in determining when to raise interest rates.
- Vanguard expects the unemployment rate to continue to fall, to just above 3% by the end of 2022, with labor-force participation peaking perhaps a full percentage point below its pre-pandemic level.

Notes:

- All investing is subject to risk, including possible loss of principal.
- Diversification does not ensure a profit or protect against loss.
- 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.
- Funds that concentrate on a relatively narrow market sector face the risk of higher share-price volatility.
- **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.