Vanguard

MARCH 2021

Market perspectives

Vanguard's monthly economic and market update

KEY TAKEAWAYS:

- The U.S. seems poised for growth in the second half, despite some vaccine distribution setbacks.
- Vanguard sees the Federal Reserve keeping its policy rate on hold at least through 2022—in line with the accommodative stance of most central banks.
- Inflation may bump up temporarily in the U.S., but minimal fiscal effect on inflation is expected.
- The official unemployment rate dipped recently but it overlooks those who would prefer full-time work and those who have temporarily left the workforce.

Asset-class return outlooks

Our 10-year, annualized, nominal return projections, as of December 31, 2020, 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	3.0%–5.0%	16.9%
U.S. value	4.4%–6.4%	18.9%
U.S. growth	–0.1%–1.9%	17.9%
U.S. large-cap	2.9%–4.9%	16.5%
U.S. small-cap	3.2%–5.2%	21.9%
U.S. real estate investment trusts	3.0%–5.0%	19.6%
Global equities ex-U.S. (unhedged)	6.1%–8.1%	18.6%
U.S. inflation	1.1%–2.1%	2.4%

Fixed income	Return projection	Median volatility
U.S. aggregate bonds	0.8%–1.8%	4.2%
U.S. Treasury bonds	0.5%–1.5%	4.4%
U.S. credit bonds	1.2%–2.2%	5.7%
U.S. high-yield corporate bonds	1.9%–2.9%	10.1%
U.S. Treasury Inflation-Protected Securities	0.5%–1.5%	6.3%
U.S. cash	0.7%–1.7%	1.0%
Global bonds ex-U.S. (hedged)	0.6%–1.6%	2.5%
Emerging markets sovereign	1.5%–2.5%	10.5%

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 December 31, 2020. Results from the model may vary with each use and over time. For more information, see page 4.

Source: Vanguard Investment Strategy Group.

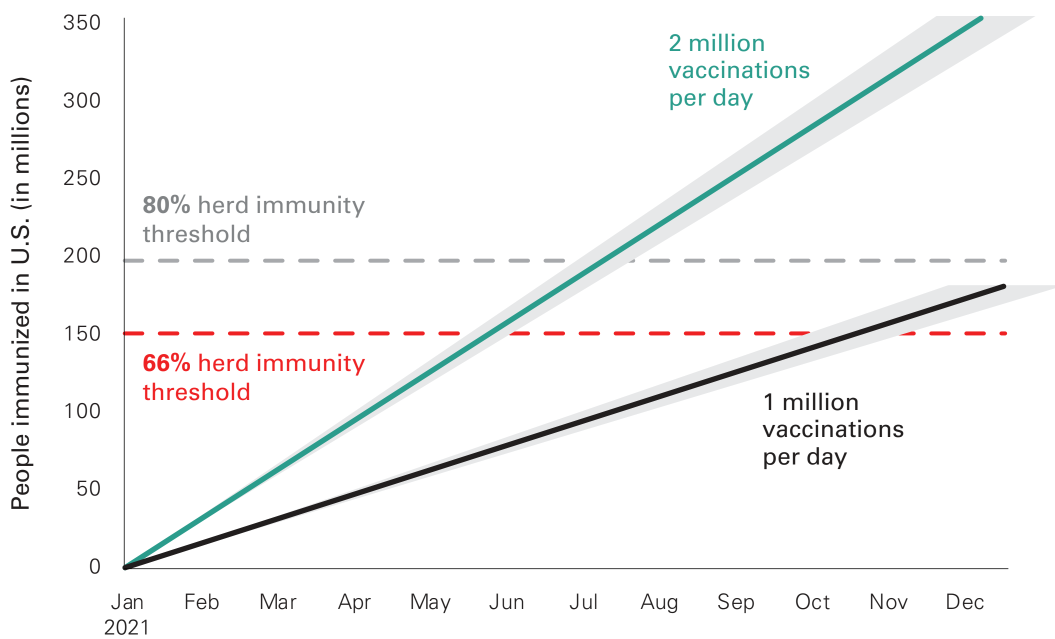
Region-by-region outlook

Vaccine rollout will be key to growth prospects

United States. Vanguard believes that the current pace of vaccination (a one-week average of 1.61 million per day as of February 17, according to Bloomberg) supports our view that economic activity in the United States will pick up significantly in the second half of the year.

- We believe that initial distribution bottlenecks—attributable in no small part to stockpiling scarce supply to ensure second doses—are surmountable. A change in strategy that prioritizes first doses and increased vaccine production should ensure that the pace of vaccinations accelerates.
- Our estimate for U.S. GDP growth above 5% in 2021 doesn't yet officially account for further government fiscal support while we await specifics on the size, timing, and composition of support.
- We would expect to raise our full-year U.S. GDP growth estimate to the neighborhood of 6.5% if further fiscal support is forthcoming, including direct aid to households and aid to state and local governments for health-related efforts.

The path to herd immunity depends on the pace of vaccinations



Notes: This analysis, as of January 25, 2021, discounts people who achieve immunity through infection. The gray buffers around the vaccination trend lines reflect the impossibility of precisely predicting when herd immunity may be achieved.

Source: Vanguard.

Euro area. Vanguard anticipates a decline in GDP in the first quarter, suggesting the region will slip into a technical "double-dip" recession.

- A relatively slow rollout of vaccine distribution and fears of mutant COVID-19 strains heighten the region's downside risks.
- In our base case we continue to foresee economic growth accelerating in the region later in the year, leaving in place our expectation for full-year growth around 5% and a return to a pre-pandemic GDP level by the end of the year.

Region-by-region outlook (continued)

China. Recent COVID-19 outbreaks and regional lockdowns are likely to leave GDP growth in China below potential in the first quarter. But we expect the fall in consumption demand to quickly recover in the second quarter, with the offsetting effects leaving our full-year outlook for China's growth unchanged around 9.0%.

- China, whose fourth-quarter GDP growth came in at 6.5% compared with the year-earlier quarter, higher than consensus estimates, also becomes the first major economy to reach its pre-pandemic trend.

Emerging markets. Vaccine breakthroughs and rollouts in developed economies make Vanguard optimistic that emerging markets on aggregate will grow by more than the 6% outlook we communicated at the end of 2020.

- We continue to see emerging Asia lead the way, with 2021 growth above 8%, as the region's pandemic management bears fruit. The growth story will also likely be positive for the Middle East should energy prices remain strong.
- There are pockets of optimism around vaccination efforts as vaccines in India and Russia have proved effective—and are being shared with some other emerging markets.

No major changes expected from the Fed

Monetary policy remains accommodative

Vanguard sees the **Federal Reserve** keeping its policy rate on hold at least through 2022 absent a shift in health outcomes affecting consumer and business behavior.

- We expect the **European Central Bank** (ECB) to keep monetary conditions highly accommodative, with the deposit rate below zero for at least the next 12 months.
- Vanguard expects any changes in policy in **China** to be balanced, looking to tamp down potential overheating in equity and real estate markets while continuing support for vulnerable sectors.
- Vanguard expects central banks in **emerging markets** to maintain an easy monetary policy, inflation dynamics permitting.

Inflation may bump up temporarily

Fiscal effect on U.S. inflation expected to be minimal

Vanguard expects the core personal consumption expenditures price index (PCE) to be pushed above the Fed's 2% target in the first half of the year as comparisons are made to weak year-earlier numbers and amid service sector supply constraints as economic activity picks up.

- We don't foresee a sustained inflationary trend in the **United States** given structural forces, and we expect direct effects from a baseline $1 trillion government fiscal package to have a minimal effect on core PCE.
- The inflation outlook for **emerging markets** is beginning to diverge, with disinflation, or inflation well below target, affecting parts of Southeast Asia, while Brazil may need to raise interest rates to counter inflation.

The U-6 unemployment rate may be more telling

Look deeper for a more complete picture on jobs

- The unemployment rate in the **United States** fell in January, but don't place too much emphasis on the official unemployment rate in the first half of 2021.
- Another in the Bureau of Labor Statistics range of alternative unemployment measures, the U-6 unemployment rate, more broadly captures an underutilization of labor, including part-time workers who would prefer full-time work and discouraged individuals who have temporarily left the workforce.

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

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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