

How should investors respond to rising real rates?

Introduction

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.

"Our research suggests that 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," said Ian Kresnak, an investment strategist at Vanguard and a member of the Vanguard Capital Markets Model (VCMM) research team.¹

Rare conditions prompt action

Kresnak noted that we are in an unusual market and economic environment, which is likely to mean that the Fed will raise interest rates over the coming years to levels not seen since before the global financial crisis. Although the recent events in Ukraine and uncertainty about the effects policy normalization will have on the broader economy raise the risks that rates may not rise as much as we anticipate, it is unlikely that they will stay at or below current levels due to high inflation rates.

This environment is likely to lead to rising real interest rates, which differ from nominal interest rates in that real rates are adjusted to remove the effects of inflation. The VCMM team investigated how some sub-asset classes performed during rising real rate environments and what drove performance. Given Vanguard's expectation that the Fed may raise the nominal rate to 3%, the team focused on similar periods with relatively large rate hikes that also led to spikes in real rates.

The analysis examined a mix of economic environments during which real rate increases occurred, including during an improving economy in 1992–1994 and a period of low growth and low interest rates in 2014–2019.

"It was important to include a wide range of economic cycles to capture as many of the conditions that exist today," Kresnak said. "This allows us to get a better understanding of how and why different sub-asset classes performed."

¹ The VCMM 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.

Three key findings

The team's research resulted in three key findings:

- 1.- **Certain sub-asset-classes have consistently outperformed, and some have consistently underperformed.** The chart below shows how 13 common sub-asset classes in investors' portfolios performed over six periods when real rates rose. The sub-asset classes that outperformed on average also tended to outperform across the six periods. The same was true for those sub-asset classes that on average underperformed, as they consistently underperformed across the different environments when real rates rose.

"Although it is not a perfect relationship, there is a clear pattern that exists between rising real rates and sub-asset class performance," Kresnak said. "When real interest rates are rising, investors tend to prefer the certainty of more immediate cash flows in their equity portfolios, which is what we typically see in high-quality value stocks, the best-performing sub-asset class during rising real rate environments."

The VCMM team found that the relationship between rising real rates and performance is stronger with bonds than with equities, given the more fixed nature of bonds' cash flows. "Equity cash flows are more uncertain, and performance tends to be influenced more by other factors, such as the business environment," he said. "In general, bonds tend to be adversely affected in a rising real rate environment."

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– Feb. 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
Below- median relative returns on average	Small-cap stocks	—	1	3	1	2	2
	High-quality growth	2	2	M	4	3	1
	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.

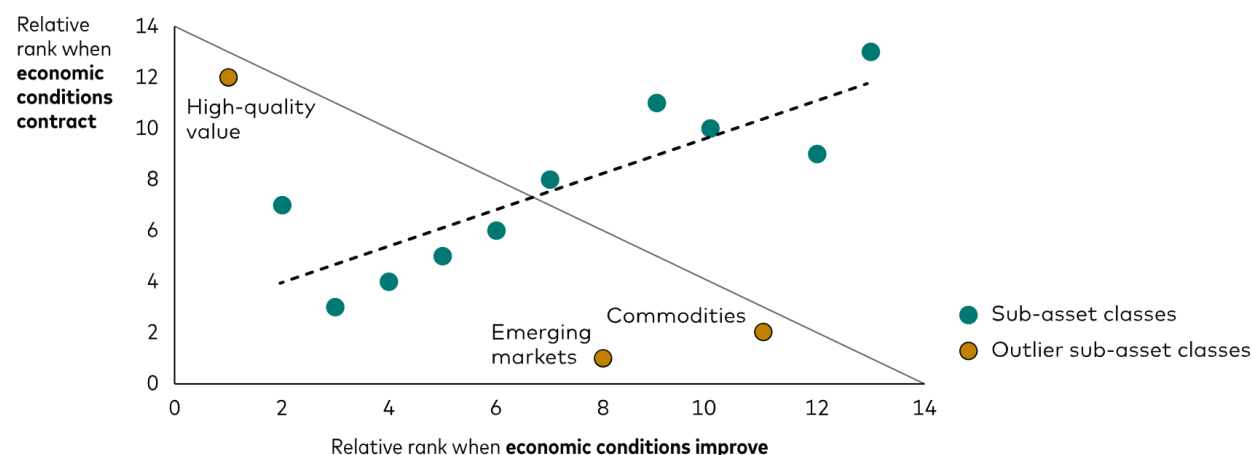
- 2.- **Rising real rates hedge inflation.** Despite the current high inflation, it may not be advisable to overweight traditional inflation hedges such as Treasury Inflation-Protected Securities and commodities, Kresnak said. "Traditional inflation hedges have typically underperformed when real interest rates rise, because policymakers are acting with the goal of bringing down inflation, and investors generally believe they will succeed," he said.

- 3.- **The growth environment is not a distinguishing factor.** Rising real rates typically are associated with improving economic conditions and higher inflation. But they can also rise because of excessive monetary tightening or deflation, which causes economic conditions to contract.

The chart below compares performance in a rising real rate environment when economic conditions are contracting and when they are improving. It clearly shows a positive slope for most sub-asset classes, suggesting that relative performance is similar whether the economy is expanding or contracting, as long as real rates are rising. If economic conditions were a key driver of relative performance, we would expect the dots to be positioned along the solid diagonal line sloping downward.

The analysis revealed three notable outliers—emerging markets, commodities, and high-quality value. Vanguard research shows that valuations for emerging markets stocks are sensitive to local economic environments, which were expanding while the U.S. was beginning to slow in the runup to the global financial crisis.[1] The unexpected behavior of commodity returns has more to do with the short-term impact of the late-1970s oil crisis. When that period is removed from the sample, commodity returns are less responsive to changing economic conditions. Finally, high-quality value stocks tend to outperform when economic conditions are strong, because investors are less willing to pay a premium for growth when it is plentiful.

Economic conditions don't matter for most sub-asset classes when real rates rise



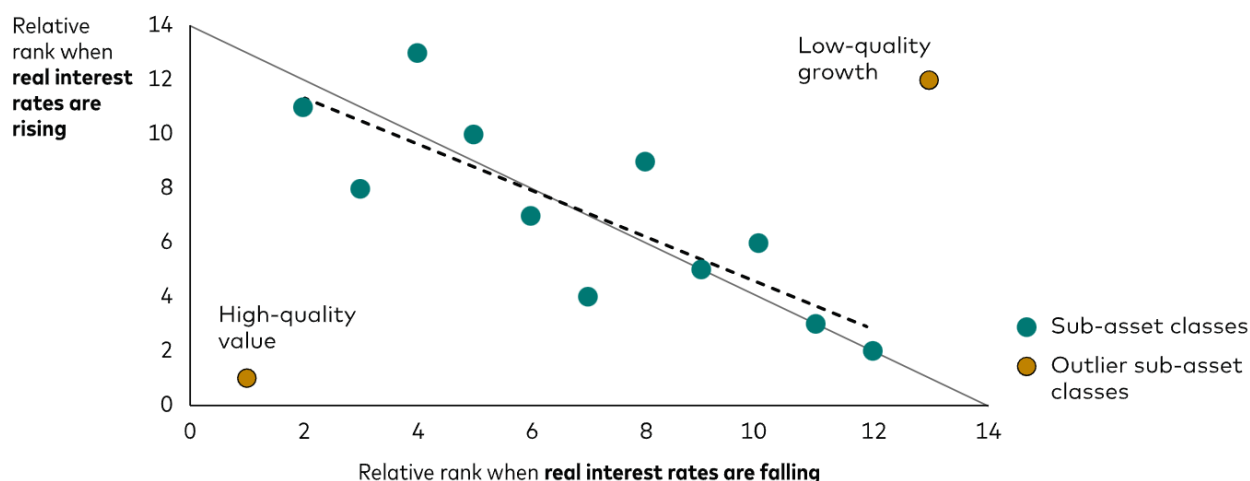
Note: Each dot represents a sub-asset class listed in the first chart. The dots are plotted based on their historical relative performance rank when economic conditions are expanding and when they are contracting. Past performance is no guarantee of future returns. **The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.**

Source: Vanguard calculations as of December 31, 2021.

The analysis also looked at sub-asset class performance during periods of rising and falling real interest rates. The negative slope in the chart below suggests that changes in real rates are a significant factor in explaining relative performance.

² See Vanguard Economic and Market Outlook for 2022: Striking a Better Balance.

The real interest rate environment is a key determinant of sub-asset class performance



Note: Each dot represents a sub-asset class listed in the first chart. The dots are plotted based on their historical relative performance rank when real interest rates are rising and when they are falling. **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.**

Source: Vanguard calculations as of December 31, 2021.

Kresnak added that many sub-asset classes that stand to gain in a rising real rate environment have been out of favor for years. As real rates increase, the risks are that active investors will stick with the best active decisions of the past decade and that passive investors will fail to rebalance.

"The opportunity is that the sub-asset classes that stand to gain the most from normalizing policy are more attractively priced precisely because they underperformed in the last decade," he said. "In that sense, both active and passive investors stand to benefit."

Notes:

- All investing is subject to risk, including the possible loss of the money you invest.
- Investments in bonds are subject to interest rate, credit, and inflation risk.
- Stocks of companies in emerging markets are generally more risky than stocks of companies in developed countries.
- 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.
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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.

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