WHY DO WE CARE ABOUT MARKET VOLATILITY?

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This article is relevant to financial professionals who are considering offering Model Portfolios to their clients. If you are an individual investor interested in WisdomTree ETF Model Portfolios, please inquire with your financial professional. Not all financial professionals have access to these Model Portfolios.

One of the overarching themes we are emphasizing for the markets in 2023 is a continuation of the elevated <u>volatility</u> quotient. Typically, heightened volatility is a by-product of uncertainty as the markets try to grapple with the probabilities of upcoming events. To be sure, uncertainty is arguably the worst fear of any investor.

The primary culprit in 2022, and for this year up to now, has been the <u>Fed</u> and the evolution of their policy-making decisions. What was once thought of as a deliberative <u>rate hike</u> approach gave way to a <u>Volcker</u>-esque' <u>tightening</u> cycle that hadn't been witnessed since the 1980s. Unfortunately, clarity on the Fed tightening front does not appear to be forthcoming any time soon. Chairman Powell's semiannual <u>monetary policy</u> testimony only added to the uncertainty currently within the market psyche. But that was for more normal fundamental conditions. Now, with the headlines surrounding the Silicon Valley Bank (SVB) and Signature Bank (SBNY) failures, a whole new layer has been added.

As a result, market volatility in arenas such as the <u>U.S. Treasury</u> market is at its highest level since 2008! Against this backdrop, we thought it would be useful to take a deeper dive on the volatility front.

First, we need to define the two most frequently referenced measures of market volatility—the <u>VIX equity volatility index</u> and the <u>MOVE bond volatility index</u>.

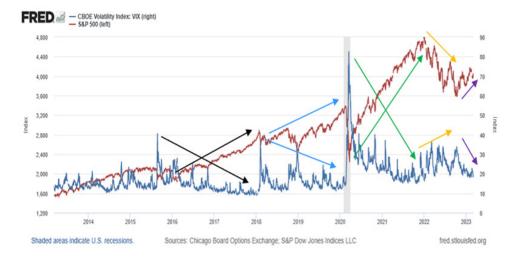
CBOE Volatility Index (VIX): This is the most widely tracked and reported equity market volatility index. It is a real-time index that represents the market's expectations for the <u>relative strength</u> of near-term price changes of the S&P 500 Index. It is derived from the prices of 30-day forward S&P 500 Index <u>options</u>. As such, it generates a 30-day forward projection of volatility. Volatility can be seen as a way of evaluating current investor sentiment, either complacency (low VIX levels) or fear (high VIX levels).

ICE MOVE Index (MOVE): This is a measure of interest rate volatility, and tracks movements in U.S. Treasury yield volatility implied by the current prices of one-month over-the-counter (OTC) options. The measured volatility is based on 2-Year, 5-Year, 10-Year and 30-Year U.S. Treasuries.

Why do we care about these volatility measures? One reason is that most long-only equity investment products and strategies have an inherent short volatility profile. That is, they tend to fall in price when volatility rises (conversely, frequently used hedging strategies, such as long <u>put options</u>, almost definitionally have a long volatility profile—they go up in value when volatility goes up).

We can see this inverse relationship between the equity market and the VIX by examining the track records of each. We've tried to make this chart easier to interpret by using different colored arrows to mark different market regimes.





Source: St. Louis Fed (FRED), 10-year data through 02/23. You cannot invest in an index and past performance does not guarantee future performance.

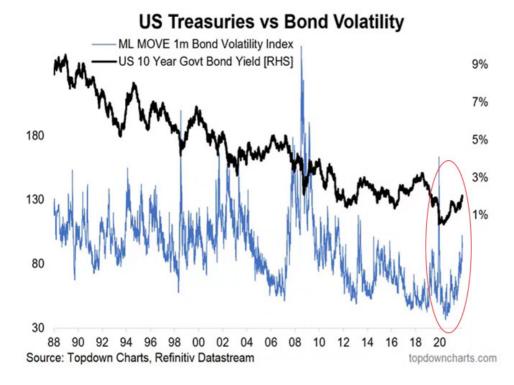
What is perhaps more interesting is the relationship between the S&P 500 and the MOVE. We see a similar relationship between the two as with the VIX—the S&P 500 tends to go up as MOVE goes down—until March 2020 (the onset of COVID), when we see a rapid rise in MOVE but a corresponding rise in the S&P 500. This is at least partially explained by the fact that the volatility in the MOVE was caused by rates falling, which typically is good for stocks, especially the tech-heavy S&P 500.



Source: TradingCenter.org, data 2003-July 2022. You cannot invest in an index and past performance does not guarantee future results.

Now let's look at the relationship between MOVE and the 10-Year Treasury yield. Given the generalized downward trend in rates between roughly mid-1981 and mid-2020 (the "great bond bull rally"), we might not expect to see much relationship between the two—and we don't, though steep increases in MOVE do seem to correspond to steep declines in yields. But as rates began to rise again in 2020, the relationship seemingly has become much tighter.





Source: SeekingAlpha.com, 02/22/22, Data 1988–February 2022. You cannot invest in an index and past performance does not guarantee future results.

There seems to be a stronger relationship between the MOVE and <u>credit spreads</u>, specifically corporate and <u>mortgage-b</u> <u>acked securities (MBS)</u>.



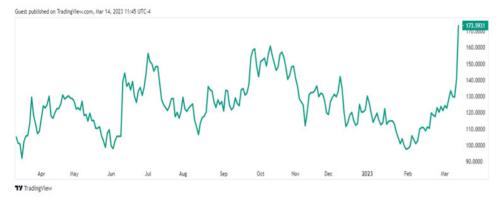
Sources: WisdomTree, Bloomberg, data 02/11/22–03/07/23. You cannot invest in an index and past performance does not guarantee future results.

For definitions of terms in the chart above please visit the <u>glossary</u>.

Now let's look at the more recent movement in the MOVE. The onset of COVID in March 2020 resulted in a huge upswing in the index followed by an equally dramatic decline as the market realized the world wasn't going to end. Since roughly July 2020, we've seen a steady increase (and also an increase in the volatility of the index itself) that we believe is caused by an increased focus by bond investors on the actions and pronouncements of the Fed as it first fought COVID

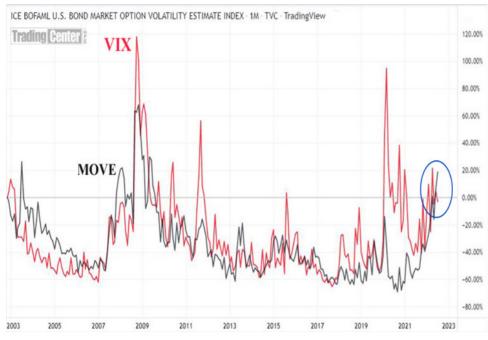


and then rising inflation. Note the steep increase over the past month or so as the market reacted to a seemingly persistent hawkish tone from the Fed and then, most recently, the failures of SVB and SBNY—respectively the secondand third-largest bank failures in U.S. history.



Source: TradingView.com, 5-year data through 03/13/23. You cannot invest in an index and past performance does not guarantee future results.

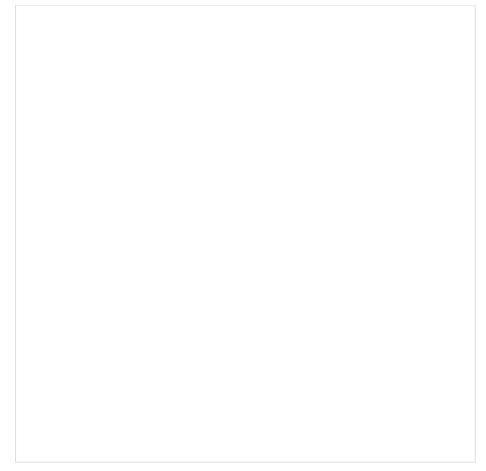
What about the relationship between the MOVE and the VIX? From a longer-term perspective, they seem highly correlated, which we might intuit from their seemingly similar relationships with the S&P 500, as illustrated above.



Source: TradingCenter.org, 20-year data through February 2023. You cannot invest in an index and past performance does not guarantee future results.

But if we zero in on more recent performance (barely visible at the far right of the previous graph), we see something interesting—an uncoupling of the two metrics since roughly February of this year.





So, Remind Me Again Why We Care?

1. As the above charts suggest, stock and bond volatility metrics are solid concurrent (and perhaps even slightly leading) indicators of investor sentiment and market momentum.

2. Both the VIX and the MOVE seem to have generally inverse relationships to the performance of the S&P, so an increase in either (or both) might be viewed as a potential bearish market signal.

3. The recent decoupling of the VIX and MOVE, compared to the much longer-term similarity between the two, suggests an eventual mean-reversion—either bond volatility will fall or equity market volatility will rise, or some combination of the two. Given continued uncertainty over inflation, the economy and Fed actions, we see it as more likely the VIX will rise (despite the recent spike in the MOVE following the failures of SVB and SBNY)— perhaps another bearish signal for equities.

4. The relationship between the increasing MOVE and credit spreads may suggest that spreads will widen as we move forward.

5. One characteristic of many WisdomTree products and most of our Model Portfolios is an anchoring to the <u>qualit</u> <u>y</u> factor—companies and strategies that exhibit better <u>balance sheets</u>, earnings, <u>cash flow</u> and <u>dividend</u> sustainability. How does this relate to volatility?

In comparison to other risk factors we might examine, the quality factor has proven to be the most consistent—it is rarely either the best or worst performing factor over full market cycles. So, by using quality as an anchor factor tilt, we believe we can improve the consistency of performance, regardless of the volatility regime. Focus on the teal-colored line in the chart below.

Rolling 10-Year Excess Return vs. Market



Conclusion

Understanding market volatility, as measured by the VIX and the MOVE, can be useful in forming a market view and positioning portfolios accordingly. Current indications suggest we may be in for a more volatile market environment as we move through 2023.

We will never apologize for being 'over-weight' quality in our products and Models—we believe it can help improve performance consistency, regardless of market regime. If we are correct in our view of volatility trends this year, we believe it will help us weather the storm.

You can learn more about our Model Portfolios on the WisdomTree Model Adoption Center.

At the product level, the <u>WisdomTree Floating Rate Treasury Fund (USFR)</u> is a potential solution which may help take advantage of the higher yields in the Treasury market without the volatility associated with fixed coupon issues.

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You cannot invest directly in an index.



DEFINITIONS

Volatility : A measure of the dispersion of actual returns around a particular average level. .

Federal Reserve : The Federal Reserve System is the central banking system of the United States.

Rate Hike : refers to an increase in the policy rate set by a central bank. In the U.S., this generally refers to the Federal Funds Target Rate.

Paul Volcker: Paul Volcker was an American economist who served as the 12th chairman of the Federal Reserve from 1979 to 1987. During his tenure as chairman, Volcker was widely credited with having ended the high levels of inflation seen in the United States throughout the 1970s and early 1980s.

Fed tightening : Refers to the Federal Reserve enacting monetary policies that have the overall impact of reducing the availability of credit, which is widely thought to have the potential to slow economic growth.

Monetary policy : Actions of a central bank or other regulatory committee that determine the size and rate of growth of the money supply, which in turn affects interest rates.

Treasury: Debt obligation issued by the U.S. government with payments of principal and interest backed by the full faith and credit of the U.S. government.

CBOE Volatility Index® (VIX®) : a key measure of market expectations of near-term volatility conveyed by S&P 500 stock index option prices. It is the premier benchmark for U.S. stock market volatility.

ICE BofAML MOVE Index (MOVE): A measure of U.S. interest rate volatility that tracks the movement in U.S. Treasury yield volatility implied by current prices of one-month over-the-counter options on 2-year, 5-year, 10-year and 30-year Treasuries.

Relative strength : A momentum investing technique that compares the performance of a stock, exchange-traded fund or mutual fund to that of the overall market.

Options : Financial derivatives that give buyers the right, but not the obligation, to buy or sell an underlying asset at an agreed-upon price and date.

Put options : an option to sell assets at an agreed price on or before a particular date.

Credit spread : The portion of a bond's yield that compensates investors for taking credit risk.

Mortgage-backed securities : Fixed income securities that are composed of multiple underlying mortgages.

Quality: Characterized by higher efficiency and profitability. Typical measures include earnings, return on equity, return on assets, operating profitability as well as others. This term is also related to the Quality Factor, which associates these stock characteristics with excess returns vs the market over tim.

Balance sheet : refers to the cash and cash equivalents part of the Current Assets on a firms balance sheet and cash available for purchasing new position.

Cash flows : a measure of how much cash a business generates after taking into account all the necessary expenses, including net capital expenditures.

Dividend : A portion of corporate profits paid out to shareholders.

