Quadrant
A Quarterly Update

WINDHAVEN
INVESTMENT MANAGEMENT

Volatility is Back (to Normal)

April 2018

Key Points:

1. Market volatility has increased, though global economy still fundamentally strong

2. Fed poised to raise interest rates at least twice in 2018, so all eyes are focused on interest rates and hints of inflation

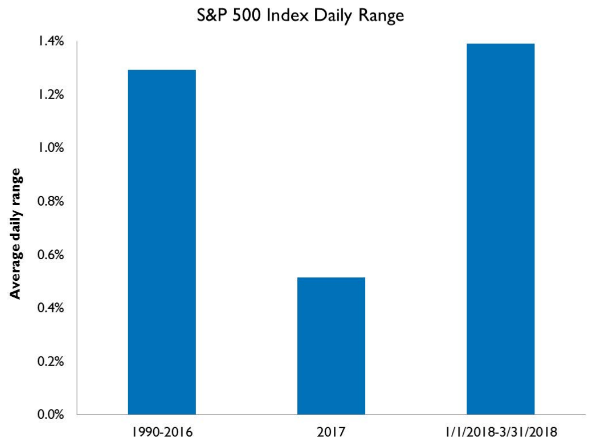
3. Windhaven Strategies continue to favor equities

Market volatility increasing

Market volatility has largely gone missing over the past two years. Since the equity correction and spike in volatility in early 2016 that was caused by recession fears, volatility has remained at abnormally low levels, suppressed by strong fundamentals and accommodative global monetary policy. While fundamentals remain solid, global monetary policy has started to shift towards tightening. In the United States, the interest rate hiking cycle that the U.S. Federal Reserve (Fed) began at a snail's pace in 2015 will now be augmented with a balance sheet reduction in the wake of tight labor markets and potential inflationary pressures. In Europe, the European Central Bank has introduced the possibility of ending quantitative easing before the end of 2018, and the Bank of England is struggling with a potential stagflationary scenario in a post-Brexit referendum world that has contributed to both a weak pound and a weak economy.

In other words, while economic growth has slowed, the global economy still appears fundamentally strong and a recession is not yet on the horizon. However, global monetary policy is beginning to tighten and interest rates have risen quickly to levels more in tune with current economic growth. The sharp catch-up rise in interest rates at the beginning of this year brought volatility back, but only to historically normal levels (figure 1). We believe the current 2018 economic outlook remains positive, though we scaled back our exposure to equities earlier in the quarter.

Fig 1: 2018 intraday volatility consistent with history
Source: Bloomberg as of 3/31/2018.



Our research and modeling process continues to indicate that the global economy is expanding. We believe it is likely that interest rates will continue to rise moving towards the nominal GDP growth rate (figure 3). As we move closer to the end of this expansion, markets are likely to remain somewhat volatile and more sensitive to negative news and data surprises, as well as any change in the guidance coming out of central banks. It is important to note that even with increased volatility strong gains can often come late in expansionary cycles.

As always, we will maintain our discipline and continue to stay true to our investment process of seeking opportunities across global asset classes which display solid fundamentals and strong behavioral and economic conditions while managing risk.

Positioning

The Windhaven Strategies began 2018 with a healthy allocation to global equities, reflecting our research that economic conditions in most regions of the world are experiencing growth. While much of our work suggests that this year will be positive from a global growth standpoint, the trajectory of growth is slowing in many areas, and rising interest rates, whether growth or central bank-induced, could pare investors' appetite for risk assets.

Looking ahead

Investors have largely digested the fact that the Fed is expected to raise interest rates two more times in 2018, taking the Fed Fund rates above 2%. That said, inflation and monetary policy remain in the spotlight. Monetary policy tightening and the path of interest rates will continue to serve as a good indication of whether we are nearing a peak in this expansionary cycle and therefore to a potential recession and bear market. As figure 2 illustrates, rising interest rates often bring on recessions.

Fig 2: Fed Fund rates peak ahead of recessions
Source: Bloomberg as of 3/31/2018.

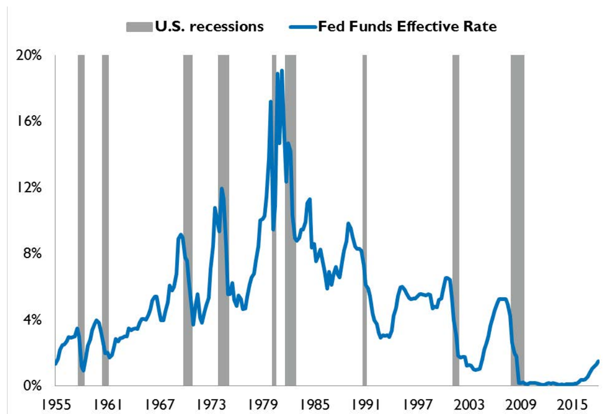
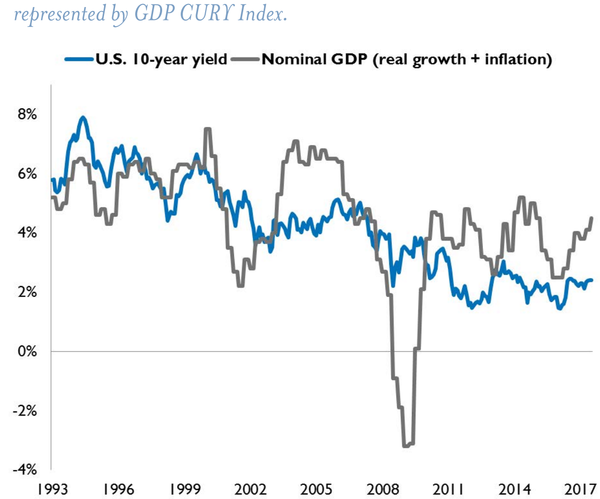


Fig 3: U.S. 10 year yields tend to move with nominal GDP growth | *Source: Bloomberg as of 12/31/2017. U.S. 10-year yield is represented by USGG10YR Index. Nominal GDP is represented by GDP CURY Index.*



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In the first quarter, all three strategies slightly reduced their allocations to equities, and the proceeds were largely reinvested in fixed income securities. Among the equity trades executed in the quarter, the largest involved the elimination of a U.S. technology stock ETF in the Diversified Conservative strategy and a reduction in the Diversified Growth and Diversified Aggressive strategies. Other notable adjustments included the addition of a U.S. consumer discretionary ETF, based on research indicating that a number of factors would benefit consumer spending. Although the size of the strategies' fixed income allocation grew only slightly in the quarter, several trades were executed with the objective of increasing yield without meaningfully increasing sensitivity to rising interest rates. Overall, we enter the second quarter with a slightly reduced allocation in equities, a neutral allocation to fixed income, modest allocations to physical assets such as commodities and gold, and no holdings in real estate.

At the end of the quarter, we made a change in our corporate legal structure merging into and becoming a division of Charles Schwab Investment Advisory, Inc., remaining within a subsidiary of The Charles Schwab Corporation. The investment strategies including the portfolio management team, investment process and objectives were not impacted and remain the same. We appreciate your investment in the Windhaven Strategies. Please contact your Investment Professional if your investment objectives or circumstances have changed such that a review of your Windhaven Strategy account(s) might be necessary, or if you have any specific questions about how your account is managed. We value the trust our clients have placed in us, and we are passionate about the Windhaven Strategies and the role they play in helping each of you reach your investment goals.

–The Windhaven Portfolio Management Team

Important Notes and Disclosures:

Portfolio Management for the Windhaven Strategies is provided by Windhaven Investment Management ("Windhaven"), a division of Charles Schwab Investment Advisory, Inc. ("CSIA"). CSIA is a registered investment adviser and an affiliate of Charles Schwab & Co, Inc. ("Schwab"). Both CSIA and Schwab are separate entities and subsidiaries of The Charles Schwab Corporation.

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Indexes shown in the charts throughout are unmanaged, do not incur fees or expenses, and cannot be invested in directly.

Past performance is no guarantee of future results.

International investments may involve additional risks, which could include differences in financial accounting standards, currency fluctuations, political instability, foreign taxes and regulations, and the potential for illiquid markets. Investing in emerging markets may accentuate these risks.

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed income investments are subject to various other risks including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications and other factors.

Hard assets can be significantly affected by commodity prices, world events, import controls, worldwide competition, government regulations, and economic conditions.

Windhaven's risk management process includes an effort to monitor and manage risk, but should not be confused with and does not imply low risk or the ability to control risk.

Please refer to the Windhaven Strategies Disclosure Brochure for additional information.
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