WILMINGTON TRUST

INVESTMENT INSIGHTS

Volatility and Your Portfolio

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The first thing we are taught in economics is that there is no free lunch. As it relates to finance, this means that, in general, higher returns can only be realized by taking more risk. Volatility is essentially the cost of the financial market buffet. Yet volatility is a dirty word, and the holy grail for us as investors is constructing a portfolio that can deliver outsized returns with minimal risk. Higher-volatility periods are usually associated with weaker coincident equity returns (though this is not always true), so we are preprogrammed to fear volatility. But in reality, for long-term investors, volatility is only as dangerous as you make it.

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Intro to volatility

Volatility can be defined in any number of ways, including standard deviation, value at risk, max drawdown, and more (see sidebar at the end of this article), all of which essentially quantify the risk taken in a given investment or portfolio. The most oft-cited measure of volatility is standard deviation, though this is a challenging concept for most people to get their arms around. It is also not necessarily aligned with how investors may think about risk in their portfolios. For example, a particular investor may be less concerned with how much their portfolio return is likely to fluctuate in a given year (a measure consistent with standard deviation) and more focused on the maximum they could stomach losing at any given time—a concept we feel is often a better measure of risk and one that is reflected by the maximum drawdown. Part of our job is homing in on the specific measure or set of measures that resonate with investors as part of gauging their appropriate risk tolerance.

Historical perspective

The year 2017 was the second-quietest for equities in the past 60, so the return of volatility in 2018 was particularly jarring (Figure 1). However, drawdowns, or pullbacks, are a normal part of investing in equities and does not have to spell doom for returns (Figure 2). Since 1980, the average maximum drawdown in any given year has been –14%, and the average drawdown in a year where equities deliver a positive return is –11%. In other words, even the best years for equities can come with considerable turbulence.

Riding through, not succumbing to, the volatility

One of the reasons volatility is feared is because short-term spikes in volatility (we use the Chicago Board Options Exchange Volatility Index, known as the VIX, as a proxy) tend to coincide with weaker short-term equity returns (Figure 3).

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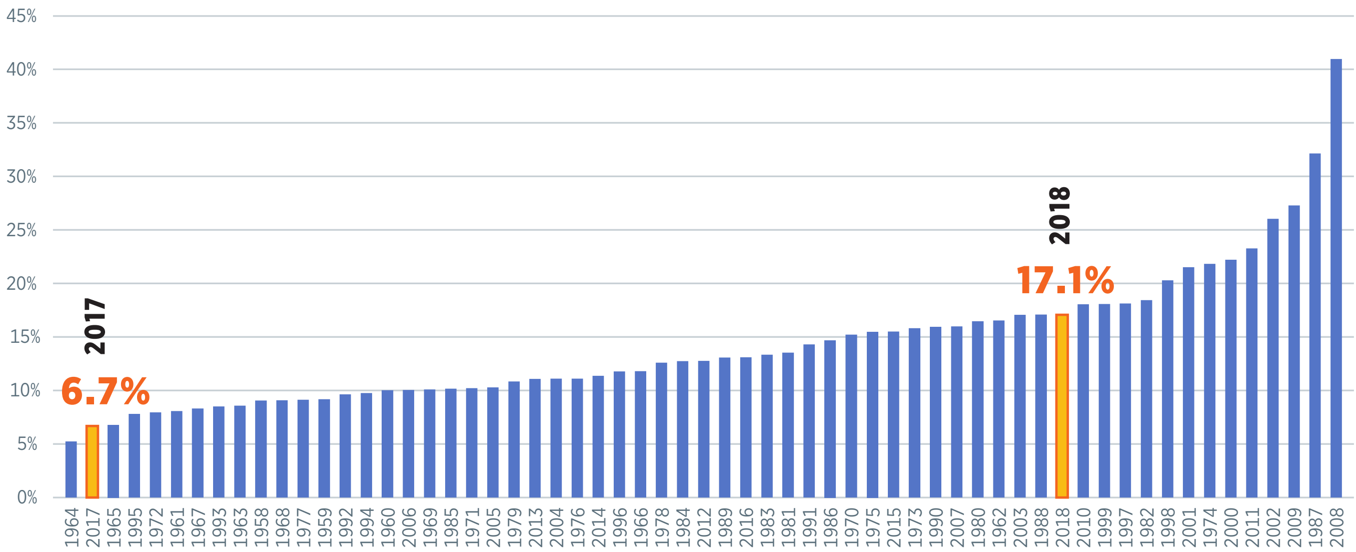
Figure 1

Volatility returned in 2018, after an abnormally quiet 2017

(Standard deviation of daily S&P 500 returns over the past 60 years)



Data as of December 31, 2018.

Represents standard deviation of daily returns. Past performance cannot guarantee future results.

Sources: Bloomberg, Standard & Poor's.

Figure 2

Intra-year pullbacks in the equity market are a normal occurrence

(S&P 500 calendar-year returns vs. intra-year declines)

40%
30%
20%
10%
0%
-10%
-20%
-30%
-40%
-50%
-60%

1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 **2018**

Calendar-year returns   Intra-year declines

Data as of December 31, 2018.

Intra-year declines reflect the maximum peak-to-trough drawdown in the S&P 500 during each calendar year.

Sources: Bloomberg, WTIA.

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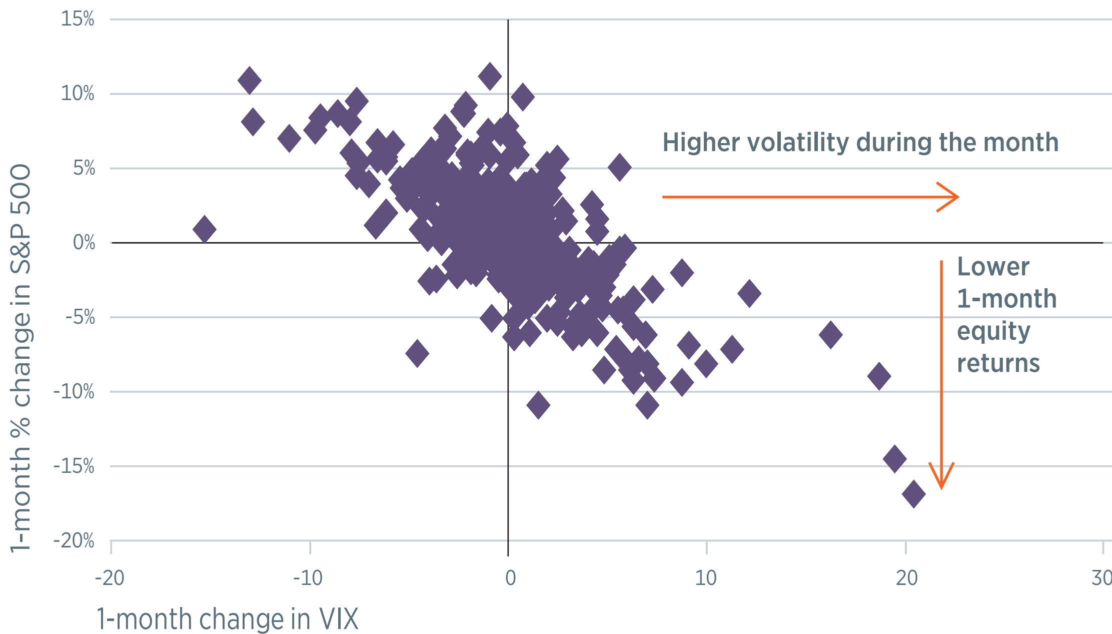
Figure 3

Higher implied volatility coincides with weaker short-term equity returns



As of January 24, 2019. Reflects monthly data going back to January 31, 1990. The y-axis is a one-month percent change in the S&P 500, and the x-axis is a nominal change in the VIX over that same month.

Sources: Bloomberg, Standard & Poor's.

Volatility is a normal part of investing in equities and does not have to spell doom for returns.

Volatility can weigh on compounded returns, and certainly large drawdowns like those we experienced in 2008 can take years to recoup, but volatility does not have to eat into a portfolio's long-term returns. We believe volatility is only truly dangerous if it is allowed to wreak havoc on an otherwise orderly investment plan. Consider the following:

1. **It is rarely profitable from a long-term perspective to sell when volatility spikes.** The average 1-year return in the S&P 500 after a spike in volatility—measured as a 1-standard deviation increase in the VIX over the past 30 years—has been 19%. Stocks have been higher one year later 86% of the time (that increases to 93% if you exclude recessionary periods). In other words, when not in a recession, an increase in volatility was a contrarian signal.

2. **Outside of recessions, sustained bear markets are very rare.** Our investment process is led by a focus on the economic fundamentals because, while pullbacks outside of a recession have occurred, they have often been short-lived (Figure 4), and investors risk doing more damage to their portfolio by getting out of the market and then trying to get back in. Our goal is to protect against severe and sustained market pullbacks, while retaining a level head during events precipitated more by panic than economic fundamentals.

3. **Even if an investor could mitigate some downside by selling out of the market when things get choppy, that presumes an ability to get back into the market at the right time.** This is very difficult to do, both given the unpredictability of short-term market movements and the emotional difficulty of deciding when is the right time to jump back in. As an extreme example of the potential cost of trading in and out of the equity market, an investor with incredibly bad luck who

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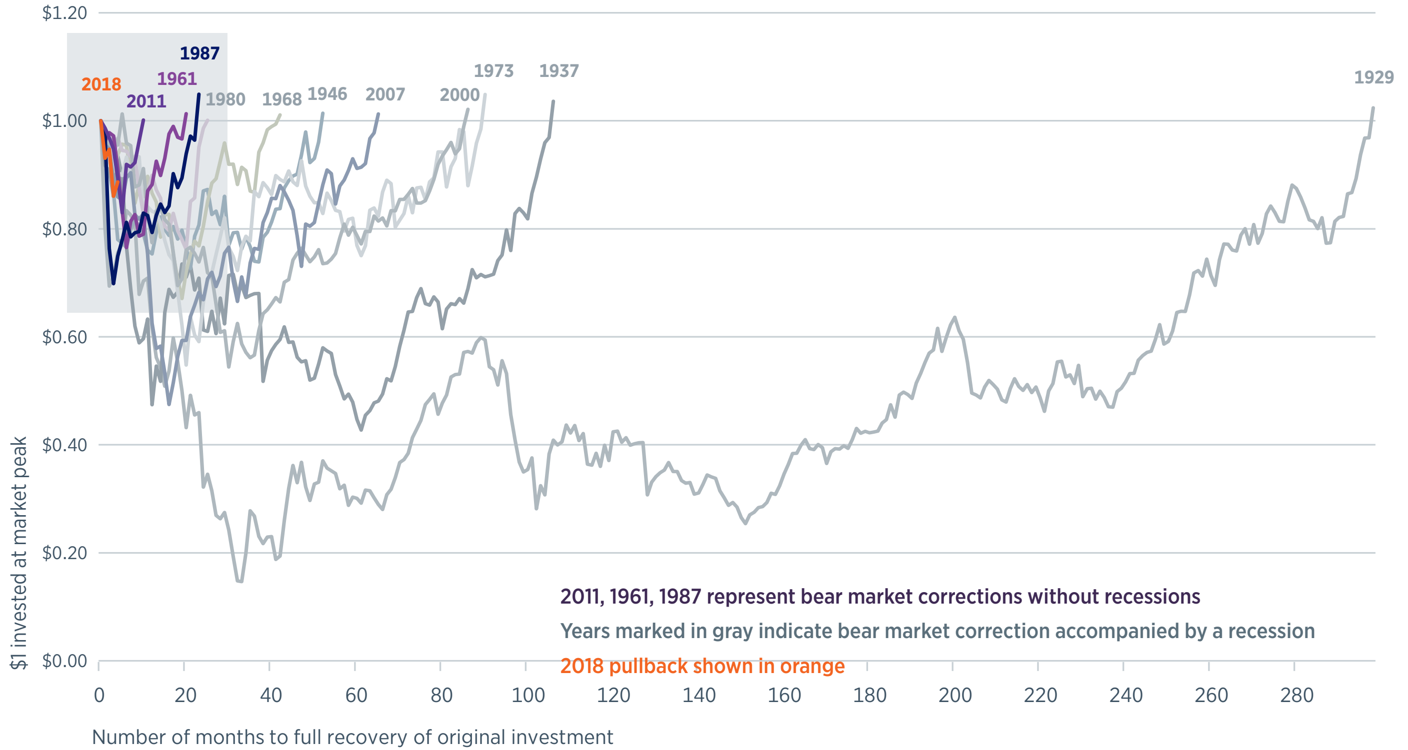
Figure 4

Sustained pullbacks are rare, outside of recessions

$1 invested in the S&P 500 at each market peak vs. the time to recover that original investment



Represents price return of the S&P 500 index going back to December 31, 1927. A bear market correction is defined as a decline in the index of more than –20% from local peak to trough, using monthly data. The only exception is 2011, which fell just shy of -20% using daily data but was included in this analysis for a more complete picture.

Data as of January 10, 2019.

Sources: Bloomberg, Standard & Poor's.

Our goal is to protect against severe and sustained market pullbacks, while retaining a level head during events precipitated more by panic than economic fundamentals.

had missed just the 10 best days over the last 30 years would have ended up with less than half as much money as someone who had remained invested the entire time (Figure 5).

Striking a balance

Our goal is to strike a fine balance when it comes to managing volatility. We want to mitigate volatility, but not necessarily minimize it, as this could result in a portfolio that is too conservative to meet long-term goals. We strive to protect against severe market drawdowns but not every market pullback, because volatility is a normal part of investing. We work with our clients to help them understand their tolerance for risk, so inevitable bouts of volatility do not become the tail that wags the dog. At the end of the day, volatility can make the ride bumpy, but for investors with a long investment horizon and sound plan, it does not have to result in a detour from one's final destination.

To help ensure that your portfolio's volatility is in line with your risk tolerance, please contact your relationship manager for more information about receiving a customized risk assessment.

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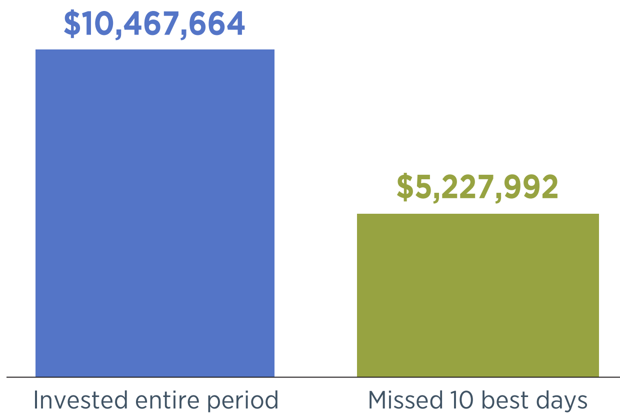
Figure 5

Attempting to market time can come with great cost
(Value of $1 million invested in the S&P 500 index for 30 years)



The period shown is August 15, 1988 through February 10, 2018.

Represents the value of $1 million invested in the S&P 500 index for 30 years, versus missing the 10 best-performing days over that period.

Past performance cannot guarantee future results.

Indexes are not available for direct investment. Investment in a security or strategy designed to replicate the performance of an index will incur expenses such as management fees and transaction costs which would reduce returns.

Source: Bloomberg.

Definitions

Standard deviation
A statistical measure of the dispersion of portfolio returns around the mean; a higher standard deviation signals more historical variance of returns.

Example: Portfolio A and Portfolio B may have the same average monthly returns over the past three years, but Portfolio A has a standard deviation of 9%, and Portfolio B has a standard deviation of 13%. This means Portfolio A would be likely to see returns fall 9% above or 9% below its average 68% of the time, while Portfolio B would likely see returns fall 13% above or below the mean 68% of the time. Therefore, Portfolio B has a higher volatility.

Value at Risk (VaR)
Measures the maximum potential loss with a degree of confidence for a specified period.

Example: Portfolio A has a one-year 15% VaR of $1 million, meaning the portfolio has a 15% chance of losing more than $1 million over a one-year time horizon.

Maximum drawdown
The largest peak-to-trough decline in a portfolio or stock's value before a new peak is achieved.

Example: Portfolio A begins with an initial value of $100,000. The portfolio climbs to a value of $200,000 before declining to $100,000. The portfolio recovers and climbs to a value of $175,000 before falling again, this time to $75,000. Then the portfolio goes on to reach a value of $300,000. The maximum drawdown would be ($75,000/$200,000)-1= –62.5%.

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