The VIX often is referred to as the stock market’s “fear gauge”; the VIX generally rises when the market (as measured by the S&P) becomes unglued.

MetLife conducted an online survey of 1,037 adults age 45+ with $100,000 or more in investable assets and 520 financial advisors in February 2011 to gauge attitudes toward volatility in retirement portfolios. Among the findings were the following:

- 75 percent of boomers and an even higher percentage of advisors are concerned with volatility even as the markets improve.
- A majority of advisors believe that alternative investments are needed to manage volatility.
- Both boomers and advisors are interested in products that provide more-consistent returns.
- 54 percent of consumers and 58 percent of advisors can stomach volatility that does not exceed 10 percent—in either direction.

The timing of this survey is instructive. Markets were relatively calm during the early part of first quarter 2011. But then volatile oil prices, the earthquake in Japan, and uprisings in the Middle East rocked the market and the VIX surged above 30. Precisely because investors have small appetites for portfolio unpredictability, we consider the opportunity—and the risks—associated with an investment in volatility.

According to Morningstar, the 15 short- and mid-term volatility tracking exchange-traded funds (ETFs) and exchange-traded notes (ETNs) that have been launched since early 2009 have raised close to $5 billion. Their appeal is that they are a form of portfolio insurance against market pullbacks; they are negatively correlated to equities and credit risk. A small allocation to volatility can have a demonstrable benefit for portfolio performance and diversification while managing portfolio risk.

Until the launch of that first ETN in 2009, volatility was not in vogue as an investment option (except by investment portfolio managers). That paradigm shifted with the severe market dislocations and the unexpectedly close correlations among asset classes.

Measuring Volatility:
The VIX Index

The VIX Index (VIX), which is the most widely followed benchmark of market sentiment, measures implied volatility of the S&P 500 Index (S&P) on a go-forward basis for the next 30 days as calculated by the Chicago Board Options Exchange (CBOE). The VIX often is referred to as the stock market’s “fear gauge”; the VIX generally rises when the market (as measured by the S&P) becomes unglued. A VIX value of 30 or greater generally indicates high volatility in the market; during crashes and extreme dislocations, the VIX soars. A value smaller than 20 generally points to low volatility, i.e., periods of low risk and small market movements. The norm (or average) ranges between 20 and 25. In October 2008 the VIX hit a high of 89.53. For calendar-year 2009 the VIX recorded its second-highest annual mean of 31.48 (down only slightly from the 2008 mean of 32.68) and its second-highest annual low of 19.25.

Even after big spikes, the VIX exhibits a strong reversion to the mean. As a result, an investment tracking the VIX likely will not produce any long-term gains because over time it is improbable that the stock market will grow more risky from a structural perspective. Replicating the VIX via direct investments is not realistic because it would entail the purchase of less-liquid option contracts. As a result, a long volatility position means tying up a slice of a portfolio in a nonappreciating asset class in exchange for avoiding major stock market declines.

Strategy Benefits and Risks

The most significant downside to buying futures contracts on the VIX as a volatility hedge is the negative return from rolling the current month’s expiring contract—which normally trades at a discount—to the next month’s contract (or a contract with a later expiry). Thus, the value of the protection declines as the expiration date of the futures contract approaches. An upward-sloping forward curve in the futures market is said to be in contango because the futures prices are progressively higher as the contract dates are
More recent studies have confirmed that risk-adjusted returns from 2005 to 2008 have resulted in better absolute and portfolios of diversified assets would exposure combined with traditional in volatility is added. Szado (2009) portfolio improve when an investment not available. futures prices and current volatility are would serve to force an alignment of spot VIX, arbitrage opportunities that move as sharply as current volatility. Because investors cannot invest in the index, and they lose much less value to current volatility than the short-term mid-term VIX (expiring 4–7 months off erings are pegged to the short-term VIX is prone to extended flat periods, punctuated by brief spikes that coincide with substantial declines in the S&P.

Finally, VIX futures prices do not move as sharply as current volatility. Because investors cannot invest in the VIX, arbitrage opportunities that would serve to force an alignment of futures prices and current volatility are not available.

The two most common volatility offerings are pegged to the short-term VIX (generally fi rst and second months of VIX futures contracts) and the mid-term VIX (expiring 4–7 months out). Because futures positions do not appreciate sharply when the VIX spikes, mid-term futures contracts provide less exposure to the sharp movements of current volatility than the short-term index, and they lose much less value to contango over time.

Risk-adjusted returns of a typical portfolio improve when an investment in volatility is added. Szado (2009) demonstrated that using VIX futures exposure combined with traditional portfolios of diversified assets would have resulted in better absolute and risk-adjusted returns from 2005 to 2008. More recent studies have confirmed that conclusion—particularly with the mid-term VIX offering, which performed better (in terms of overall portfolio returns and reduced standard deviation) than its shorter-term brethren despite the lower sensitivity to current market movements. Moreover, the mid-term VIX affords less erosion during bull markets and better performance in periods of market weakness.

Considerations for Investment Managers

With the trend toward fee-based accounts and portfolio models that incorporate a dollop of alternatives, we expect to see continued volatility product proliferation. Volatility products can serve an important role in a portfolio by providing downside protection, diversification, and more-effective risk control/moderation. However, we believe (and caution) that volatility offerings carry the risks of misuse and potentially inappropriate sales.

Investment managers that are considering offering volatility products should be prepared to invest heavily in educating advisors and direct investors about their proper use(s) in a portfolio and their return properties. Investor—and advisor—expectations must be properly managed. While the use of VIX products in a portfolio is appropriate for investors or their advisors with a strong directional view of the market and its performance, we highlight a few following cautions:

- Volatility should play only a limited role in a portfolio. A small investment can reduce standard deviation but also will lower returns. A bigger investment in volatility isn’t better. Because of spartan long-term returns, a sizeable commitment to volatility will yield a meaningful drag on portfolio returns even though portfolio risk is moderated.
- VIX offerings have a very short performance history by which to gauge their effectiveness. Much has been written about the extremely poor performance of the ETFs and ETNs in their early days; futures contracts that track the volatility indexes were in extreme contango during the market meltdown. While the markets are operating under more normal conditions, a caution nevertheless is appropriate.

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References