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## **VOLATILITY - AN INVESTMENT CASE**

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### **Synopsis**

At Invest In Vol we believe alternative assets offer investors an important source of investment diversification, and that volatility investing can help boost an investor's portfolio by delivering strong returns with low correlation to traditional assets.<sup>1</sup> In this Investment Case we explain how you can invest in volatility, how volatility investing can help diversify your portfolio, where volatility returns come from, and how Invest In Vol can help you harness them.

### **Why invest in volatility?**

Investable assets are traditionally divided into cash, stocks, bonds, and alternatives. While investors are frequently familiar with the first three, alternative assets are sometimes poorly understood and frequently underinvested in. Despite this, investment in alternatives is growing at twice that of traditional assets, and already account for more than 10% of global assets under management.<sup>2</sup>

An Invest In Vol volatility trading account is an alternative asset that seeks to benefit from the risk premium found in VIX<sup>®</sup> futures and S&P 500<sup>®</sup> options. Volatility Risk Premium is the premium paid by hedging investors to insure their portfolio against drawdowns, and has been shown to exhibit a low correlation with both stocks and bonds. A volatility trading account focused on harvesting this premium may improve returns and offer further diversification to an investment portfolio.

### **Where do the returns come from?**

Volatility investing should not be confused with volatility hedging. Just like property insurers pay insurance premiums to protect against property damage; volatility hedgers pay volatility premiums to protect against drawdowns and volatile markets. Like insurance companies, volatility investors can systematically harvest this premium.

But insurance companies also make payouts after adverse events, and volatility investors may experience similar drawdowns during spikes in volatility. It is for this reason that we recommend volatility investing only as a long term approach to diversify traditional portfolios and boost performance. Like insurance companies, volatility investors shoulder risk in the short term to harvest risk premium over the long term.

The return on our accounts comes from three separate but related sources: 1) the premium hedgers pay over realized volatility for S&P 500<sup>®</sup> Index options (the Volatility Risk Premium), 2) the further premium hedgers pay for VIX<sup>®</sup> futures over the theoretical price implied by S&P 500<sup>®</sup> options (VIX<sup>®</sup> Futures Risk Premium), and 3) the tendency for measures of implied volatility, including the VIX<sup>®</sup> Index, to mean revert over time (Volatility Mean Reversion). Lets unpack these three sources a bit more.

Volatility Risk Premium or VRP is analogous to the equity risk premium found in the stock market. The premium stems from hedgers paying to insure their portfolios, and manifests itself in the difference between the price options are sold (implied volatility) and the volatility that the S&P 500<sup>®</sup> ultimately realizes. Implied volatility is the level of volatility required for a hedged option to break even, and, if realized volatility falls below this level, the volatility seller collects the VRP.

<sup>1</sup> Cooper, T. (2013) Easy Volatility Investing, Social Science Research Network. Pg 1.

<sup>2</sup> Baghai, P., Erzan, O., Kwek, J. (2015) The \$64 trillion question: Convergence in asset management, Private Equity & Principal Investors, McKinsey & Company Home.. PWC (2014) Asset Management 2020 A Brave New World.

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There is also a bias in the options market towards buying options. Portfolio managers frequently buy puts to hedge their existing long equity portfolios, and sometimes buy calls to gain leveraged exposure to the market. This bias towards buying options can result in a Volatility Risk Premium being paid by asset managers to option market makers and other volatility risk takers.<sup>3</sup>

The VIX® Index is a popular measure of the current implied volatility of 30 day S&P 500® Index options. Often referred to as the 'fear index', the VIX® represents the most popular measure of the S&P 500® options market's expectation of stock market volatility over the next 30 days.

The VIX® Index itself however is not tradable, but index futures give hedgers and investors a proxy exposure to the Index. These futures represent the market's best collective guess at the value of the VIX® Index at their expiry. This proxy gives way to a further premium, the VIX® Futures Risk Premium.

VIX® Futures Risk Premium or FRP is the premium paid by investors over the value of the VIX® Index itself for a futures contract. This premium is often referred to as 'futures contango', and can be seen in the tendency for longer dated VIX® futures to trade at a premium to the underlying index.

It is important to remember that FRP - or VIX® 'futures contango' - is a separate but related premium to VRP, and that these premiums can be additive. For example, the VIX® Index may price above the subsequent 30 day realized volatility (this is VRP) AND, at the same time, the VIX® futures may trade at a premium to the VIX® Index (this is FRP). The total risk premium that may be harvested by a volatility investing strategy is therefore the VRP+FRP.

Mean Reversion or MR is the final source of return available to volatility trading accounts. The VIX® Index has been shown to exhibit a mean reverting behavior; that is to say it frequently returns to its long term average after rising or falling.<sup>4</sup> This facet of the VIX® Index has been shown to produce volatile, but substantial, theoretical long term returns. However, because the VIX® Index itself is not investable, and investable proxies like VIX® futures tend not to exhibit the same degree of reversion, this can be a difficult strategy to follow consistently. That said, the MR property does sometimes make it possible to recover short term drawdowns if aggressive management principles are employed. For this reason we consider MR a higher risk strategy.

### **How do I access volatility returns?**

Invest In Vol is the only Registered Investment Advisor (RIA) to offer clients a diverse set of volatility strategies from a group of leading volatility strategists. Invest In Vol offers clients three strategies from the three leading volatility strategists in one managed account.

By focusing exclusively on volatility as an asset, Invest In Vol works with investors and other advisors to raise awareness and understanding of volatility investing, and to deliver the returns of volatility as an asset.

Invest In Vol offers its strategies to individuals and other RIAs through separately managed accounts (SMAs). Managed accounts are opened and funded by the investor, and Invest In Vol is given limited permission to trade on their behalf. Invest In Vol's managed accounts give investors access to the knowledge and experience of our professional traders and strategists while retaining full control over the ownership of their funds. Furthermore, in addition to retaining ownership and control, investors can track and manage their accounts anytime and from anywhere using their computer or smartphone, and can withdraw, close or add funds at any time.

<sup>3</sup> The Options Industry Council (2017) What is an Option?

<sup>4</sup> Fouque, J.P., Papanicolaou, G., Sircar, K.R. (2000) Mean-reverting stochastic volatility. International Journal of Theoretical Applied Finance, 3(01), pp.101-142.

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### **Conclusion**

An Invest In Vol trading account is an alternative asset that seeks to harvest the longer term risk premium exhibited in the equity volatility market. We are the only RIA to offer clients a diverse set of volatility strategies from a group of leading volatility strategists, offering investors the opportunity to diversify across multiple strategies in one account. In contrast to the hedge fund approach, Separately Managed Accounts allow investors to retain full ownership and control of their funds, as well as gain full transparency on trading and market value.

Invest In Vol was founded by Stuart Barton, PhD, CFA, a volatility trading specialist with more than 15 years experience creating and managing volatility products. Stuart was previously head of US index trading at Barclays, head of Asia Pacific index trading at HSBC, and the Chief Investment Officer of REX Shares.

Stuart holds a PhD in Economic History from the University of Cambridge, an MBA from the University of Surrey, and a BSc in engineering from the University of Cape Town. Stuart is also a CFA Charter holder.

### **Disclosures**

Investing involves risk, including the possible loss of principal. Carefully consider the Strategy's investment objectives, risk factors, charges and expenses before investing. This Strategy is actively managed and there is no guarantee investments selected and strategies employed will achieve the intended results. Strategy is subject to change. Active management may also increase transaction costs. The Strategy is not diversified, and narrowly focused investments may be subject to higher risk.

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