

Asset Management Use Case - Q&A with Corey Hoffstein

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1. PROVIDE A BIT OF BACKGROUND ABOUT NEWFOUND RESEARCH

[Newfound Research](#) is a quantitative asset manager founded in August 2008. We're dedicated to helping investors pro-actively navigate the risks of investing through thought leadership and investment acumen. To build more resilient portfolios, we seek to diversify across the investment axes of *what*, *how*, and *when*. Our mandates are available as mutual funds, ETFs, on a variety of model manager platforms, and via model delivery licensing agreements.

Our flagship mandate is our Risk Managed U.S. Growth strategy, which seeks to provide resilient, "all-weather" exposure to U.S. equities by embedding a diversified set of risk management techniques, including systematic equity tilts, trend-following, bond exposure, and option-based hedges for left and right tails.

2. YOU WERE AN EARLY ADOPTER OF SIMPLIFY'S CONVEXITY ETF SUITE. WHAT DROVE YOUR INTEREST?

During the March 2020 market sell-off, we became acutely aware that what started as a fundamental scare rapidly devolved into a technical contagion, with the pressures of systematic de-leveraging and hedging trampling any natural buyers and sellers. After March, we took a step back and asked ourselves the question: "Have markets fundamentally changed? And, if so, what does that imply for portfolio construction?"

The quantitative evidence suggests that markets are indeed behaving outside the realm of expectation. Estimates of how "fat tailed" equity markets are have increased over the last 20 years, suggesting that extreme events are occurring with greater frequency. We have also seen traditional measures of liquidity in the S&P 500 decline since December 2017. For example, the Chicago Fed's ANFCI measure of S&P 500 e-mini futures market depth has not only deteriorated (suggesting greater market impact), but it has become far more volatile and far more correlated to changes in VIX.

The qualitative explanation for this change is more tenuous. Ultimately, we explored three popular narratives: (1) the growing influence of central banks; (2) the reflexive impacts of passive and index-linked investments; and (3) the mismatch between liquidity providers (e.g. HFT) and liquidity takers (e.g. option hedgers or volatility-targeting strategies). In the paper we published – [Liquidity Cascades: The Coordinated Risk of Uncoordinated Market Participants](#) – we argued that none of these narratives are sufficient on their own in explaining current market conditions. They do, however, appear to feed into each other and create a procyclical risk in markets that can lead to melt ups and melt downs.

Presented with both the quantitative and qualitative evidence that markets were going to move further faster, we saw two obvious solutions. First, we could develop tactical models to measure market stress and try to play whack-a-mole at an increasing speed. Or, alternatively, we could try to incorporate convex positions that would create structural diversification within our portfolio targeting these sorts of risks.

3. HOW WERE YOU ABLE TO GET COMFORTABLE WITH THE SUITE? WHAT DID YOUR DUE DILIGENCE LOOK LIKE?

To get comfortable with the option strategies we intended to employ in our mutual funds, we built our own option hypothetical performance engine. This meant getting hands-on with options data from the bottom up: cleaning it, transforming it using different surface fitting models, and really exploring all the things that can go right and wrong with hypothetical performance.

Unfortunately, for our ETF model portfolios, there was no real way to embed the same ideas. That is, until Simplify launched its convexity suite.

This is all a long-winded way of saying that by the time we went to perform due diligence on the ETFs, we had a laundry list of questions to ask about their construction because we had already found a lot of the easy pitfalls ourselves. Further, given the toolset we had built out, we were able to independently verify hypothetical results and develop intuition for how we would expect the ETFs to behave in different market environments.

4. WITH MARCH 2020 IN THE REARVIEW, DO YOU FOCUS MORE ON UPSIDE OR DOWNSIDE CONVEXITY GOING FORWARD?

One of the core theses resulting from our Liquidity Cascades research is that *weird things* happen in both directions. It is easy to focus on the crisis events, like March 2020, but we believe that hyper-low volatility years (e.g. 2017), melt-ups (e.g. Q2+ 2020), and even the recent GameStop brouhaha are symptoms of the same underlying factors. Ultimately, the technical selling pressures that can drive markets down can also become the technical buying pressures that drive them up.

The foundation of our models, therefore, is a three-pillar approach: a Growth pillar focused on maximizing upside capture; a Dynamic pillar focused on tactically adjusting portfolio market beta; and a Defensive pillar focused on minimizing downside capture. The goal is to embed asymmetry in the pillars such that the Growth pillar can gain more than the Defensive pillar lags in a melt up and the Defensive pillar can protect more than the Growth pillar loses in a melt down.

5. YOU UTILIZE ALL THREE OF THE CONVEXITY ETFS – SPUC, SPD, AND SPYC – IN YOUR ETF MODEL. HOW DO THEY FIT?

SPD (S&P 500 + puts) and SPUC (S&P 500 + calls) are natural fits within our Defensive and Growth sleeves respectively. SPYC (S&P 500 + puts and calls), therefore, likely appears somewhat redundant.

We use SPYC within our Dynamic pillar, where we employ dynamic trend-following signals that can shift the sleeve from being 100% invested in equity to 100% divested into short-term U.S. Treasuries. By utilizing SPYC, not only are we able to introduce extra convexity into our portfolio, but the embedded puts and calls serve somewhat as a hedge against a delay in the trend signals or a false signal.

6. THERE IS CURRENTLY A LOT OF INDUSTRY DISCUSSION ABOUT LOW INTEREST RATES AND THE “BOND PROBLEM.” HOW DOES FIXED INCOME PLAY INTO YOUR PORTFOLIO CONSTRUCTION?

Our mandates are primarily focused on providing resilient equity exposure, so equity will be the primary driver of returns. We believe achieving resilient returns, however, requires risk management, and that’s where bonds have historically played a role. For decades, investors have been able to use bonds as an income generator, diversifier, and a portfolio ballast during crisis periods.

Unfortunately, the math of bonds is rather inescapable: starting yields are a terrific predictor of forward returns (we are partial to the “two times duration minus one” rule). That means a 7-10 Year US Treasury Bond ETF yielding 1.00% and duration of 8 would have an expected return of 1.00% annualized for the next 15 years. After inflation and any advisor fees, that quickly turns negative.

While this does not mean we should outright abandon bonds, we believe investors should take a more critical eye to the opportunity cost of allocating to them. If we expect equities to return 5% per year and bonds to return 1% per year, then we’d expect a 60/40 portfolio to return 3.4%. Compared to owning equities outright, we’re paying a “cost” of 1.6% for our risk management. Everyone talks about the drag of options, but in this light, is a 60/40 portfolio that much different than an all-equity portfolio that spends 1.6% a year on put option premium?

No risk management technique is a panacea. A core philosophy we repeat at Newfound is: “risk is not destroyed, only transformed.” Each approach to managing risk has its own pros and cons; environments in which it works and environments in which it fails.

To pursue resilience in practice, we seek to *diversify our diversifiers*. We begin with an equity core that applies different style tilts that we believe give us an asymmetric edge in both up and down markets. Portfolio beta is then modulated using dynamic trend-following signals that seek to participate during prolonged market trends and divest during prolonged declines. We then introduce convexity for more extreme environments, both positive and negative. Finally, where we can, we try to introduce capital-efficient exposure to bonds as a diversifier for all markets.

GLOSSARY:

S&P 500 Index: The S&P 500 Index, or the Standard & Poor's 500 Index, is a market-capitalization-weighted index of the 500 largest publicly-traded companies in the U.S (Retrieved from Standard and Poor's, https://www.standardandpoors.com/en_US/web/guest/home, April, 2021).

ANFCI: The adjusted NFCI (ANFCI). This index isolates a component of financial conditions uncorrelated with economic conditions to provide an update on how financial conditions compare with current economic conditions. (Retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/ANFCI>, April 1, 2021).

VIX: The CBOE Volatility Index, or VIX, is a real-time market index representing the market's expectations for volatility over the coming 30 days. (Retrieved from CBOE, Chicago Board Options Exchange, https://www.cboe.com/tradable_products/vix/, April, 2021).

HFT: Computerized trading using proprietary algorithms also known as algo or algorithmic trading. (Retrieved from NASDAQ, <https://www.nasdaq.com/glossary/h/high-frequency-trading>, April, 2021).

Expected Return: The expected return is the profit or loss that an investor anticipates on an investment that has known historical rates of return (RoR). (Retrieved from NASDAQ <https://www.nasdaq.com/glossary/e/expected-return>, April, 2021).

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Hypothetical model results have many inherent limitations, some of which, but not all, are described herein. One of the limitations of hypothetical performance results is that they are generally prepared with the benefit of hindsight. In addition, hypothetical trading does not involve financial risk, and no hypothetical trading record can completely account for the impact of financial risk in actual trading.

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The use of derivative instruments involves risks different from, or possibly greater than, the risks associated with investing directly in securities and other traditional investments. These risks include (i) the risk that the counterparty to a derivative transaction may not fulfill its contractual obligations; (ii) risk of mispricing or improper valuation; and (iii) the risk that changes in the value of the derivative may not correlate perfectly with the underlying asset, rate, or index. Derivative prices are highly volatile and may fluctuate substantially during a short period of time. The use of leverage by the Fund, such as borrowing money to purchase securities or the use of options, will cause the Fund to incur additional expenses and magnify the Fund's gains or losses. The Fund's investment in fixed income securities is subject to credit risk (the debtor may default) and prepayment risk (an obligation paid early) which could cause its share price and total return to be reduced. Typically, as interest rates rise the value of bond prices will decline and the fund could lose value.

While the option overlay is intended to improve the Fund's performance, there is no guarantee that it will do so. Utilizing an option overlay strategy involves the risk that as the buyer of a put or call option, the Fund risks losing the entire premium invested in the option if the Fund does not exercise the option. Also, securities and options traded in over-the-counter markets may trade less frequently and in limited volumes and thus exhibit more volatility and liquidity risk.

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