

ABR Dynamic Funds – 1Q 2023 Newsletter

More than a Good Backtest: Live Results of the ABR Volatility Indices 8 Years Later

Background: Launch of ABR's Volatility Indices 2015-2017

When ABR launched in 2015, there were questions around the new models, which are independently calculated and published by Wilshire Associates (ABR "Dynamic Long" and ABR "Dynamic Short Volatility" Indices¹):

1. How would ABR's vol models work in various market conditions?

a. The Fed and other sovereign agencies around the world had created an artificial atmosphere. Sure, 2008 looked great, but what if that never happened again, VIX at 80 is a once-in-ageneration event. What if volatility was just lower for the next 10 years?

2. Were they just good (read: "overfit") backtests that would not work once launched?

- a. After all, no one have ever seen a bad backtest, and most of the ones in volatility models looked great until they launched, and then they failed shortly thereafter.
- b. Plus, 2008 heavily skewed the numbers since VIX futures "launched" in 2006 (the backtest can't go further back than this launch). What if the next 10-20 years doesn't produce a major volatility event?

The results of ABR's long and short vol models have both been calculated by Wilshire, independently of any ABR input, in live, post-inception index performance for 8 and 6 years, respectively now. This time period has presented a variety of historic volatility events that shed light on the answers:

- Top-3 lowest realized vol in a year since 1928 (SPX in 2017)
- Largest single-day jump in VIX futures ever → 100%! ("Volmageddon" on 5 Feb 2018)
- 2^{nd} Largest single-day jump in VIX futures ever \rightarrow 40%! (June 2020)
- Largest (at that time) single day jump in VIX futures ever → 32.71%! (Brexit, June 2016)
- Highest VIX Index closing print ever (COVID, March 2020)
- Largest-ever monthly percentage drop in VIX futures (November 2020, US election)
- Top-3 lowest 6-month realized volatility ever with SPX down >20% (1H 2022)

In the next two sections, we take a look at Wilshire's calculated results both over the past 5 years and over the longest time period in which both have been calculated by Wilshire (since 31 January 2017).

ABR uses index benchmarks of static volatility allocations to represent the "do-it-yourself" (DIY) crowd and index benchmarks that measure baskets of volatility funds to represent the "let someone else handle it for me" (outsourced) crowd. Over the long term, across all scenarios, ABR beat both the "DIY" crowd and the "outsourced" crowd, and beat them handily.

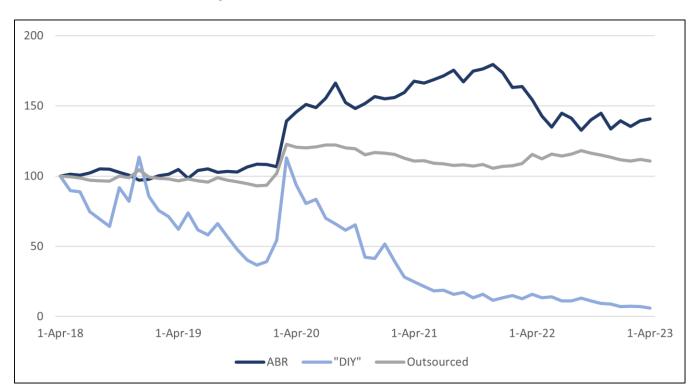
¹ The "long volatility" model is measured by the ABR Dynamic Blend Equity and Volatility Index Powered by Wilshire (ABRVXX), and the "short volatility" model is measured by the ABR Enhanced Short Volatility Index Powered by Wilshire (ABRXIV).

Over the past 5 years

ABR "Dynamic Long Volatility" Index

The ABR "Dynamic Long Volatility" Index (ABRVXX) is up 10.27% annualized gross (ABR Long Volatility Strategy up 7.07% net of 3% hypothetical expenses). ABR crushed static long volatility exposure and outperformed an index of many hedge funds which use volatility assets with a long bias for core diversification:

- ABR Long Volatility Strategy navy
 - o ABR's "Long Vol" model²
- S&P 500 VIX Short-Term Futures Index (SPVIXSTR) blue
 - o "DIY" Long Vol³
- Eurekahedge CBOE Long Volatility Index (EHFI451) grey
 - "Outsourced" Long Vol⁴



² Wilshire's independent calculation of ABR's "long volatility" model

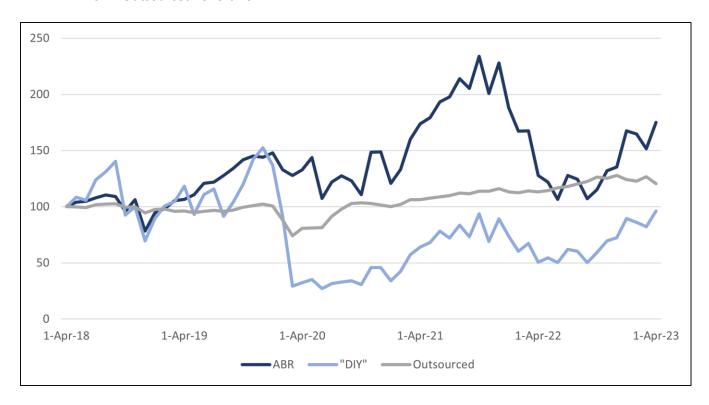
³ Static long exposure to VIX futures

⁴ Equally weighted basket of primarily hedge fund constituents that use volatility instruments with a long bias

ABR "Dynamic Short Volatility" Index

The ABR "Dynamic Short Volatility" Index (ABRXIV) is up 16.23% annualized gross (ABR Short Volatility Strategy up 11.85% net of 2% & 20% hypothetical expenses). That also crushed static short volatility exposure and outperformed an index of many hedge funds which use volatility assets with a short bias:

- ABR Enhanced Short Volatility Index (ABRXIV) navy
 - ABR's "Short Vol" model⁵
- S&P 500 VIX Short-Term Futures Inverse Index (SPVXSPI) blue
 - "DIY" Short Vol⁶
- Eurekahedge CBOE Short Volatility Index (EHFI450) grey
 - "Outsourced" Short Vol⁷



The above charts reflect the past 5 years of realized performance and ABR's models have significantly outperformed both static vol models and baskets of actual hedge funds trading volatility. But they miss a very important event back in 2018 (remember Volmageddon???), so let's begin at the earliest date that both of ABR's indices were calculated live, 31 January 2017.8

⁵ Wilshire's independent calculation of ABR's "short volatility" model

⁶ Static short exposure to VIX futures

⁷ Equally weighted basket of primarily hedge fund constituents that use volatility instruments with a short bias

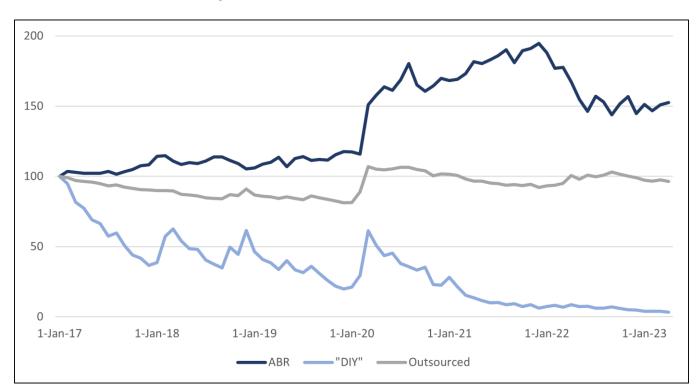
⁸ ABR launched its ABR Enhanced Short Volatility Index, on Jan 31, 2017

Since 31 January 2017

ABR "Long Volatility" Index

The "ABR Long Volatility" Index (ABRVXX) is up 10.20% annualized gross (ABR Long Volatility Strategy up 6.99% net of 3% hypothetical expenses). That again crushed static long volatility exposure and outperformed an index of many hedge funds which use volatility assets with a long bias for core diversification:

- ABR Dynamic Blend Equity and Volatility Index (ABRVXX) navy
 - ABR's "Long Vol" model⁹
- S&P 500 VIX Short-Term Futures Index (SPVIXSTR) blue
 - o "DIY" Long Vol¹⁰
- Eurekahedge CBOE Long Volatility Index (EHFI451) grey
 - "Outsourced" Long Vol¹¹



⁹ Wilshire's independent calculation of ABR's "long volatility" model

¹⁰ Static long exposure to VIX futures

¹¹ Equally weighted basket of primarily hedge fund constituents that use volatility instruments with a long bias

ABR "Short Volatility" Index

The "ABR Short Volatility" Index (ABRXIV) is up 11.49% annualized gross (ABR Short Volatility Strategy up 6.94% net of 2% & 20% hypothetical expenses). That also crushed static short volatility exposure and outperformed an index of many hedge funds which use volatility assets with a short bias:

- ABR Enhanced Short Volatility Index (ABRXIV) navy
 - ABR's "Short Vol" model¹²
- S&P 500 VIX Short-Term Futures Inverse Index (SPVXSPI) blue
 - "DIY" Short Vol¹³
- Eurekahedge CBOE Short Volatility Index (EHFI450) grey
 - "Outsourced" Short Vol¹⁴



Conclusion

ABR's models, in the Wilshire-calculated live index results, have beaten static volatility models (used by the "DIY" crowd) and indexes of baskets of volatility hedge funds (used by the "outsourced" crowd), and it's not even close. The research and development performed by ABR's founders, who have traded volatility since their early 20s at some of the top derivatives firms in the world, has led to models that differ dramatically from the *status quo* in volatility land.

¹² Wilshire's independent calculation of ABR's "short volatility" model

¹³ Static short exposure to VIX futures

¹⁴ Equally weighted basket of primarily hedge fund constituents that use volatility instruments with a short bias

Important to note is the fact that, while other volatility strategies/firms have come and gone since ABR launched, there have never been changes to the systematic ABR models or Wilshire-calculated indices, including throughout these various and sometimes challenging market conditions. In short, we think the dynamic nature of the models has worked well mitigating risk and achieving appealing returns.

We believe that combining the benefits of these dynamic long and short volatility models presents the best potential to balance risk and reward throughout various market conditions. A 75% and 25% blend of the long volatility model and the short volatility model may offer attractive risk-adjusted returns. The ABR 75/25 Volatility Strategy is composed of these proportions.

Over this same time period since 31 Jan 2017, the ABR 75/25 Volatility Strategy has returned 7.3% annualized net. It has also demonstrated considerable diversification value to equity and core allocations with a correlation of only 0.60.

To learn more about the ABR 75/25 Volatility Strategy, please reach out to us at info@abrfunds.com.

Disclosures:

The ABR 75/25 Volatility Strategy returns, for the periods ending 31 March 2023, have been -11.92% for one year, +7.43% for five years, and +7.49% for ten years. The ABR Long Volatility Strategy returns, for the periods ending 31 March 2023, have been -14.96% for one year, +6.39% for five years, and +5.30% for ten years. The ABR Short Volatility Strategy returns, for the periods ending 31 March 2023, have been -9.60% for one year, +10.06% for five years, and +13.00% for ten years.

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Certain performance information shown above is hypothetical. Hypothetical performance does not reflect actual trading experience and does not necessarily reflect the deduction of all expenses. HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. 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. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS.

The ABR Long Volatility ("ABR LV") Strategy is represented by 100% the returns of the ABR Dynamic Blend Equity and Volatility Index Powered by Wilshire (ABRVXX). The "ABR 75/25" Volatility Strategy is represented by 75% of the returns of ABRVXX and 25% of the returns of the ABR Enhanced Short Volatility Index Powered by Wilshire (ABRXIV) respectively (collectively, the ABR Indexes). The ABR Short Volatility ("ABR SV") Strategy is represented by 100% of the returns of ABRXIV. All of the ABR volatility strategies include pre-inception

performance and are shown net of hypothetical expenses. Actual expenses may vary. For information on the live trading performance of various ABR managed strategies, please contact us. Past performance does not guarantee future results.

For more information on the live-trading performance of various ABR-advised strategies or the hypothetical performance presented, please contact us. Wilshire® is a service mark of Wilshire Associates Incorporated (Wilshire) and has been licensed for use by ABR Dynamic Funds, LLC. The ABR Indexes are not sponsored, endorsed, sold or promoted by Wilshire, and Wilshire makes no representations or warranties with respect to the ABR Indexes. ABR Dynamic Funds, LLC may receive compensation in connection with licensing the ABR indices to third parties.

The Strategies may acquire or enter into derivatives instruments and transactions. Derivatives are financial instruments that have a value which depends upon, or is derived from, a reference asset, such as one or more underlying securities, pools of securities, options, futures, indexes, or currencies. Derivatives may result in investment exposures that are greater than their cost would suggest; in other words, a small investment in a derivative may have a large impact on the Strategies' performance. The successful use of derivatives generally depends on the ability to predict market movements. There may be an imperfect correlation between a derivative and its reference asset. Certain transactions, such as those involving investing in certain derivatives, may give rise to leverage, causing the Strategies to be more volatile than if it had not been leveraged.

Incorporating a dynamic volatility strategy into a portfolio is designed to help an investor potentially mitigate, and potentially benefit from, volatility in the U.S. stock market. However, all investing involves risk including the possible loss of principal. There can be no assurance such a strategy will achieve a gain or prevent a loss. Volatility assets and strategies may not be suitable for some investors due to their financial circumstances and risk tolerance. A volatility strategy should not be viewed as a complete investment program.

Volatility assets entail their own unique risks that investors should consider when evaluating a volatility strategy. Volatility-based futures can become volatile and difficult to value and can be imperfectly correlated to the underlying asset or index. Due to leverage, the loss on a long futures contract could greatly exceed the initial investment. The loss on a short contract theoretically is unlimited since the appreciation of the shorted asset also theoretically is unlimited. Thus, a small investment in derivatives could have a large potential impact on the performance of a portfolio. Further, a volatility strategy may at times call for high portfolio turnover rates, which increases brokerage costs. High turnover also may generate net short-term capital gains.

Dynamic Funds for a Dynamic Future

