

US HEDGE FUND PERFORMANCE IN THE ERA OF QUANTITATIVE EASING

By Dion van Proosdij

Quantitative easing (QE) has caused part of the deterioration in hedge fund performance in the decade after the Global Financial Crisis of 2008-2009 (GFC) and has negatively impacted monthly performance of seven out of ten US hedge fund investment styles analyzed. Hedge fund investors should therefore incorporate QE in their allocation decision making process.

Performance of US hedge funds deteriorated while the Federal Reserve (Fed) started to implement QE in the decade after the GFC. The following hypothesis was tested in the master thesis study 'Quantitative Easing and Hedge Fund Performance: Evidence from US Hedge Funds': Did QE play a role in the deterioration of US hedge fund performance? This article seeks to answer this question and to offer a suggestion for investment style portfolio allocation with respect to two scenarios: an increase and a decrease in QE.

QE IS HERE TO STAY

The Fed will likely continue to rely on QE in its future monetary policy. Interest rates are expected to remain low for years to come according to Teulings & Lu (2016), Powell (2020) and others. QE is generally (but not exclusively) used to lower the long end of the yield curve when short term interest rates are low (Karras, 2013). Figure 1 shows that QE (measured by the US dollar amount of securities held outright by the Fed) has increased significantly from 2009 onward, while the short-term effective federal funds rate remained close to zero.

IMPACT OF QE ON ASSET PRICES

QE affects monthly performance of hedge funds through two channels. First, QE leads to rising equity and fixed income prices through decreased borrowing costs for

firms (Balatti, Brooks, Clements, & Kappou, 2017). Secondly, QE affects relative valuations of firms differently depending on the leverage ratio of a given firm. This implies that long-run equilibria in relative valuations change. A decrease in borrowing costs can lead to additional firm investments. This generates additional future cash flows, which translates into higher equity prices. Firms with a higher leverage ratio tend to have fewer future investments and therefore lower equity prices relative to firms with a lower leverage ratio (Myers, 1977, and Zhang & Cai, 2011).

Furthermore, long-run equilibria of relative valuations in the fixed income space change with the introduction of the Fed as a new buyer in this market. A change in supply-demand dynamics affects spreads and perceived credit risks between securities eligible for purchase within QE programs and securities that are not.

IMPACT OF QE ON US HEDGE FUND PERFORMANCE

The thesis referred to earlier focuses on the impact of QE (measured by the amount of securities held outright in billions of US dollars on the balance sheet of the Fed) on monthly performance of ten US hedge fund investment styles. This impact is quantified in a linear factor model that explains the

intrinsic characteristics and risks of hedge fund portfolios and performance. The empirical results from the thesis, along with hypotheses attempting to explain these results, are presented in the following paragraphs.

QE has a positive impact on monthly performance of the Long-Bias investment style. This can be explained by the fact that a long portfolio exposure tends to do well when asset prices rise.

Furthermore, QE has a negative impact on monthly performance of the Global Macro, Long/Short Equity Hedge and Managed Futures/CTA investment styles. The following hypothesis could explain this outcome: The net-portfolio exposure of these three

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investment styles differs per given hedge fund. Rising asset prices caused by QE result in margin calls on short positions. The disposition effect (selling ‘winners’ and holding on to ‘losers’) could cause managers to sell a portion of long positions (‘winners’) to free up cash to meet margin calls on short positions (‘losers’). This limits gains on long positions while amplifying losses on short positions.

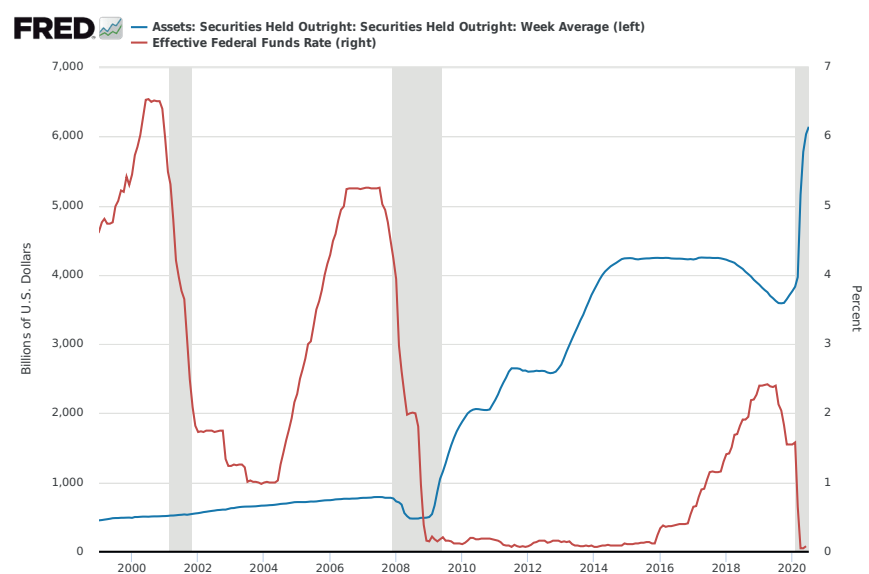
The empirical evidence regarding relative value investment styles shows that QE has a negative impact on monthly performance of the Convertible Arbitrage, Fixed Income Arbitrage and Equity Market-Neutral styles. These styles put on positions under the assumption that relative valuations in convertible fixed income and equity securities converge back to their long-run equilibrium. Profitability hinges on correctly estimating these long-run equilibria. Hedge fund managers might not observe a potential structural break in long-run equilibria of relative valuations caused by an exogenous factor such as QE. This could explain the underperformance of these styles.

In contrast to the investment styles discussed so far, the empirical analysis shows no evidence that QE affects monthly performance of the investment styles Event-Driven and Credit Focus. This suggests that QE does not affect attempts to profit from mispricing or price movements related to specific market or corporate events such as distressed securities and mergers (Event-Driven) or changes in credit quality, spreads and market liquidity (Credit Focus).

Finally, QE has a negative impact on monthly performance of the Multi-Strategy investment style. This empirical evidence suggests that combining several investments styles (of which seven out of nine are negatively affected by QE) in one portfolio leads to a negative impact on Multi-Strategy portfolios on aggregate.

In summary, the deterioration of hedge fund performance after the GFC is partially caused by QE. Getmansky, Lee & Lo (2015), appoints two other causes for this

Figure 1: QE & the Effective Federal Funds Rate



Source: Board of Governors of the Federal Reserve System (US)

deterioration. First, a decrease in the risk-free rate, which decreases return on cash (margin) holdings of hedge funds. Secondly, an upward bias in older performance data caused by survivorship, backfill and extinction bias.

INVESTMENT STYLE PORTFOLIO ALLOCATION

Hedge fund investors can incorporate QE in their investment process by adjusting the weights allocated to individual investment styles based on whether QE increases or decreases. If QE increases, they should overweight the Long-Bias investment style. This style benefits from rising asset prices. They should combine this with a neutral position in the investment styles not affected by an increase in QE: Event-Driven and Credit Focus. Furthermore, they should underweight the investment styles that are negatively affected by an increase in QE: Global Macro, Long/Short Equity Hedge, Managed Futures/CTA, Convertible Arbitrage, Fixed-Income Arbitrage, Equity Market-Neutral and Multi-Strategy.

When QE decreases, hedge fund investors should reverse the suggested portfolio allocation. They should overweight the seven investment styles that benefit from a decrease in QE: Global Macro, Long/Short

Equity Hedge, Managed Futures/CTA, Convertible Arbitrage, Fixed-Income Arbitrage, Equity Market-Neutral and Multi-Strategy, and combine this with a neutral position in the two investment styles not affected by QE: Event-Driven and Credit Focus. Finally, they should underweight the Long-Bias style. This style is negatively affected by a decrease in QE.

As a closing remark, it remains important to hold a diversified portfolio of hedge fund investment styles in order to eliminate undesirable idiosyncratic risk exposure. It is not recommended to exclude investment styles based only on QE considerations. There are more drivers of performance for hedge funds than QE alone. «

References: van Proosdij, D. (2020, June). Quantitative Easing and Hedge Fund Performance: Evidence from US Hedge Funds. Utrecht University School of Economics Master Thesis. Thesis written during an internship at the Aureus Group. Accessible via: <https://www.linkedin.com/in/dionvanproosdij/>

Sources mentioned in this article can be found in the original master thesis.

This article was written by Dion van Proosdij during the last part of his study. He recently obtained his Masters Degree at Utrecht University School of Economics.