Woodford Crisis - how can investors use forensic analysis to identify important redflags?

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Introduction

In this paper, we provide an overview of the issues that plaqued Woodford, a UK-based equity investment manager. Using forensic portfolio analysis, we also show how investors could have detected some of the redflags ahead of the blow-up. By regularly monitoring and analysing key drifts in the economic and risk footprints of the portfolio, investors have the opportunity to be decisive before it is too late or at least ask the right questions to get to the bottom of the key issues.

Introduction to Woodford Equity Funds

Celebrated as a high profile manager, Neil Woodford's own Woodford Equity Income Fund amassed great popularity as a strong performing investment in the UK market. Within three years, Woodford cemented its reputation as a well-managed fund with a return of 39.3 per cent in comparison to the average 19.4 per cent from the UK Equity Income sector[1].

According to Morningstar analysis, the early outperformance of the fund was attribute to incisive long-term macro calls and as well as strong stock selection.

What happened?

However, from July 2018, the fund began to struggle as global stock markets soared and several stock-specific issues damaged performance.

Red Flag 1

The key contributor to the fund's shift in performance was the change in the portfolio manager's style. Woodford's portfolio managers had previously focused on targeting global companies with well-diversified revenue streams and resilient business models. However, from early 2017, the team shifted its style to focus more on investing domestically on early-stage companies, especially health care firms experimenting on new drugs and treatments. Whilst Woodford's positive outlook on the health of the UK economy was correct, the fund's style choices resulted in prolonged underperformance with persistent stock-specific problems.

Red Flag 2

In addition to investment style drift, market capitalisation bias or size was another important risk factor that moved significantly and contributed to Woodford's poor performance. Over a three-year period, the weight of the Woodford fund in mega-cap stocks dropped from 44% to zero, signalling a significant change both relative to its own historical size footprint as well as peer relative footprint. Take for example, the average UK income fund held 31% of the portfolio in mega-cap stocks. As the funds mega-cap exposure was diluted, its exposure to small and illiquid names sky-rocketed from 22% to 61% in March 2019[2]. This increase amounted to a 300% increase to the illiquid segment of the market.

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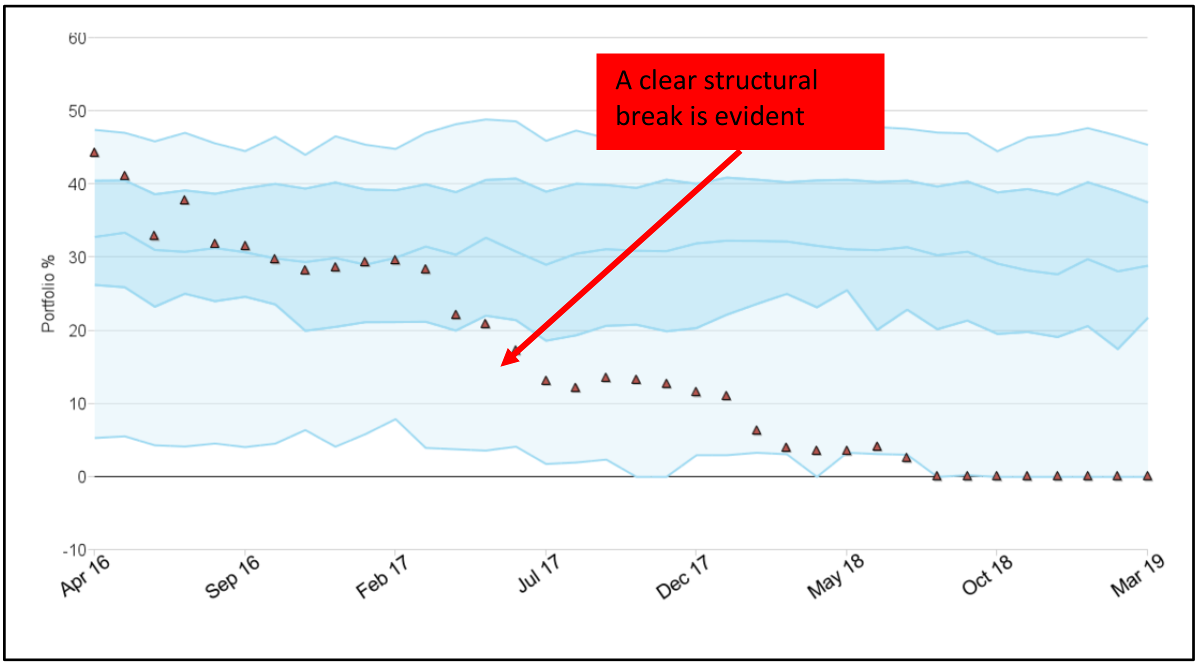
[1] Morningstar, "*Woodford: a cautionary tale for Australian investors*", https://www.morningstar.com.au/funds/article/woodford-a-cautionary-tale-for-australian-inv/193479

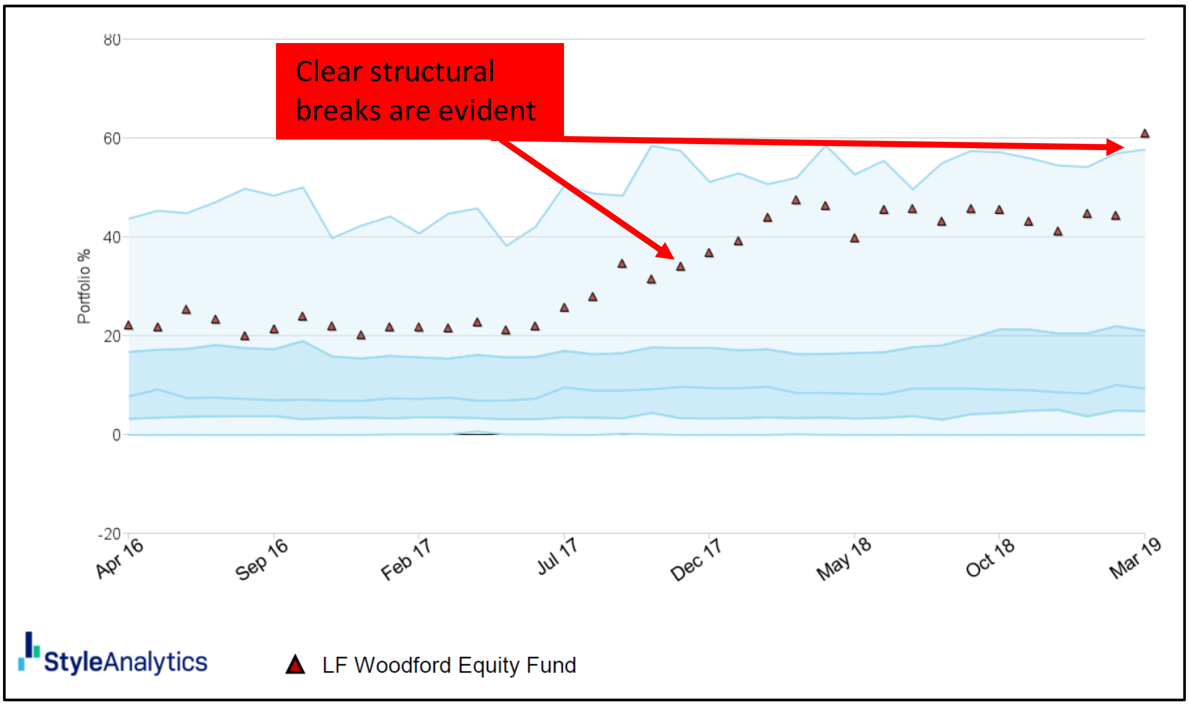
[2] Style Analytics, "*Woodford Fund Analysis*" , https://www.styleanalytics.com/resources/woodford-fund-analysis-equity-income-fund/

Exhibit 1: The continued decline in Mega Cap exposure over three years to March 2019 contributed to Woodford's style drift and subsequent losses



Source: Foresight Analytics, Style Analytics

Exhibit 2: Gradual increase in Small-Cap Weights from April 2016 significantly contributed to poor liquidity and the eventual poor performance of the fund

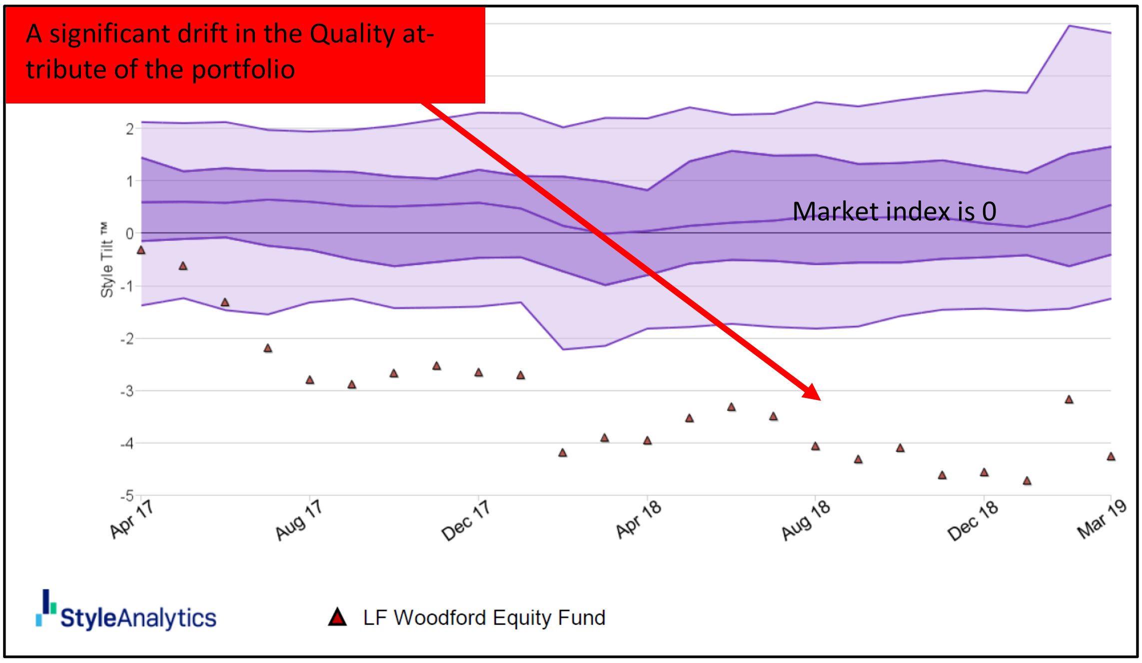


Source: Foresight Analytics, Style Analytics

Red Flag 3

The Woodford fund also drifted on Quality footprint, a predictive alpha factor important to the firm's portfolio construction process. The fund experienced the largest drop in ROE (Return on equity) tilt (bet relative to the index) relative to its own history and 56 peer funds. As the Quality attributed diminished, the fund entered into the bottom fifth percentile of the peer group in July 2017. As of March 2019, Woodford was the only fund that had lower-ranked ROE title, the Investors UK Equity Income II Fund, a fund which is also managed by Woodford.

Exhibit 3: Woodford's ROE significantly dropped and entered the bottom 5th percentile of UK Income Funds



Source: Foresight Analytics, Style Analytics

Style drift and significant changes to size and quality fuel poor performance

As a result of the changes in Woodford's portfolio construction process and risk control, Woodford's equity income fund performance dropped by 13.6 per cent in the year to 30 June 2018. In the meantime, the average UK equity income fund had grown by 2.5 per cent[3].

In the meantime, investors pulled substantial amount of their capital from the fund, causing further underperformance. For instance, while the Woodford Equity Income fund was one of the UK's largest equity income funds with an asset value of GBP 10 billion, its assets had dropped to GBP 6.5 billion by the mid 2019. Woodford became the worst-performing fund in May 2019.

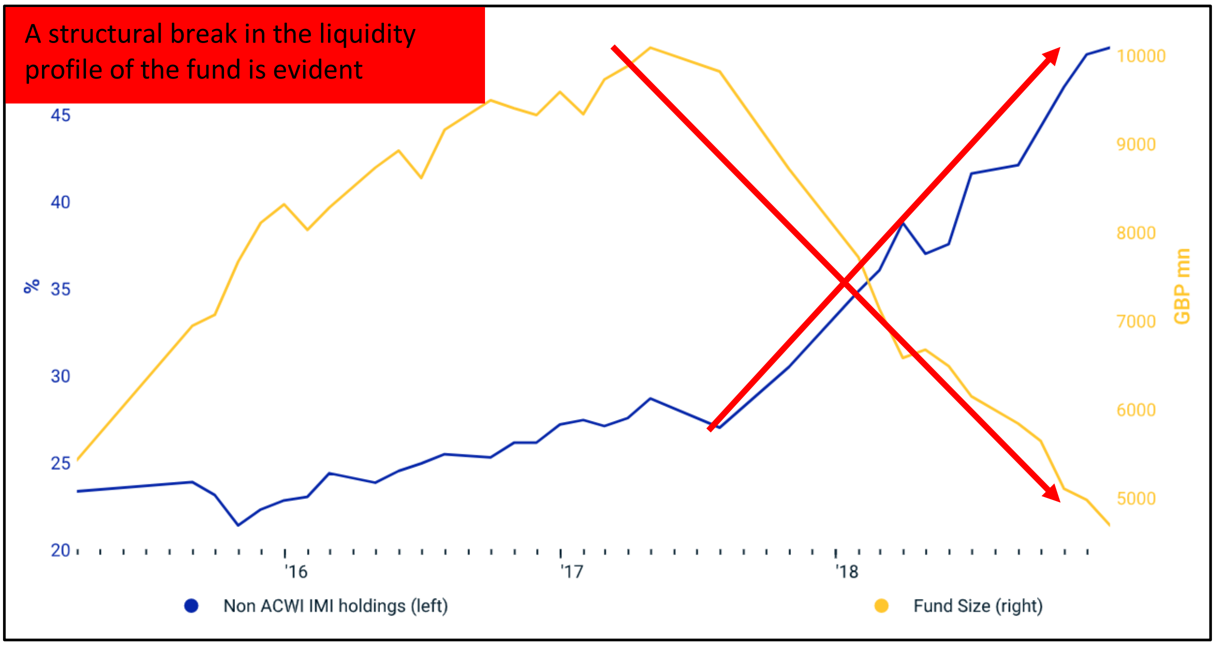
Investor response to poor performance

As a result of continued poor performance, many investors began to withdraw their investment. However, despite Woodford being an open-ended mutual fund which aimed to provide investors with high liquidity and the ability to withdraw capital on a daily basis, the level of illiquid securities in the fund was close to 80%.

[3] Morningstar, "*Woodford: a cautionary tale for Australian investors*", https://www.morningstar.com.au/Funds/article/woodford-a-cautionary-tale-for-australian-inv/193479

The fund held a significant number of investments in unlisted securities outside the MSCI ACWI IMI and was consequently forced to suspend all withdrawals in June 2019. This highlights the importance for investors to regularly review the liquidity characteristics of their portfolio in order to identify signs of liquidity drift or inability to redeem shares when required.

Exhibit 4: Decreasing fund size accompanied by the increasing weight of illiquid assets

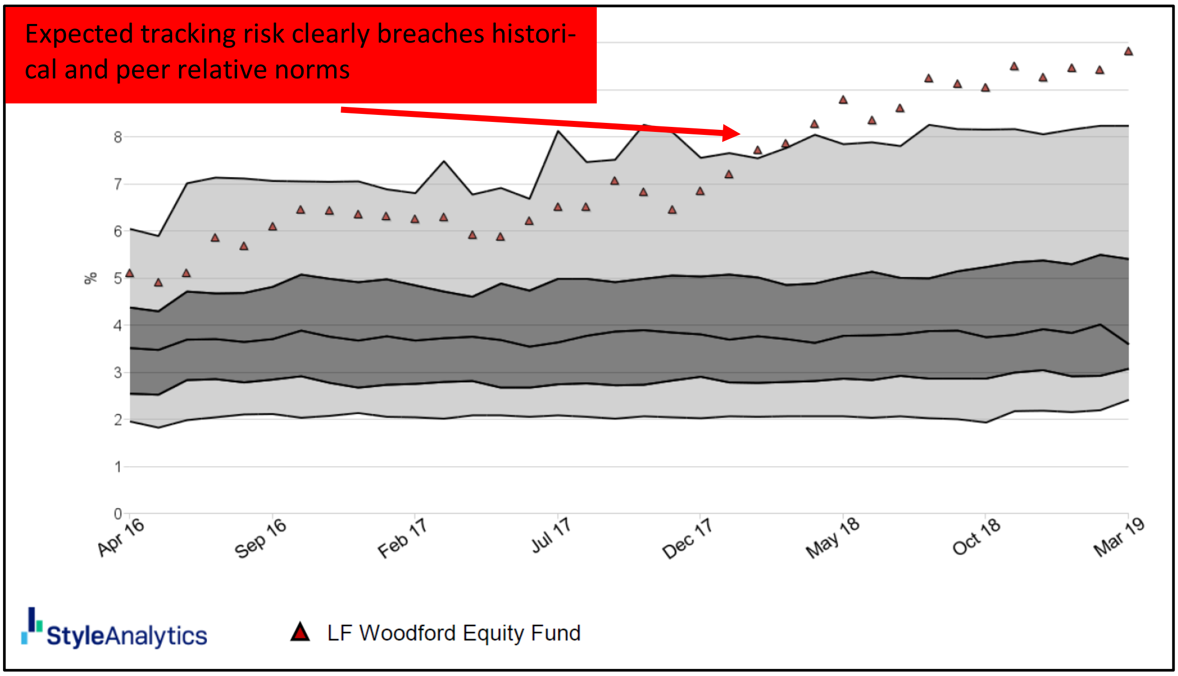


Source: MSCI, Lipper Data

Red Flag 4

As the style, market cap, quality and liquidity attributes drifted, so did the tracking risk of the fund. Exhibit 5 shows the blow-out of the fund's tracking error (ex-ante) both relative to its own historical footprint and relative to the peer group.

Exhibit 5: Continuous analysis of Woodford's Predicted Tracking Error would have allowed investors to identify key red flags in the fund's performance



Source: Foresight Analytics, Style Analytics

Key insights from Woodford crisis for investors

The drastic change in performance of the Woodford fund highlights to investors the importance and necessity in using forensic indicators to identify structural changes to key portfolio characteristics that are both sudden and are not justified based on the expected process, style and risk parameters of a manager/strategy. In the case of Woodford, investors who engaged in active fund analysis would have identified the key red flags that either co-incided or lead the subsequent decline in performance. At a minimum, the forensic analysis would have allowed investors to ask the right questions and probe more deeper into the intentions of the portfolio decisions makers.

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