**Market Timing Strategy In U.K**

# **Data description**

We obtain the daily UK index during a period of over 40 years: from Feb 1982 to Dec 2022. The U.K. Index was downloaded from Investing website and was carefully cleaned for analysis purposes. The CAPE and 1M UK treasury Bond were obtained from Barclays and Investing websites, respectively.

# **Predictive power of CAPE**

**Chart 1 U.K. Equity 10-year returns sorted by starting CAPE Valuation, 1982–2022**

Chart 1 shows the average rate of excess returns (over cash) for UK index for 10-year period and sorting by CAPE ratio, using data from Jan 1982 til Dec 2022. As we can clearly see that, lower valuations for CAPE predicting higher returns (and vice versa) does indeed appear solid. Not only that, the index return shows a poor performance over treasury bond 1M return. That is the reason why the excess returns for the CAPE buckets (above 14.26) are negative. However, as we already know that based on the original paper, there is an important hindsight bias: we used a full history data to define quintiles.

**Chart 2 U.K. equity returns sorted by starting valuation based on rolling 10-year window, 1982–2020**

Chart 2 removes the hindsight bias by using a 10-year rolling of past data. It also add 1-year and 3-month returns. The patterns are not so clear for shorter periods, epecially in the 5th quintile, they did not so outperform the other quintiles.

**Table 1** EP (1/CAPE) as explanatory variable of future equity return 1982–2022 (in sample)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Next 10Y | Next 1Y | Next 1M |
| Beta | 1.82 | 4.95 | 5.66 |
| T-statistic | 17.24 | 10.89 | 2.99 |
| R-squared | 0.45 | 0.2 | 0.02 |

This table shows a strong relationship between 10Y returns and UK index. The linear regression model with R-squared of 0.45, indicating that approximately 45% of the variation in future equity returns can be explained by EP. The high T-statistic also suggests the relationship between EP and future equity 10Y returns is highly robust and reliable. While the relationship between 1Y return or 1M return and the Index appears EP has very limited explanatory power in predicting or understanding future equity 1Y or 1M returns. Hence, longterm predictibility increases as we lengthen the period. Shiller EP has lower predictive power over short period as R-squared decrease when we shorten the horizon.

# **Market timing strategy**

# **3.1 Methodology**

We construct the market timing signal based on the current E/P and its rolling 10Y Median scaled by 95th and 5th percentile range. The portfolio is rebalanced monthly/ quarterly/ annually, with leverage market timing strategy: (ceil at 150% and floor at 50%). We only apply no-leverage strategy (ceil at 100% and floor at 50%) only for monthly rebalance.

The equity weight is based on following formular:

# **3.2 Results**

**Table 2 Performance of buy-and-hold and simple timing strategies in U.K. equities, 1992–2022.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Buy&Hold | Value Timing  (No leverage) | Value Timing  (Leverage) | Value Timing  (Leverage) | Value Timing  (Leverage) |
| Rebalance | Monthly | Monthly | Monthly | Quarterly | Annually |
| Return | 3.97% | 3.12% | 3.83% | 4.01% | 4.39% |
| Volatility | 16.67% | 55.67% | 71.83% | 70.83% | 64.75% |
| Sharpe ratio | 0.06 | 0.002 | 0.01 | 0.01 | 0.02 |
| Max drawdown | -46.88% | -41.77% | -51.24% | -51.74% | -43.54% |
| Average position | 100% | 85% | 103% | 104% | 101% |

Leverage market timing (annually rebalanced) has the highest return, Buy&Hold approach ranks in middle. Noticebly, all value timing strategies display higher volatilities than Buy&Hold, almost from 3.3 times to 4.3 times, which implies a significant degree of uncertainty and risk in this particular investment strategy. The max drawdowns are also relatively high for all value timing strategies.

When considering the Sharpe ratio, Buy&Hold strategy emerges as the most appealing option, consistently outperforming all market timing strategies regardless of the rebalancing period. It means the timing strategy cannot beat the Buy&Hold approach over the research period.

The timing strategy has been underinvested on average for no leverage, average position of 85%. While for the leverage approaches, the positions are just more or less above 100%. This is mostly due to the drifts in CAPE (as illustrated in Chart 3).

**Chart 3 U.K CAPE, 1992-2022**

Once again, we notice that CAPE can drift higher or lower for different period of time, making it difficult to evaluate current market is expensive or cheap, without using hindsight bias.

# **Conclusion**

Market timing does not beat Buy&Hold strategy in the UK market with the data set from 1982 to 2022. Although, the market timing strategy generates a positive return, which is even higher Buy&Hold approach in some cases, the timing approach suffer from low Sharpe ratio, high volatility and high max drawdown.

**Reference**

Asness, C., Ilmanen, A., & Maloney, T. (2017), *Market Timing: Sin A Little - Resolving The Valuation Timing Puzzle*. Journal Of Investment Management, Vol. 15, No. 3, (2017), pp. 23–40.