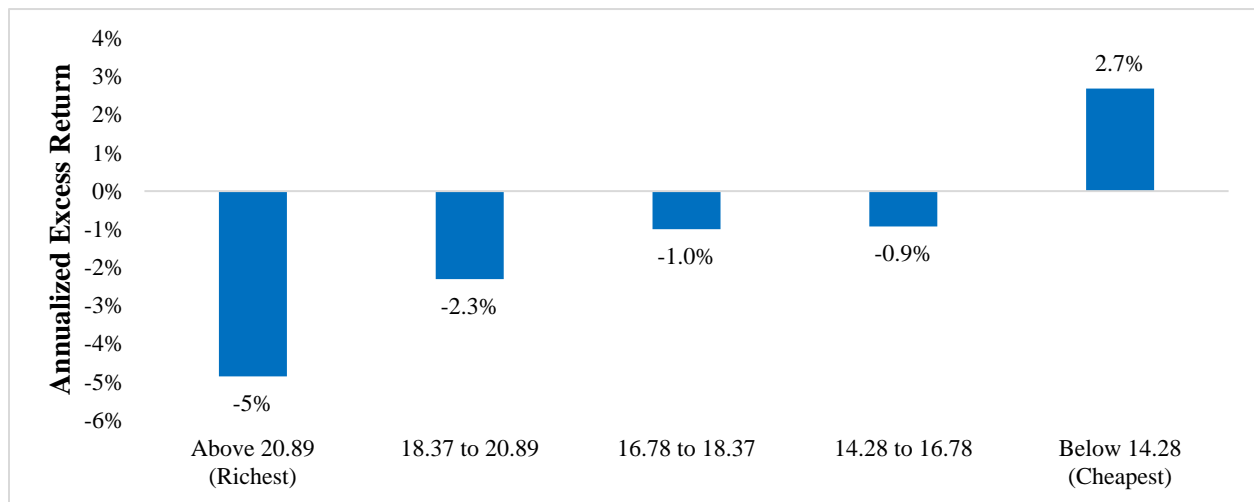


# Market Timing Strategy In U.K.

## 1. Data description

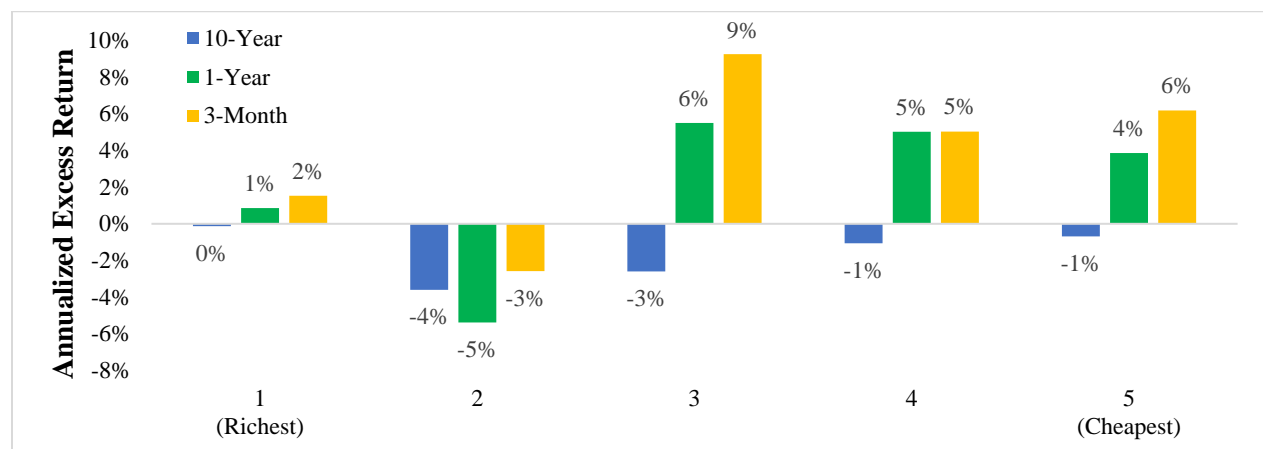
The project includes the daily U.K. index during a period of over 40 years: from Feb 1982 to Dec 2022. The U.K. Index was downloaded from Investing website and was carefully cleaned for analysis purposes. The CAPE and U.K. 1-Month bond yield were obtained from Barclays and Investing websites, respectively.

## 2. The 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 the U.K. index for a 10-year period and sorted by CAPE ratio, using data from Jan 1982 til Dec 2022. Clearly, lower valuations for CAPE predicting higher returns (and vice versa) 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, based on the original paper, there is an important hindsight bias in using 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 addresses the issue of hindsight bias by employing a 10-year rolling of past data. It also adds 1-year and 3-month returns. The inclusion of shorter timeframes reveals less distinct patterns, especially in the 5<sup>th</sup> quintile, they did not consistently outperform the other quintiles.

**Table 1** EP (1/CAPE) as an 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	0.19	0.02

This table shows a strong relationship between 10Y returns and the U.K. 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 that EP has very limited explanatory power in predicting or understanding future equity 1Y or 1M returns. Hence, long-term predictability increases as the period lengthens. Shiller EP has lower predictive power over a short period as R-squared decreases when the time horizon is shortened.

### 3. Market timing strategy

#### 3.1 Methodology

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

The equity weight is based on the following formula:

$$100\% + \frac{\text{Current E/P} - \text{Median E/P}}{95\text{th} - 5\text{th percentile range}}$$

#### 3.2 Results

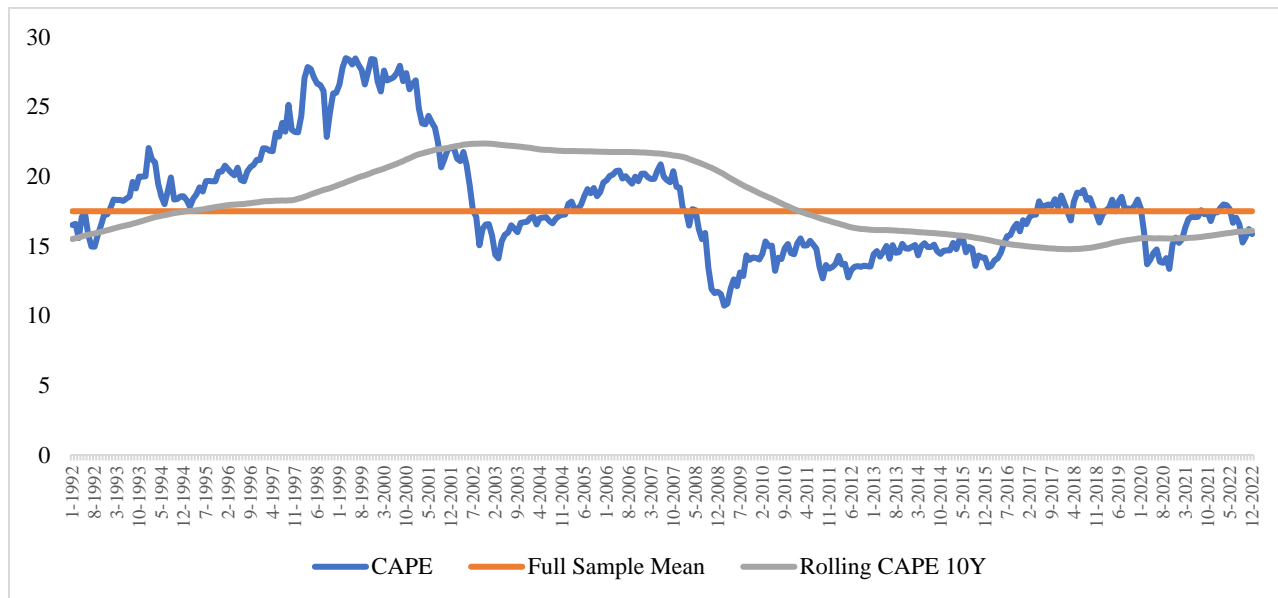
**Table 2** Performance of Buy&Hold and simple timing strategies in U.K. equities, 1992–2022.

	Buy&Hold	Value Timing (No leverage)	Value Timing (Leverage)	Value Timing (Leverage)	Value Timing (Leverage)
Rebalance	-	Monthly	Monthly	Quarterly	Annually
Excess Return	1.06%	2.04%	3.56%	3.78%	4.13%
Geometric Return	3.89%	3.12%	3.83%	4.01%	4.39%
Volatility	13.7%	55.7%	71.8%	70.8%	64.8%
Sharpe ratio	0.06	0.002	0.01	0.01	0.02
Max drawdown	-46.9%	-41.8%	-51.2%	-51.7%	-43.5%
Max relative drawdown		-15%	-11%	-14%	-8%
Average position	100%	85%	103%	104%	101%

Leverage market timing (annually rebalanced) has the highest geometric return, Buy&Hold approach ranks in the middle. Noticeably, all value timing strategies display higher volatilities than Buy&Hold, almost from 4.1 times to 5.2 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 evaluating the Sharpe ratio, the Buy&Hold strategy emerges as the most appealing option, consistently outperforming all market timing strategies regardless of the chosen rebalancing period. It means the timing strategy cannot beat the Buy&Hold approach over the researched period.

The timing strategy has been underinvested on average for no leverage, an 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**

CAPE can drift higher or lower for different periods, making it difficult to evaluate whether the current market is expensive or cheap, without using hindsight bias.

#### 4. Conclusion

In the U.K., market timing fails to outperform the Buy&Hold strategy with the dataset from 1982 to 2022. Although the market timing strategy generates a positive geometric return, which occasionally surpasses that of the Buy&Hold approach, the timing approach suffers from a low Sharpe ratio, high volatility, and high max drawdown.

#### Reference

Asness, C., Iltanen, 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.