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Final Assignment

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1 Introduction

Numerous scholars have proposed that total stock market returns are predictable[1], which provides scope for investors to engage in market timing. At the same time, factors beyond the aggregate market are sources of risk premiums in the cross-section of assets **fama1993common**, creating the basis for factor investing.

2 Literature Review

There are various papers aim to tackle the entire cross-section, such as **akbas2015smart**, examine the ability of a single variable to forecast all anomaly returns and thus their common component. Besides, there is a part of the literature on return forecasting studies from the perspective of unsettled factor structures. Better known examples are **lochstoer2020drives** who use panel VAR methods to forecast firm-level expected returns and then construct portfolios.

3 Methodology

3.1 A subsection

Lemma 1. (Conditional factor model) This is an equation:

$$\mathbb{E}_t\left[R_{j,t+1}\right] = \beta_{jt}'\Sigma_{F,t}\delta_t = \beta_{jt}'\mathbb{E}_t\left[F_{t+1}\right] \tag{1}$$

3.1.1 A sub-subsection

We use the valuation ratio as a predictor variable and build a forecasting model to obtain the predicted value of each principal component. The valuation ratio is the most commonly used predictor of market returns and, in fact, its use implies an assumption that valuation ratios are believed to provide information about expected returns.

Table 1: This is a table.

	Mom12	rome	age	shortint
r	10.08	13.77	-0.53	-2.29
σ	24.77	17.24	15.48	13.75
SR	40.68	79.91	-3.48	-16.66
MDD	-80.70	-59.96	-76.39	-80.64

Table 1 shows that the first ten PCs only explain a small portion of the variance compared to **haddad2020factor**, where they demonstrate that nearly the two first PC in other assets classes such as in foreign exchange and Treasury Bond account for nearly 100% of the variance.

[1] This is a footnote.

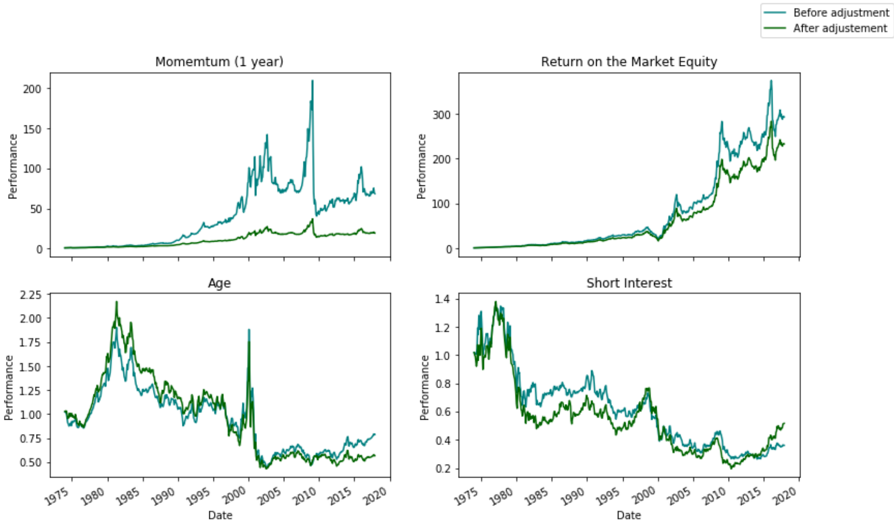

Figure 1: This is a figure.

4 Conclusion

In general, factor timing, which combines the concepts of long-short factor investing and market timing, can be extremely beneficial, delivering greater results when compared to market timing and factor investing alone.

5 Appendix

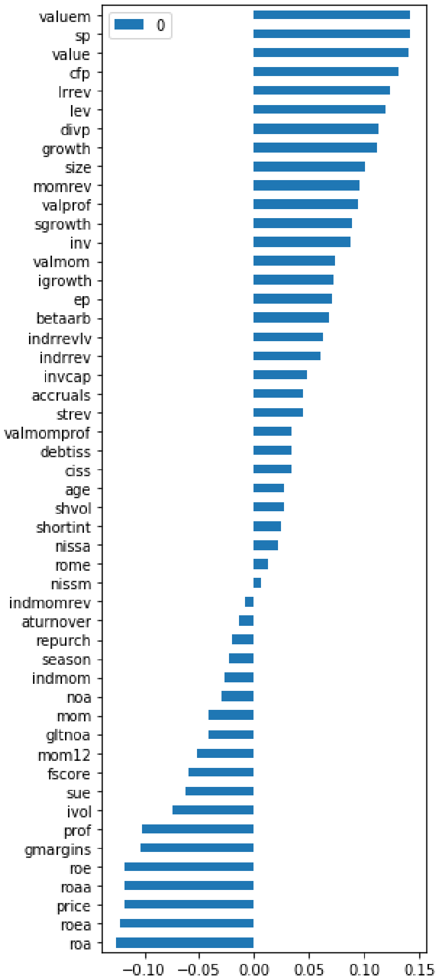

Figure 2: This is a figure

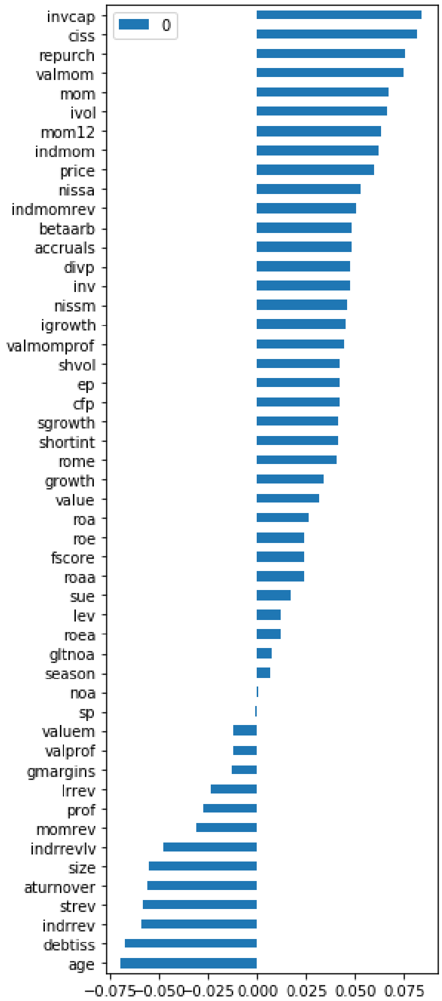

Figure 3: This is another figure