Equity and Fixed Income Homework Project (Summer 2023)

1. Read carefully the following paper which inspired my remarks made during the lecture: Asness, C., Ilmanen, A., & Maloney, T. (2017). Market timing: Sin a little resolving the valuation timing puzzle. *Journal of Investment Management*, *15*(3), 23-40.
2. Your goal in this project will be to ultimately test (and potentially improve!) the market timing strategy described in the article for the market of your choice (cyclically adjusted P/E ratio is available for the US only on Robert Shiller's website, but you may use the unadjusted version of the metric when working with other markets). Proceed in the following steps.
3. Start by describing and visually analyzing your dataset and confirm (?) the predictive power of P/E ratio by:
    a. Running the regression described in Table 1 of the paper;
    b. Replicating results in Charts 1 & 2.
4. Construct a market timing strategy according to the principles laid out in the article, i.e.:
    a. Strategy allocates between 50%-150% of portfolio market value at a given rebalance date to equities; the remaining part is held in cash (earning US 1M Libor)
    b. At each (monthly) rebalancing date the strategy allocates to equities based on the strength of the tactical signal defined as the difference between the E/P ratio (inverse of P/E) and its rolling median scaled by the 95-5 percentile range; the equity weight is therefore: 100% + (current E/P – median E/P)/(95-5 percentile range).
    c. Compare the results of the above strategy to one that simply holds the underlying broad market index using Table 2 as a template.
5. Did you manage to beat the market? Is it possible to adjust your market timing signal so that outperformance is more clearly visible?
6. **Submit a report with your key findings (<u>no longer than 2-3 pages</u>) in hard copy at the last session, i.e. June 13 in class. <u>Late submissions will not be considered</u>.**