1. We use both t-tests and GRS tests to see if TSMOM and MOM capture each other.
2. we test if MOM captures TSMOM. We run the time-series regressions of TSMOM factors in each market on all the 4 MOM factors.

In terms of the alphas, none of the TSMOM factors are captured by the MOM factors since all 4 alphas are significantly different from 0. In addition, the GRS test strongly rejects the null hypothesis that , so MOM factors do not capture TSMOM. In terms of betas, we can find some correlations between the MOM factors and TSMOM factors, the and for example, which indicates MOM factors can partially explain the movement of TSMOM, but it does not fully capture the information in the TSMOM.



1. we test if TSMOM captures MOM. We run the time-series regressions of MOM factors in each market on all the TSMOM factors.

In terms of the alphas, , , and factors are captured by the MOM factors since these 3 alphas are not significantly different from 0. In addition, the results of GRS test are on the border of the 5% significance level, which indicates MOM factors weakly capture TSMOM. In terms of betas, we can find some MOM factors are closely related to the TSMOM factors, as an example. Therefore, TSMOM factors have some ability in explaining the movement of MOM.



In conclusion, MOM factors do not capture TSMOM, but TSMOM do a better job in capturing MOM.

1. The individual alphas and R-squares from each regression are given in the pictures below.





The results of GRS tests are given below. All the tests are rejected, which indicates all proxies of the market are not mean-variance efficient.



* Based on the alphas, R-squares and GRS tests, the model 7 is the one that performs the best at pricing the hedge fund portfolios. Firstly, by taking the average of the alphas’ t-statistics in each column, we conclude that the alpha of the model 7 is the least significantly different from 0 compared to other models. Second, the model 7 has the highest average adjusted R-squares. Third, the model 7 has the lowest GRS test statistics. Therefore, model 7 has the strongest explanatory power.



* The factors that the various hedge fund strategies load on are RMRF, RMRF(lag), BAB and Carry. We compute the betas obtained from the regressions on model7. Since there are 20 hedge fund portfolios, we obtain 20 betas for each factor. Then, we do cross-sectional tests on these betas and found the factors we state above are significantly different from 0, so we conclude they are the factors that the hedge fund strategies load on. These don’t make sense to us, because the momentum and value factors have such low loadings. Considering the long history of momentum and value strategies, the hedge funds must have exploited these strategies for a long time, and their strategies should have a heavy loading in the momentum and value strategies. However, the results show that these factors are not heavily loaded on, which is a surprising fact.



* The heavy loading on the lagged market return tells us that the hedge fund strategies are not significantly different from the passive management.