1. Analyst Dispersion

Methodology:

Based on the paper: *Re-assess the Analyst Forecast Dispersion Puzzle*. Stocks with larger analyst earning forecast dispersions earn lower future return. Two hypotheses from the paper, hypo 1 works, hypo2 doesn't work.

Hypo1: The negative relation between analyst dispersion and expected stock return depends on Analyst Coverage (I use FC_NumEst from IHStable), Analyst dispersion has no effects on stocks that are well covered by analysts.

At the same time, stocks that are less covered by analysts will be negatively associated with future returns.

Hypo2: The negative relation depends on idiosyncratic volatility. Analyst dispersion is less likely to be associated with future stock returns when idiosyncratic volatility is high.

Summary:

 I use the median of FC_NumEst number of analyst to separate the universe. Then test the lower half. FC_CVFY1EPS (FY1 EPS Estimates Dispersion) is the Analyst Dispersion factor from IHStable.

1)For the raw return results, there's a big drawdown(over 40%) during the crisis. But after 2010 it performs well.

2)For the residual_return_1000 using Factor_4_ind (regressed on size, momentum, value, beta and industry), from Axioma_MH table, the overall result is good:

Annualized Sharpe = 1.29, annReturn = 0.06,

 MDD = 0.095 and stk = 193/202.

3)Since residual return works, I regress the original position on 5 factors above, and re-generate the new position, then use the new position and raw 1010_1010 return for my test.

The results is fine: Sharpe = 0.86, ann_return = 0.045, turnover = 0.14/4(daily turnover less than 4%, so the transaction cost will be extremely low),MDD = 0.087,stk = 503-483.

The overall result seems good, I need do further research to improve the magnitude of return and also on hypo2.

2. Residual Momentum

Methodology:

Using residuals to identify stock-specific momentum and then ranking stocks by such momentum is therefore giving preference to stocks that have less exposure to common factors (like beta, value, size, industry…)

Conventional Momentum: builds positive exposures to common factors such as Beta when these factors have positive returns during the formation period of momentum.

It is speculating on the continuation of these factor returns, commonly known as 'factor momentum'.

Residual Momentum: is more 'factor neutral', since they're stock-specific returns which cannot be explained systematically by factors in a regression model. The more that stock returns are explained by factors, the smaller the specific-return is.

For my test, I regress the standardized 1000_residual_return (on 4 factors), and long/short quintile.

Summary:

1)If I use daily data for my test, I'll get strong negative results, which means daily data for daily rebalance is a reverse strategy (I should flip the signal sign). Then the result is pretty strong (Ann_return=0.10, Sharpe = 1.19), but turnover is too high: 2.9/4, means 75% daily turnover for all your positions.

2)If I use 12-1 month (12 month active return with 1-month lag), turnover will decrease dramatically, but the return is near 0%.

Need to do further research on regressed position, or see if residual return (regress on other factors) work.

3.Quality Minus Junk(QMJ)

Methodology:

Size matters, if we control the quality (from AQR paper). I need to construct the Quality factor = z(Profitability+Growth+Safety+Payout factor) by using IHStable, and first need to construct these factors by using z-score of other IHSfactors.

step1: Regress Quality(y) on Size(x) and get residual (QMJ). Step2: Regress Size(y) on QMJ(x) and get residual2(standardize, then use the z-score as position).

Summary:

1)Need to create those factors by myself (use worldscope data) since IHStable may have wrong direction and generate very different return.

2)I get very strong negative results if I follow the methodology… so there might be something wrong in IHSdirection.

4. ARM (Analyst Revision Model)

Methodology:

Starmine_ARM_daily table, it's a measure of overall change in analyst sentiment. There're 6 factors in this table include:ARM_exRecommendation, Analyst Revision, preferred, revenue, recommendations,Score5. The exRecommendation is the best performer.

Summary:

1)I use both raw return and Residual_return_Axioma_1000_trad_univ for my test. For raw return test, there's big drawdown during the crisis. For residual return test, the Sharpe = 0.68, Ann_return = 0.067, but MDD = 0.21(still during crisis).

Need to do further research on regress position.

5. TRMI(Thomson Reuters Market Psych)

Methodology:

Since it is trail 5 years data and many null values… I choose emotionVSFact and sentiment column for my test. I use compare the performance of different datatype and buzz level. datatype = news_social and buzz>40 seems to perform better than others.

Summary:

1) Residual return_1000 has similar performance as raw return_1000.(Sharpe=0.96, ann_return = 0.047, MDD = 0.055)
Need formal data and further test.

6. ESG (Environmental, Social and Corporate Governance)
Methodology:
 measure the sustainability and ethical impact of an investment in a company.
ESG_CG (corporate governance rating): measures a company's systems and processes.
ESG_SO (social rating): generate trust & loyalty with its workforce.
ESG_IR (integrated rating): equal weighted rating measures a company's financial & extra financial health through the use of Asset economic.
ESG_EC (economic rating): generate sustainable growth & a high return through the efficient use of its resources.
ESG_EN (environmental rating): company's impact on living & nonliving natural systems.
Summary:
1)I use both raw return and residual return for the test. The two methods generate similar results, residual performs better than raw…(Sharpe = 0.77,ann_return = 0.02, MDD = 0.034)
2) CG is the best performer. I also do 3 month change and 12 month change of ESG_CG to see whether it can improve the return magnitude, but the results do not change too much.
3)ESG is not a return dragging factor, performance is stable.
4)Different venders may provide different ESG ratings especially high ratings for 'good' ESG companies.

7.Size Investing
Methodology:
Within sectors with high levels of concentration, buy large caps, if you wish to buy small caps, only buy the highest quality ones;
Within sectors with low levels of concentration, buy smaller caps, but remove the lowest quality stocks.
Herfindahl score: measures concentration level of sectors.
Test: I choose the high concentration sectors by using Herfindahl score, then separate the universe by size and quality factors, see if small company with high quality has excess return. (use Quality related factors in IHStable such as TTMAccu(accounting accrual).

8. IHS_Surprise Analyst
Methodology:
I test 5 IHS Surprise Analyst factors including:QSA_Composite: Surprise Analyst Composite Rank , QSA_Efficiency: Fundamentals Rank, QSA_Percent: Probability of Surprise (%) ,QSA_EstExpect: Estimate Trend Rank ,QSA_SurpSN: Surprise Analyst Sector-Neutral Rank
Summary:

1)They don't have descending/ascending order so I have to use correlation matrix to predict the order for these factors
Seems like none of them can generate strong positive/negative return.
2)Needs white paper for further research.

9.sales/employee
Methodology:
For Retail Industry(labor-sensitive), market has been rewarding traditional retail companies with high sales/employee in recent years. I use RevPer(Revenue per employee) and NIPer(Net income per employee) for my test(from IHStable).
Need further research

10.Smart Holding Daily
Methodology:
Rank stocks based on the predicted future increase, or decrease, in institutional ownership.
Summary:
 I test country,industry and sector rank by using raw return & residual return. Residual return is not as good as raw return.
Need further research

11. RDSale (Tech sector)
Methodology:
 RDSale: Average of the research & development expenses in the trailing 12 months deflated by the sum of total sales in the same period.
TTMFCFEV: free cash flow to enterprise value
Idea: high RDSale and TTMFCFEV will generate better performance for Tech sector companies.
Summary:
 Screen the long/short side by using these two factors. Performs relatively well before 2018(ann_return = 6.5%) but during 2018 there's big drawdown…
Need further research.

12. REITs(Real Estates)
Methodology:
In a rising interest rate environments, NAVP(Net Asset Value to Price, capture the intrinsic value of REITs) and analyst upside were most promising factors.
Value(earnings yield, BP book value per share) & profitability are most effective in REITs factor.
Summary:
All of these factors have big drawdown during the crisis and rebound in 2009, but they do not perform well in recent years. So basically we cannot use either of them

13.Oil_energy
Methodology:

I test CapExAst factor and DebtEBITA factor on Energy industry, based on the idea from research paper: stocks with higher levels of Debt and higher levels of Capital Expenditures are likely UNDERPERFORM compared to the sector.
I also incorporate the crude oil price in the test.
Summary:
The overall return is not bad, but the volatility is so large and MDD is over 40% during 2016.
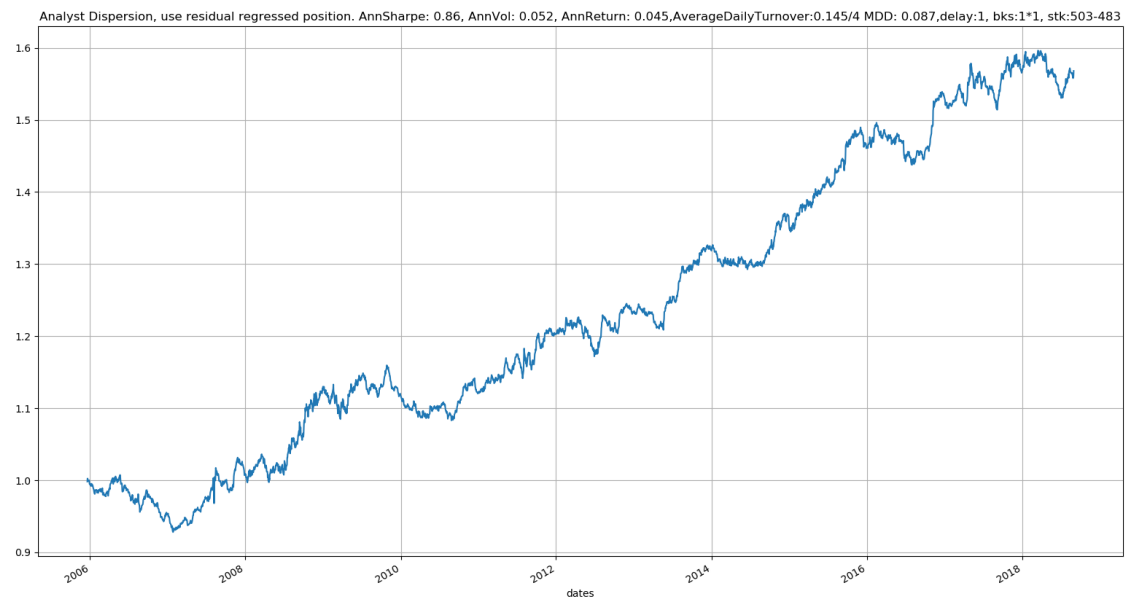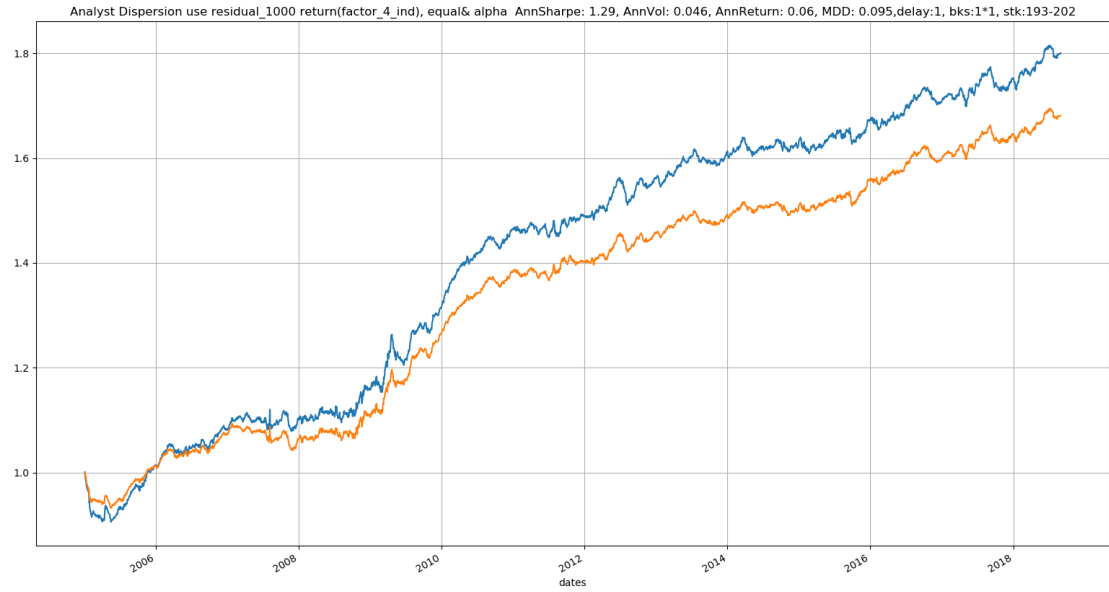
14.Earnings momentum and Earnings growth
Methodology:
signal1: Earnings growth(FY3 -FY4); signal2: Earnings momentum(mean - mean 3m)/mean 3m
See these factors performance on Healthcare industry

15.Smart Holding Daily 10 industries
Methodology:
I test Smartholding_Sector_Rank performance on 10 industries from UniverseAllDates table, separately. And compare volatility and overall performance for each industry.

Analyst Dispersion use residual_1000 return(factor_4_ind), equal& alpha AnnSharpe: 1.29, AnnVol: 0.046, AnnReturn: 0.06, MDD: 0.095,delay:1, bks:1*1, stk:193-202

Analyst Dispersion, use residual regressed position. AnnSharpe: 0.86, AnnVol: 0.052, AnnReturn: 0.045,AverageDailyTurnover:0.145/4 MDD: 0.087,delay:1, bks:1*1, stk:503-483

Residual Momentum,use Factor_4_ind residual return,equal weithed AnnualizedSharpe: 0.88, AnnualizedVolatility: 0.084, AnnualizedReturn: 0.074,MDD: 0.094, delay:1, bks:1*1, stk:394-394
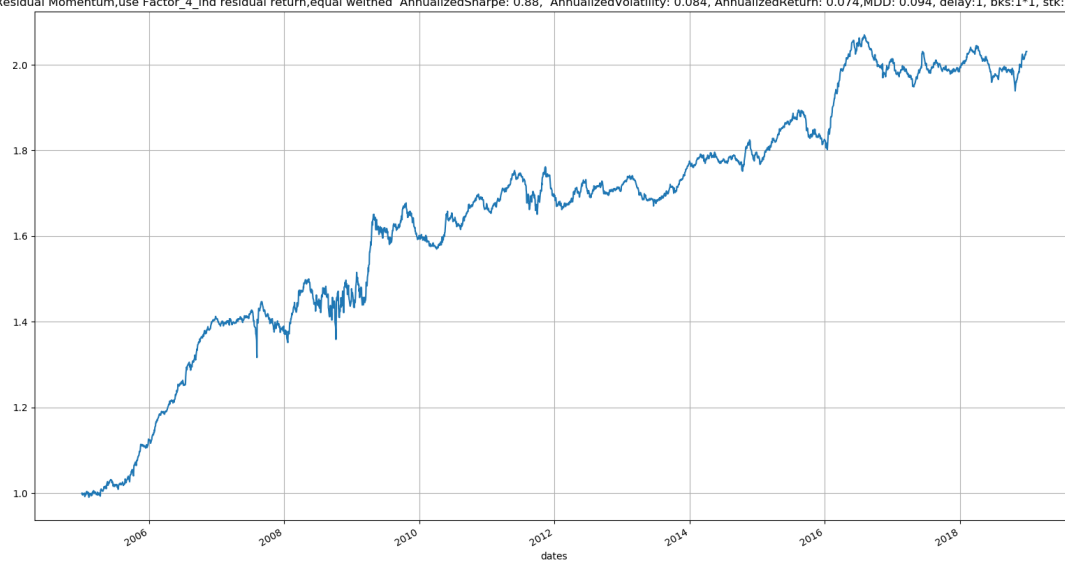
Residual Momentum(reversion), AnnualizedSharpe: 1.19, AnnualizedVolatility: 0.087, AnnualizedReturn: 0.10.4,MDD: 0.079, delay:1, bks:1*1, stk:394-394

ESG_CG use residual return, equal& alpha, AnnSharpe: 0.77, AnnVol: 0.024, AnnReturn: 0.019, MDD: 0.034,delay:1, bks:1*1, stk:817-826