

A Portfolio-Level, Sum-of-the-Parts Approach to Return Predictability

Internet Appendix

Appendix A

Table A presents the out-of-sample R-squared statistics for the monthly total return forecasts from predictive models across the NYSE market and six characteristic-based portfolios. These values are the same as those in Table 2, however, the statistical significance of these out-of-sample statistics is evaluated by the *MSPE-adjusted* statistic from Clark and West (2007). Consistent with findings in Table 2, out-of-sample return predictability is statistically significant for the big-growth portfolio, but not for the other portfolios, using the SOP method. Specifically, the SOP method still outperforms the historical mean and all univariate predictive regressions for the big-growth portfolio and the out-of-sample R-squared is significant at the 5% level. For the NYSE market portfolio, however, the out-of-sample R-squared is no longer significant. In all, the out-of-sample return predictability we find at the characteristic-based portfolio level is robust to the use of an alternative test statistic to measure significance.

Table A: Forecasts of Portfolios Returns with MSPE-adjusted Statistics

This table reports the out-of-sample (OOS) R-squared values of total return forecasts for the NYSE market portfolio and six size and book-to-market equity sorted portfolios, BL, BM, BH, SL, SM and SH, from univariate predictive regressions and the sum-of-the-parts (SOP) method. The MSPE-adjusted statistic is used to determine the statistical significance of the OOS R-squared statistics from different forecasting methods, under the null hypothesis that the OOS R-squared statistics is less than or equal to zero. ***, ** and * denote the 1%, 5% and 10% statistical significance levels, respectively. The full sample period spans from February 1966 to December 2023 and the OOS period starts in February 1986. All figures are reported in percentage form.

	NYSE	BL	BM	BH	SL	SM	SH
DP	-0.82%	0.21%	-1.24%	-0.02%	-0.14%	-1.48%	-1.36%
PE	-0.44%	-0.22%	-1.12%	-0.23%	-0.77%	-0.89%	-1.02%
EY	-0.46%	-0.26%	-1.09%	-0.21%	-0.84%	-1.06%	-1.11%
DY	-0.86%	0.18%	-1.21%	0.04%	-0.23%	-1.95%	-1.52%
Payout	-0.36%	-0.28%	-0.72%	-0.18%	-0.71%	-0.15%	-0.48%
SOP	0.30%	0.65% **	-0.25%	-0.78%	-0.87%	-0.57%	-1.99%

Appendix B

Since the $MSE-F$ statistic follows non-standard distributions when examining nested models, we obtain empirical critical values by bootstrapping corresponding distributions in Table B, under the null hypothesis that the conditional model exhibits no predictive power. Given current observations and the length of the initial in-sample period s_0 , we assume the data generating process as:

$$r_{i,t+1} = \alpha_i + u_{i,t+1}^r, \quad (20)$$

$$x_{i,t+1} = \gamma_i + \rho_i \times x_{i,t} + u_{i,t+1}^x, \quad (21)$$

$$u_{i,t+1} = \begin{pmatrix} u_{i,t+1}^r \\ u_{i,t+1}^x \end{pmatrix} \text{ and } u_i = (u_{i,1}, u_{i,2}, \dots, u_{i,T}), \quad (22)$$

where $u_{i,t+1}^r$ and $u_{i,t+1}^x$ are the disturbance terms in this data generating process for portfolio i 's total return and the predictor x_i . Using OLS, α_i , γ_i and ρ_i are estimated from the full sample and all disturbance terms are stored in u_i for the bootstrap process. We bootstrap 10,000 pairs of time-series on the portfolio total return and the corresponding predictor by sampling (with replacement) from the disturbance terms u_i . Using bootstrapped disturbance terms, we can create bootstrapped time-series on r_i^B and x_i^B as follows:

$$bu_{i,t+1} = \begin{pmatrix} bu_{i,t+1}^r \\ bu_{i,t+1}^x \end{pmatrix}, \quad (23)$$

$$r_{i,t+1}^B = \hat{\alpha}_i + bu_{i,t+1}^r, \quad (24)$$

$$x_{i,t+1}^B = \hat{\gamma}_i + \hat{\rho}_i \times x_{i,t}^B + bu_{i,t+1}^x, \quad (25)$$

where $bu_{i,t+1}^r$ and $bu_{i,t+1}^x$ are the bootstrapped disturbance terms for the portfolio i 's total returns and the predictor, respectively. $r_{i,t+1}^B$ denotes the bootstrapped portfolio i 's total returns and $x_{i,t+1}^B$ denote the bootstrapped values for predictor x_i . We obtain 10,000 bootstrapped $MSE-F$ statistics and construct the empirical non-standard distribution with empirical critical values for the hypothesis test.

Table B: Forecasts of Portfolio Returns with Bootstrap

This table reports the in-sample and out-of-sample R-squared statistics of total return forecasts for the NYSE market and six size and book-to-market sorted portfolios, constructed from the NYSE stock universe, from univariate predictive regressions and the sum-of-the-parts (SOP) method. The full sample period spans from February 1966 to December 2023 and the in-sample estimation period is set to twenty years. The MSE-F statistic from McCracken (2007) measures the statistical significance of the out-of-sample R-squared statistics. The significance of the in-sample R-squared statistic from the univariate predictive regressions is determined by the F-statistic. ***, ** and * denote the 1%, 5% and 10% statistical significance levels, respectively. All figures are reported in percentage form.

NYSE	In-sample R-squared	Out-of-sample R-squared			
DP	0.78% **	-0.82%			
PE	0.27%	-0.44%			
EY	0.30%	-0.46%			
DY	0.84% **	-0.86%			
Payout	0.08%	-0.36%			
SOP		0.30% *			
BL	In-sample R-squared	Out-of-sample R-squared	SL	In-sample R-squared	Out-of-sample R-squared
DP	0.86% **	0.21% *	DP	0.38%	-0.14%
PE	0.48% *	-0.22%	PE	0.09%	-0.77%
EY	0.52% *	-0.26%	EY	0.24%	-0.84%
DY	0.94% **	0.18% *	DY	0.60% **	-0.23%
Payout	0.00%	-0.28%	Payout	0.09%	-0.71%
SOP		0.65% **	SOP		-0.87%

BM	In-sample R-squared	Out-of-sample R-squared	SM	In-sample R-squared	Out-of-sample R-squared
DP	0.26%	-1.24%	DP	0.28%	-1.48%
PE	0.13%	-1.12%	PE	0.02%	-0.89%
EY	0.14%	-1.09%	EY	0.08%	-1.06%
DY	0.27%	-1.21%	DY	0.40% *	-1.95%
Payout	0.04%	-0.72%	Payout	0.20%	-0.15%
SOP		-0.25%	SOP		-0.57%
BH	In-sample R-squared	Out-of-sample R-squared	SH	In-sample R-squared	Out-of-sample R-squared
DP	0.40% *	-0.02%	DP	0.05%	-1.36%
PE	0.04%	-0.23%	PE	0.03%	-1.02%
EY	0.05% *	-0.21%	EY	0.10%	-1.11%
DY	0.45%	0.04%	DY	0.10%	-1.52%
Payout	0.11%	-0.18%	Payout	0.00%	-0.48%
SOP		-0.78%	SOP		-1.99%

Appendix C

In Table C, we present the OOS R-squared statistics for single-sorted characteristic-based decile portfolios from the expanded CRSP equity universe (stocks listed on the NYSE, AMEX and NASDAQ exchanges). In addition to size and book-to-market, we include additional firm characteristics as detailed in Fama and French (2015), namely investment (the growth of total assets for the fiscal year ending in t , divided by total assets at the end of $t - 1$) and operating profit (the revenue minus cost of goods sold, interest expense, and selling, general, and administrative expenses for the fiscal year ending in t , all divided by book equity at the end of fiscal year t). D1 (D10) refers to the bottom (top) decile of each equity portfolio, with all other analyses and calculation procedures remaining unchanged. Following the procedure presented in the paper, we apply both univariate predictive regressions and the SOP method to form conditional return forecasts and use the historical mean forecast as the benchmark when evaluating OOS return predictability in different characteristic-based portfolios. The *MSE-F* statistics and the corresponding critical values from McCracken (2007) are used to measure the statistical significance of the OOS return predictability.

Fitting with our prior findings, return predictability is largely observed in the big-cap portfolios. For other characteristic-based portfolios, the highest growth (i.e. lowest book-to-market) and the most aggressive investment (i.e. highest investment) portfolios exhibit some significant and positive OOS R-squares, largely when employing the SOP method. For the operating profit-sorted portfolios, we have positive and significant OOS R-squares for D5 and D10. However, the OOS results outside of the big-cap portfolios are not adamant and show no discernible pattern. In conclusion, the patterns from the single characteristic-sorted portfolios are consistent with the results in Table 4 and our main findings are robust to the use of different characteristic-based portfolios, expanding samples of stocks and alternative portfolio partitions.

Table C: Forecasts of Stock Portfolio Returns with Decile Portfolios (NYSE, AMEX, NASDAQ)

This table reports the out-of-sample (OOS) R-squared statistics of total return forecasts based on an expanded universe of stocks (NYSE, AMEX and NASDAQ) and characteristic-sorted decile portfolios, from univariate predictive regressions and the sum-of-the-parts (SOP) method. D1 (D10) refers to the bottom (top) decile of each equity portfolio. Each panel indicates the characteristics used to form decile portfolios, sorted according to the book-to-market ratio, investment, operating profit, and size. The OOS R-squared statistic is calculated to compare the forecast error of the model against the historical mean model. The full sample period spans from February 1966 to December 2023 and the in-sample estimation period is set to twenty years. The MSE-F statistic from McCracken (2007) measures the statistical significance of the OOS R-squared statistics. ***, ** and * denote the 1%, 5% and 10% statistical significance levels, respectively. All figures are reported in percentage form.

Variable	Market	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
Panel A: Book-to-Market Ratio Sort											
DP	-0.93%	0.50%**	-0.52%	-0.81%	-0.23%	-0.74%	-0.77%	-0.63%	0.38%**	-0.23%	-0.79%
PE	0.06%	-0.06%	-0.62%	-0.79%	-1.41%	-0.54%	-1.23%	-0.26%	-0.27%	-0.15%	-0.45%
EY	0.01%	-0.04%	-0.67%	-0.89%	-1.48%	-0.59%	-1.22%	-0.14%	-0.26%	-0.13%	-0.44%
DY	-1.05%	0.58%**	-0.54%	-0.92%	-0.24%	-0.76%	-0.83%	-0.52%	0.42%**	-0.15%	-0.72%
Payout	-0.87%	-0.14%	-0.30%	-0.22%	-0.47%	-0.22%	-1.05%	-0.36%	-0.28%	-0.10%	0.03%
SOP	0.53%**	1.51%***	0.22%*	-0.15%	-0.27%	-0.35%	-0.97%	-1.07%	-0.64%	-0.77%	-1.92%
Panel B: Investment Sort											
DP	-0.93%	-0.98%	-0.73%	-2.28%	-0.88%	-1.54%	-1.02%	-0.43%	-0.89%	-0.46%	-1.63%
PE	0.06%	-1.10%	-0.54%	-0.14%	-1.40%	-0.78%	-0.30%	-0.38%	-0.80%	-0.74%	0.01%
EY	0.01%	-1.26%	-0.51%	-0.15%	-1.39%	-0.75%	-0.29%	-0.45%	-0.90%	-0.82%	0.06%
DY	-1.05%	-1.26%	-0.68%	-2.16%	-0.90%	-1.46%	-0.99%	-0.43%	-1.00%	-0.53%	-1.87%
Payout	-0.87%	-0.63%	-0.35%	-0.32%	-0.66%	-0.63%	-0.75%	-1.13%	-0.49%	-0.31%	-1.73%
SOP	0.53%**	-0.32%	-0.26%	-0.19%	-0.29%	-0.42%	-0.07%	-0.20%	-0.75%	-0.13%	0.56%**
Panel C: Operating Profit Sort											
DP	-0.93%	-0.78%	-0.78%	0.06%	-0.81%	-0.34%	-1.32%	-0.52%	-0.76%	-0.56%	0.84%**
PE	0.06%	-0.13%	-0.53%	-0.28%	-0.34%	0.24%*	-0.60%	-0.63%	-1.08%	-1.09%	-0.65%
EY	0.01%	0.04%	-0.48%	-0.24%	-0.34%	0.27%*	-0.63%	-0.69%	-1.18%	-1.16%	-0.75%
DY	-1.05%	-0.76%	-0.77%	0.08%	-0.83%	-0.33%	-1.35%	-0.64%	-0.90%	-0.60%	0.89%***
Payout	-0.87%	-0.80%	-0.58%	-0.42%	-0.66%	-0.46%	-0.69%	-0.48%	-0.51%	-0.51%	-0.51%
SOP	0.53%**	-0.53%	-0.40%	0.04%	-0.06%	0.51%**	-0.66%	-0.16%	-0.05%	0.00%	0.29%*

Panel D: Size Sort

DP	-0.93%	-0.24%	-0.42%	-1.08%	-0.56%	-0.63%	-0.87%	-0.82%	-0.20%	-1.17%	-0.91%
PE	0.06%	-0.43%	-0.87%	-1.08%	-0.99%	-0.73%	-0.60%	-0.63%	-0.59%	-1.12%	-0.67%
EY	0.01%	-0.95%	-1.28%	-1.17%	-1.02%	-0.73%	-0.55%	-0.57%	-0.52%	-1.15%	-0.69%
DY	-1.05%	-0.48%	-0.24%	-1.62%	-0.57%	-0.88%	-1.15%	-1.11%	-0.30%	-1.29%	-0.90%
Payout	-0.87%	-0.53%	-0.88%	-1.04%	-0.72%	-0.86%	-0.59%	-0.65%	-0.81%	-0.85%	-0.88%
SOP	0.53%**	-10.22%	-3.90%	-3.47%	-1.77%	-1.82%	-1.08%	-0.77%	-0.58%	0.56%	0.25%*

Appendix D

In Table D1, we present the certainty equivalent returns for each trading strategy with varying trading restrictions. These are the baseline figures (including the returns for the benchmark historical mean model) used to calculate the certainty equivalent gains reported in Table 5. In Table D2, we present the Sharpe ratios for each trading strategy with varying trading restrictions. These are the baseline figures (including the ratios for the benchmark historical mean model) used to calculate the Sharpe ratio gains reported in Table 6.

Table D1 and Table D2 report the greatest certainty equivalent returns and Sharpe ratios for the big-growth (BL) portfolio using the SOP method. This is invariant to the choice of the trading strategy and is consistent with the predictability evidence presented in the paper (Table 2, Table 5 and Table 6). Further, Table D1 and Table D2 show that stricter trading restrictions generally increase certainty equivalent returns and Sharpe ratios. The increase seems to be greater among small-cap relative to large-cap portfolios and be higher when the forecasting method performs poorly. With no predictability improvement, this indicates that stricter trading restrictions mitigate the negative impact of inferior predictability and may weaken the positive impact of superior predictability on trading performance. This pattern is also found in returns and Sharpe ratios for the benchmark strategy using the historical mean (HM) forecasts. As shown in each panel, the historical mean strategy can generate sizable economic value for the investor, consistent with the prior literature reporting that the historical mean forecasts are not straightforward to beat (Campbell and Thompson, 2008).

Table D1: Trading Strategies - Certainty Equivalent Returns

This table reports the certainty equivalent returns for each strategy at monthly frequency using univariate predictive regressions and the sum-of-the-parts (SOP) method and the equivalent historical mean (HM) method. The trading strategy for each portfolio is designed by optimally allocating funds between the risk-free asset and a risky portfolio. The trading strategy in Panel A does not impose trading restrictions. The strategy in Panel B imposes restrictions that the investor cannot short or use more than 50% leverage for the investment in the risky portfolio. The strategy in Panel C restricts the investor from either shorting the risky portfolio or using leverage. The risky portfolios include the NYSE market portfolio and six size and book-to-market equity sorted portfolios, BL, BM, BH, SL, SM and SH. The reported certainty equivalent returns are annualised. The full sample period spans from February 1966 to December 2023 and the out-of-sample period starts in February 1986. All figures are reported in percentage form.

Variable	NYSE	BL	BM	BH	SL	SM	SH
Panel A: No Trading Restrictions							
DP	3.22%	5.64%	2.30%	3.58%	4.78%	3.13%	0.57%
PE	4.67%	5.08%	2.91%	3.70%	3.54%	4.76%	3.10%
EY	4.66%	4.97%	3.00%	3.89%	3.12%	3.86%	2.56%
DY	3.17%	5.56%	2.38%	4.06%	4.55%	2.24%	-0.14%
Payout	5.56%	5.64%	4.29%	3.76%	4.50%	6.90%	4.63%
SOP	7.14%	7.35%	6.13%	1.82%	5.08%	6.60%	0.41%
HM	6.16%	5.98%	6.02%	4.29%	5.70%	7.30%	5.65%
Panel B: Trading Restrictions $0\% \leq \omega_{i,t+1} \leq 150\%$							
DP	5.70%	6.36%	4.21%	4.21%	5.47%	5.16%	1.87%
PE	6.44%	5.95%	5.68%	4.01%	5.42%	6.92%	6.12%
EY	6.63%	5.94%	5.93%	4.16%	5.93%	7.65%	7.25%
DY	5.76%	6.35%	4.28%	4.64%	5.51%	5.25%	2.07%
Payout	5.54%	6.21%	5.71%	4.17%	4.73%	6.83%	4.64%
SOP	7.02%	7.41%	5.79%	3.45%	5.18%	6.57%	3.29%
HM	6.16%	6.02%	6.02%	4.41%	5.70%	7.30%	5.65%
Panel C: Trading Restrictions $0\% \leq \omega_{i,t+1} \leq 100\%$							
DP	5.79%	6.14%	4.25%	5.28%	5.46%	5.20%	4.02%
PE	6.16%	5.60%	5.56%	5.50%	5.42%	7.00%	6.21%
EY	6.39%	5.61%	5.77%	5.35%	5.92%	7.71%	7.04%
DY	5.80%	6.10%	4.24%	5.29%	5.51%	5.16%	3.70%
Payout	5.70%	6.14%	6.07%	6.07%	4.85%	6.92%	5.61%
SOP	6.70%	7.12%	5.90%	5.09%	5.23%	7.18%	5.84%
HM	6.20%	5.86%	6.26%	6.19%	5.70%	7.40%	6.34%

Table D2: Trading Strategies - Sharpe Ratios

This table reports the Sharpe ratios for each strategy at monthly frequency using univariate predictive regressions and the sum-of-the-parts (SOP) method and the equivalent historical mean (HM) method. The trading strategy for each portfolio is designed by optimally allocating funds between the risk-free asset and a risky portfolio. The trading strategy in Panel A does not impose trading restrictions. The strategy in Panel B imposes restrictions that the investor cannot short or use more than 50% leverage for the investment in the risky portfolio. The strategy in Panel C restricts the investor from either shorting the risky portfolio or using leverage. The risky portfolios include the NYSE market portfolio and six size and book-to-market equity sorted portfolios, BL, BM, BH, SL, SM and SH. The reported Sharpe ratios are annualised. The full sample period spans from February 1966 to December 2023 and the out-of-sample period starts in February 1986. All figures are reported in decimal form.

Variable	NYSE	BL	BM	BH	SL	SM	SH
Panel A: No Trading Restrictions							
DP	0.19	0.42	0.14	0.28	0.33	0.23	0.23
PE	0.32	0.36	0.21	0.34	0.23	0.36	0.34
EY	0.32	0.35	0.22	0.34	0.22	0.32	0.33
DY	0.18	0.41	0.13	0.30	0.31	0.17	0.22
Payout	0.40	0.41	0.37	0.35	0.30	0.48	0.39
SOP	0.50	0.54	0.44	0.30	0.38	0.49	0.37
HM	0.43	0.43	0.43	0.38	0.41	0.51	0.45
Panel B: Trading Restrictions $0\% \leq \omega_{i,t+1} \leq 150\%$							
DP	0.42	0.52	0.28	0.32	0.40	0.36	0.27
PE	0.48	0.48	0.40	0.35	0.38	0.48	0.46
EY	0.51	0.49	0.42	0.35	0.43	0.53	0.51
DY	0.45	0.53	0.28	0.34	0.41	0.37	0.27
Payout	0.40	0.46	0.42	0.37	0.32	0.48	0.40
SOP	0.49	0.55	0.42	0.32	0.38	0.49	0.42
HM	0.43	0.44	0.43	0.38	0.41	0.51	0.45
Panel C: Trading Restrictions $0\% \leq \omega_{i,t+1} \leq 100\%$							
DP	0.45	0.52	0.28	0.37	0.40	0.36	0.33
PE	0.47	0.46	0.39	0.40	0.38	0.49	0.45
EY	0.51	0.47	0.41	0.39	0.42	0.54	0.49
DY	0.47	0.53	0.28	0.37	0.41	0.36	0.30
Payout	0.40	0.46	0.43	0.43	0.33	0.48	0.42
SOP	0.48	0.55	0.42	0.37	0.38	0.50	0.45
HM	0.44	0.43	0.44	0.44	0.41	0.51	0.47

Appendix E

In Table E, we present the certainty equivalent returns and Sharpe ratio gains for a dynamic trading strategy based on binary portfolio weights (see, for example, Breen et al., 1989; Goyal and Santa-Clara, 2003; Maio, 2016). This binary trading strategy invests (each month) 150% in the risky portfolio (and -50% in the risk-free asset) if the estimated excess return of that portfolio over the risk-free rate is non-negative, selling 50% of the risky portfolio (and investing these funds into the risk-free asset) otherwise. For robustness, we also test this strategy when the weights are set to 100% in the risky asset if the estimated excess return is non-negative, and 100% in the risk-free one-month Treasury bill otherwise (i.e. no leverage). The results are quantitatively similar for both binary strategies.

Consistent with Table 5 and Table 6 in the paper, imposing a binary restriction does not qualitatively alter the economic benefits of applying a market-timing strategy. Table E reports different measures of economic benefits from the binary trading strategy, and we continue to obtain significant economic gains in the market and the big-growth portfolio. Based on predictions from the SOP method, the binary trading strategy for the BL portfolio generates an annualised certainty equivalent (Sharpe ratio) gain of 2.60% (0.12) relative to the historical mean model. This sharp increase in the certainty equivalent gain can mainly be attributed to the drop in the certainty equivalent return from using the historical mean forecast. For the small-cap portfolios, dividend-related predictors generate higher economic gains in the small-growth portfolio. However, this is not robust to the choice of trading strategies. In all, the economic benefits generated from adopting a binary trading strategy provide quantitatively similar results to those reported in this study.

Table E: Binary Trading Strategies - Certainty Equivalent Gains and Sharpe Ratios

This table reports the out-of-sample portfolio choice gains at monthly frequency from univariate predictive regressions and the sum-of-the-parts (SOP) method, relative to (i.e. after subtracting) the results from a trading strategy based on the historical mean (HM) model. The binary trading strategy for each portfolio is designed to invest 150% in the risky portfolio (and -50% in the risk-free asset) if the predicted excess return of the portfolio from the strategy (over the risk-free rate) is non-negative (each month), selling 50% of the risky portfolio (and investing these funds in the risk-free asset) otherwise. Panel A presents the certainty equivalent returns (in percentage form) from using the binary trading strategy. Panel B presents the certainty equivalent gains (in percentage form) from using the binary trading strategy. The gain is the difference in the certainty equivalent returns between a trading strategy based on the conditional forecasting model and that based on the HM model, for that specific risky portfolio. The reported certainty equivalent gains are annualised. Panel C presents the Sharpe ratio gains (in decimal form) from using a binary trading strategy with different conditional forecasting models. The Sharpe ratio gain is the difference between the Sharpe ratio of a trading strategy based on the conditional forecasting model and that based on the HM model, for that specific risky portfolio. The reported Sharpe ratio gains are annualised. Panel D reports the proportion of times the 150% risky portfolio position is entered into (in percentage form) over the entire trading period. The risky portfolios include the NYSE market portfolio and six size and book-to-market equity sorted portfolios, BL, BM, BH, SL, SM and SH. The full sample period spans from February 1966 to December 2023 and the out-of-sample period starts in February 1986.

Variable	NYSE	BL	BM	BH	SL	SM	SH
Panel A: Certainty Equivalent Returns (Percentage Form)							
DP	6.36%	4.65%	2.25%	5.57%	4.43%	3.19%	2.11%
PE	5.61%	8.05%	4.55%	4.50%	1.54%	3.33%	1.11%
EY	5.15%	7.36%	5.13%	4.50%	2.43%	4.08%	2.36%
DY	5.53%	4.75%	3.09%	5.36%	4.28%	1.78%	0.64%
Payout	6.17%	4.47%	5.21%	4.50%	1.33%	5.87%	2.33%
SOP	6.02%	7.53%	5.64%	4.44%	0.36%	5.46%	2.52%
HM	6.57%	4.93%	6.30%	4.50%	0.84%	5.87%	2.90%
Panel B: Certainty Equivalent Gains (Percentage Form)							
DP	-0.21%	-0.28%	-4.05%	1.06%	3.58%	-2.69%	-0.79%
PE	-0.96%	3.12%	-1.75%	0.00%	0.70%	-2.54%	-1.78%
EY	-1.42%	2.43%	-1.17%	0.00%	1.59%	-1.80%	-0.54%
DY	-1.04%	-0.18%	-3.21%	0.85%	3.44%	-4.10%	-2.26%
Payout	-0.40%	-0.46%	-1.08%	0.00%	0.48%	0.00%	-0.57%
SOP	-0.55%	2.60%	-0.65%	-0.06%	-0.49%	-0.42%	-0.38%
Panel C: Sharpe Ratio Gains (Decimal Form)							
DP	-0.03	-0.06	-0.21	0.03	0.06	-0.12	-0.04
PE	-0.06	0.14	-0.10	0.00	-0.02	-0.10	-0.07
EY	-0.08	0.10	-0.08	0.00	0.01	-0.08	-0.03
DY	-0.08	-0.06	-0.17	0.02	0.04	-0.19	-0.09
Payout	-0.02	-0.02	-0.05	0.00	0.00	0.00	-0.02
SOP	-0.03	0.12	-0.03	0.00	-0.02	-0.01	-0.01
Panel D: Long-Short Strategy (Percentage Form) - Frequency of Full Allocation to Risky Portfolio							
DP	61.52%	63.98%	81.66%	95.30%	73.83%	74.05%	88.59%
PE	91.05%	71.81%	81.43%	100.00%	88.81%	96.64%	99.33%
EY	89.93%	69.13%	81.43%	100.00%	85.23%	93.74%	98.88%
DY	59.28%	61.75%	81.21%	95.30%	64.88%	65.10%	83.00%
Payout	99.78%	97.99%	91.50%	100.00%	91.28%	100.00%	99.78%
SOP	99.55%	98.88%	99.55%	99.78%	99.78%	99.78%	99.78%
HM	100.00%	97.54%	100.00%	100.00%	100.00%	100.00%	100.00%

