

Investing with style of styles - and the European evidence

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Abstract

This paper uses European data only and provides evidence that 3 out of 4 investment styles, as measured by 11 style proxies in total, exist in large and liquid European data panels. When applying 3 price based investment styles on an investment universe of 242 style proxies, it appears that only momentum strategies can generate a second successful layer of investment styles. "Style of styles" increase diversification especially from a traditional equity portfolio point of view and can additionally be utilized in a long-only and long-short framework.

Key words— *Investment styles, Style of styles, Europe, Momentum, Value, Defensive, Size*

EFM classification 310, 330, 350, 370

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1 Introduction

Institutional money management mainly has one goal: Generating excess returns with ideally no correlation to the broad market. The alpha generation process can come in different forms. Mutual funds, hedge funds or fund of funds all strive to earn a consistent alpha with different strategies over time. Achieving excess returns however, became more difficult after the financial crisis of 2008. Regulation increased, investors got better informed and digitalization in terms of big data and artificial intelligence more and more found its way into professional asset management (see e.g. Aitken et al. [2004], Angel, Harris, and Spatt [2010], Edwards, Harris, and Piwowar [2007], Hendershott, Jones, and Menkveld [2011]). Green, Hand, and Zhang [2017] for instance show that after the tech bubble only a few independent firm characteristics remained that explain the cross section of US stock returns. Also, McLean and Pontiff [2016] provide evidence that strategies and capital market anomalies mainly disappear after their publication in the US. Nevertheless, certain investment strategies have the ability to produce steady, as well as economically and statistically significant (excess) returns over the last couple of decades. These strategies not only earn money but are also able to explain cross sectional return variations. Often, these investment strategies are referred to as investment "styles" or "factors". Eugene Fama and Kenneth French may have opened the hunt for additional styles after the introduction of their 3-factor asset pricing model. Since then, many strategies have been found to generate excess returns but only a few of those can explain the cross section of stock returns. Styles like momentum, value, defensive and carry appear to be the most important and most robust ones over different countries and asset classes (see Asness et al. [2015b]). The academic literature usually first reports new investment strategies or styles by using US American data. Afterwards, the same strategies are tested in other markets.

We focus exclusively on European data and show two things. First, most of the traditional investment styles do still exist in Europe. They exist on a cross sectional basis, within sectors and within single countries. The styles momentum, defensive and value¹ are economically and statistically

¹We will refer to value in the course of this paper as "value style" which is an umbrella term for the six proxies price-earnings ratio (PE), book-equity/market-equity (BE/ME), cash-flow (CF), EBIT, dividend yield and long-term

significant in European data. The examined data consists of three panels (see table 1). Panel 1 includes all stocks from 16 European countries, which are also investigated by Fama and French [2012], sorted into different company size groups. Panel 2 comprises 10 European sectors as indicated by the one-digit SIC code and panel 3 includes 16 single European countries. Second, traditional investment styles seem to be able to form an additional successful layer of investment styles when applied to an underlying universe of traditional styles. These "styles of styles" are robust for long-only and long-short portfolios. Based on the styles found in the different data panels we use a novel approach to build a second level of styles or style of styles. The underlying return series are taken from the three data panels (11 countries x 11 style proxies + 7 sectors x 11 style proxies + 4 company size groups x 11 style proxies). Thus, we construct price based investment styles like momentum (as measured by Jegadeesh and Titman [1993] momentum and 1-year rolling sharpe ratio), defensive (in terms of low volatility and low beta) and value (which is measured by long-term reversal) to form the styles of styles. Momentum produces significant alphas compared to the underlying style universe. The momentum style of styles additionally appears to be a stand-alone characteristic premium as indicated by Fama-MacBeth regressions. Value and defensive do not generate excess returns over the underlying style universe but seem to increase diversification.

Our work adds aspects to two streams of the current literature. First, we provide evidence for the success or failure of investment styles in Europe. McLean and Pontiff [2016] and Jacobs and Müller [2017] show that the US is the only country with diminishing returns of strategies/capital market anomalies after their publication. We support this finding, since we solely find the failure of size in Europe which is in line with the academic literature. We not only show that these styles work in large, liquid data panels but also in data sets of homogeneous companies, which can be implemented in a rather easy way. Schmidt [2017] shows the success of momentum in Germany which we can additionally support for 15 other European countries and for another momentum proxy as well. Linnainmaa and Roberts [2016] provide evidence that the success of strategies based on accounting variables might have been mostly spurious. From our six value proxies only long-term reversal.

reversal seems to fail in Europe. Defensive (as measured by low volatility and low beta) produces consistent results over all panels and appears to be the clearest priced characteristic premium in Europe.

Second, inspired by the investment style literature based on style rotation and style timing, we attempt to find a new source of uncorrelated returns. It has been shown by several studies (see Daniel and Moskowitz [2016], Barroso and Santa-Clara [2015] and Miller et al. [2013] or Arnott et al. [1989], Lucas, Dijk, and Kloek [2002] and Levis and Liodakis [1999]) that investment styles follow different cycles and tend to "crash" during certain periods. This leads to an unfavorable negative skewness and a high kurtosis for a majority of investment styles. Thus, a rotation of investment styles aims to overcome style crashes and to increase the expected return of a style portfolio. Therefore Moerlose and Giot [2011], Copeland and Copeland [1999] and Arshanapalli, Switzer, and Panju [2007] describe models to dynamically favor one style over the other. However, they only use few styles for their timing models. To our knowledge, there are not many studies similar to our approach. Chen and DeBondt [2004] apply a momentum strategy on three styles based on the firm characteristics BE/ME, size and dividend yield of all stocks included in the S&P500. Peltomäki and Peni [2009] as well find a momentum effect when tactically investing in the best performing of the three strategies SMB, HML and PE every month. We extend these approaches to form a novel kind of investment styles and aim to find if different investment strategies are beneficial for an underlying style portfolio. Therefore, we apply three investment styles (momentum, defensive and value) on an universe of 242 underlying style proxies from our European data samples and show that only momentum is capable of succeeding on a style of styles level.

This paper is structured in the following way: Section 2 discusses relevant literature, section 3 describes the methodology used in the course of our analysis, section 4 presents the results on a single style basis and section 5 displays the style of styles analysis. Section 6 describes alternative style of styles approaches and section 7 concludes. In the appendix we include the detailed results of our analysis from section 4.

2 Literature review

Investment styles usually involve two types of portfolios. To construct a dollar- or a market-neutral portfolio, respectively, a hedge portfolio needs to be created. Therefore, an universe of assets is sorted into different style percentiles which are averaged to portfolios. An investment style can be described by multiple numbers, ratios or characteristics (which we will refer to as "proxy"). Going long the percentile/portfolio with the most distinct characteristic and going short the portfolio with the least distinct characteristic should result in a suitable hedge portfolio which represents the desired proxy. Thus, style investing is nothing else than sorting for a specific proxy representing a specific style and forming the corresponding hedge portfolio from the "best" and the "worst" portfolios. Nearly any variable or indicator can be used as proxy, but not every proxy or group of proxies represents a reasonable investment style.

With the introduction of the Fama and French [1993] three factor model, style investing has experienced an exponentially grown interest. Some effects or anomalies have already been known before the work of Fama and French and a lot of others have been found afterwards due to an increased search for anomalies by international researchers. McLean and Pontiff [2016] show that most of the found anomalies evaporate after publication in the US. Jacobs and Müller [2017] however show that this post-publication decline in long-short returns is limited to the US only and cannot be found in 38 other countries. So to be regarded as a "true" investment style, an investment strategy should be robust over different asset classes, countries and periods of time. Asness et al. [2015b] narrow the variety of anomalies, effects and strategies down to a few actually robust investment styles. These are momentum, defensive, carry and value. They also mention (il)liquidity as possible style which however is not liquid enough to be implemented in large institutional portfolios. The most recently explored style is momentum. Jegadeesh and Titman [1993] find predictive power of past stock performance on future returns. Past winner stocks tend to continue their positive performance whereas past losers further increase their losses. Reversal on the other hand proclaims exactly the opposite of momentum. Long-term (mostly five year) losers tend to become future winners and vice

versa. Due to the extended overreaction of stock investors, long-term reversal is often regarded as a value proxy. Initially, DeBondt and Thaler [1985] document a reversal effect in NYSE stocks. Reversal however, has not been investigated as deeply as value or momentum. Forner and Marhuenda [2003] document a momentum effect in Spanish stocks but reversal seems to be dependent on the examined period of time. Doeswijk [1997] on the other hand, shows a robust reversal effect in the Dutch stock market. Most studies about the reversal effect focus on short-term reversal and/or emerging markets stocks which are both not part of this work. Another part of the momentum related literature is the nominal price effect. Blume and Husic [1973] first describe a relationship between stock prices and future returns. This relationship has further been investigated by Hammerich, Fieberg, and Poddig [2016] who show a higher expected return for high nominal price stocks than for low nominal price stocks in Germany. By doing so, it appears that hedge portfolios based on nominal stock prices can mostly be explained by the German momentum factor. A second more traditional style is called defensive. It can be implemented in different ways. Originally introduced by Black, Jensen, and Scholes [1972], it has emerged that low beta stocks tend to achieve similar or even higher returns than high beta stocks while experiencing lower volatilities. Frazzini and Pedersen [2014] document this effect for several asset classes and Blitz and Vliet [2007] successfully implement the defensive style via realized volatilities.

More fundamentally oriented investment styles are size and value. Size proposes a higher return for small cap stocks than for large cap stocks. It was initially found by Banz [1981] but has not held robust until today. Dijk [2011] and Kim [1997] for instance report a nearly evaporated size effect. The value style usually buys undervalued securities and shorts overvalued ones. It also seems to be discussed in the academic literature as much as momentum. Value initially appeared with the work of Graham and Dodd [1934]. Theoretically, value could be measured by many accounting numbers. The most prominent one however, appears to be the book-to-market ratio (BE/ME) as used by Fama and French [1998]. Nonetheless, other accounting ratios are able to proxy value as well. Fama and French [1988] and Naranjo, Nimalendran, and Ryngaert [1998] describe the dividend yield

as proxy for future stock returns and Kojien et al. [2013] show that the performance of dividend yield strategies is dependent on the state of the economy. Hou, Karolyi, and Kho [2011] show that cash-flow to price (CF) captures large parts of the stock return variation in a global context. Artmann, Finter, and Kempf [2012] propose the usage of earnings based variables like earnings-to-price to measure value for German equities. Basu [1977] successfully employs the price-earnings ratio (PE) to capture a value premium.

Investment styles not only exist in equity markets but also in other asset classes. Miffre and Rallis [2007] and Shen, Szakmary, and Sharma [2007] find the existence of a momentum effect in commodity markets whereas reversal strategies appear to produce negative returns. Fuertes, Miffre, and Fernandez-Perez [2014] additionally include term structure and idiosyncratic volatility to design profitable strategies in commodity markets. Term structure or carry is a common strategy in bond and FX markets which is the model-free expected return of a given security. Here, the expected return can be decomposed into carry and the expected price appreciation. Carry in FX markets is generally defined as borrowing funds in a currency with low interest rates and investing the proceeds in another currency with higher interest rates. Assuming a constant exchange rate, this strategy yields risk less returns (see Kojien et al. [2013]). In bond markets, carry can also describe the bond yield plus "roll down" of a fixed income security. Both however, can only hardly be found in equities and are hence not included in our analysis. Sarno, Schneider, and Wagner [2012], Sweeney [1986], Kroencke, Schindler, and Schrimpf [2013] and Menkhoff et al. [2012] find and describe different investment styles in foreign exchange markets. Jostova et al. [2013], Elton, Gruber, and Blake [1995] and Gebhardt, Hvidkjaer, and Swaminathan [2005] focus their analysis on bond markets.

The academic literature on investment styles in Europe is rather limited. It only exist a few studies which explicitly investigate investment styles in continental Europe. More studies focus on specific countries and specific styles. One of the few works looking at the whole EU is Fama and French [2012]. In their analysis, the value premium in Europe (and other regions) is higher for small stocks than for large stocks. They also find a strong momentum effect in Europe. A

size premium does not exist in Europe nor in other regions. Bird and Whitaker [2003] evaluate value and momentum in European markets from 1990 to 2002. For both they find exceptional good results with momentum generating superior returns in bull markets and a better performance of value in bear markets. Arshanapalli, Coggin, and Doukas [1998] as well find a successful value style in Europe. Brouwer [1997] investigates the performance of PE, CF, BE/ME and dividend yield in France, Germany, the Netherlands and the UK. He finds an outperformance of all four value proxies in his analysis, with CF generating the highest returns. Similar results are obtained by Fama and French [1998] for the European countries France, Germany, Italy, the Netherlands, Belgium, Sweden, Switzerland and the UK. To our knowledge, the style defensive has not been subject of a specific European study yet. We attempt to reduce this gap by explicitly testing the four investment styles momentum, defensive, value and size which are proxied by 11 different characteristics on a large European data set.

Since investment styles are subject to crashes at certain times or extended periods of poor performance (see Daniel and Moskowitz [2016], Barroso and Santa-Clara [2015] and Miller et al. [2013] or Arnott et al. [1989], Lucas, Dijk, and Kloek [2002] and Levis and Liodakis [1999]), researchers try to circumvent these issues by optimizing such styles. Some ways of achieving better results in terms of higher returns and/or lower volatility are found by style timing and style rotation. Style timing aims at finding the optimal entry- and exit-points of a given investment style to arrive at higher returns than a simple buy-and-hold strategy. Style rotation dynamically favors one style over another to always be invested in the most promising style. Investment style timing mostly uses spreads or differentials (see Levis and Liodakis [1999] and Asness et al. [2000]) whereas the macroeconomic environment also finds application for the timing or rotation of investment styles (see Arshanapalli, Switzer, and Panju [2007], Lucas, Dijk, and Kloek [2002] and Kao and Shumaker [1999]). Closest to our approach of building a second long-short portfolio is the work of Chen and DeBondt [2004]. We extend their approach and the style rotation / style timing literature by applying a second layer of investment styles on an investment universe of single styles.

In this paper we want to show two things. First, we provide evidence for the success or failure of 4 investment styles in Europe. Therefore, we construct the investment styles as close as possible to the academic literature. We apply these investment styles to a large and highly liquid dataset of European equities. Afterwards, we set up a second layer of investment styles on the before mentioned single styles to see if there are positive cross-sectional effects (in terms of higher returns and/or lower volatilities).

3 Methodology

3.1 Data

For the evaluation of the second layer investment styles we apply three different asset pricing models which are described below. Therefore, we download the monthly European factor return series from Kenneth French's website². All other data used in this paper is predominantly obtained from Thomson Reuters Datastream and Worldscope. We base the construction of our European data panels on the work of Fama and French [2012] who include 16 European countries in their analysis (see panel 3 in table 1). Thus, we download dead and alive stocks from Datastream which are identified as equity and listed with a primary quote in the markets stated in table 1. Only for Germany we download the stocks from Boerse Frankfurt and Xetra, since Xetra emerged as the fully electronic counterpart of Boerse Frankfurt. Potential duplicates are removed afterwards. To clean our data from small- and micro cap stocks, we apply a similar liquidity filter as proposed by Asness et al. [2015b]. By doing so, we reduce the number of stocks contained within each data sample dramatically to arrive only at the most liquid stocks. We calculate the 6-months rolling median market capitalization and then sort every month by descending values to cumulate the market values as long as 90% of the total market cap is reached. All stocks behind this point are excluded from our analysis. This however, leads to some datasets which cannot be used for a proper analysis anymore. This is why we exclude the sectors Agriculture, Mining and Public Administration from further

²see http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

analysis in section 4 since they contain less than 25 stocks on average (5 stocks per quintile). The same applies to the countries Austria, Belgium, Finland, Ireland and Portugal. Further, we exclude financial stocks from our analysis due to an increased leverage applied by these firms, a different accounting standard and differing risk factors (see Viale, Kolari, and Fraser [2009]).

Table 1: Data composition

Panel 1 - Europe	Size tercile	Minimum	Maximum	Average number of stocks
Full Europe	All	475	654	556
Large	3rd	158	229	193
Medium	2nd	153	213	183
Small	1st	149	214	180
Panel 2 - Sectors	SIC code	Minimum	Maximum	Average number of stocks
Agriculture	01-09	8	24	16
Mining	10-14	5	27	14
Construction	15-17	34	76	48
Manufacturing	20-39	186	293	237
Transport & Public Utilities	40-49	52	96	74
Wholesale Trade	50-51	32	70	46
Retail Trade	52-59	32	63	44
Finance, Insurance, Real Estate	60-67	120	192	157
Services	70-89	83	268	159
Public Administration	90-98	0	4	2
Panel 3 - Countries	Major stock exchange	Minimum	Maximum	Average number of stocks
Austria	Vienna	13	29	19
Belgium	Brussels	11	25	17
Denmark	Copenhagen	19	50	30
Finland	Helsinki	7	30	21
France	Paris	52	85	67
Germany	Frankfurt	50	94	64
Greece	Athens	14	143	62
Ireland	Dublin	6	13	9
Italy	Milan	14	51	31
Netherlands	Amsterdam	16	33	25
Norway	Oslo	16	59	39
Portugal	Lisbon	7	30	14
Spain	Madrid	18	33	25
Sweden	Stockholm	16	95	47
Switzerland	Zurich	18	48	33
UK	London	98	171	136

The SIC code ranges describe the sector classification following the SIC methodology. Min, max and average describe the minimum, maximum and average number of stocks over time.

Panel 1 uses all firms from the 16 European countries in panel 3 and splits them into different size terciles every month, based on the firms market values. Here, we include a data set with all stocks regardless of company size, another one for large cap stocks with market values in the largest size tercile, a third one for medium stocks in the second size tercile and a fourth one for small stocks in the lowest tercile. Panel 2 uses the one-digit SIC code to split all stocks from panel

3 into different sectors. Here, we investigate 7 out of 10 possible industry divisions. The financials sector is also the only sector where solely financial stocks are included. We remove financial stocks in all other data sets. We download end of month data from January 1990 through January 2017 for each panel, covering 27 years of data ($T=325$ months). To account for data errors we apply the filter as proposed by Ince and Porter [2006]. All returns are calculated as monthly local returns. The 3M-Euribor is considered to represent the risk free rate and is converted to monthly data for excess return calculations. Portfolio sorts are based on the variables described in table 2 and for performance measurement we use total return index data. Further details on the panel construction can be found in table 1.

3.2 Styles

Many factors have been found to explain the cross section of stock returns until now. The most important ones seem to be beta (or the market factor), size, value and momentum. Fama and French [2015] add two more factors to their first asset pricing model, namely profitability and investment. This five-factor model outperforms the Fama-French three-factor model but still lacks to include momentum and fails to completely capture the return behavior of small cap stocks (see Fama and French [2017]). Based on the finding of Asness et al. [2015b], this paper focuses on four equity related styles. Defensive, momentum, value and size. Size is not explicitly mentioned as robust style but it is still part of the standard Fama-French three-factor model. So, we as well investigate size as an investment style in European equities. Since there are several proxies for the styles momentum and value, we implement momentum as 2-12 months winners minus losers and as nominal price hedge portfolios. Sharpe ratio is used on a style of styles level since the standardization of the single styles weakens the meaningfulness of nominal prices (see section 5 for further details). Value is proxied by five fundamental variables plus long-term reversal. All styles are implemented as simple (single sorts) and as close to the literature as possible to avoid data snooping biases. Table 2 summarizes the 4 styles and references the original studies as well as the construction methodology and the direction of

sorts. Additional information on the styles and the data can be found in table 3 and in the appendix.

Table 2: Styles: Construction methodology

Style or proxy	Initially introduced by	Construction	Direction of sorts
Momentum proxies			
Momentum	Jegadeesh and Titman [1993]	$rMOM = \frac{P_{t-2} - P_{t-12}}{P_{t-12}}$	up
Sharpe ratio	Sharpe [1966]	$SR = \frac{\ln(\frac{P_t}{P_{t-12}}) - r_f}{\sigma_t}$	up
Price/Nominal	Blume and Husic [1973]	log(Unadjusted stock price)	up
Value proxies			
Price/Earnings (PE)	Basu [1977]	PE-ratio lagged by 6 month	down
BE/ME	Fama and French [1992]	$BEME = \frac{CommonEquity_{t-6}}{MarketValue_t}$	up
Cash-flow (CF)	Lakonishok, Shleifer, and Vishny [1994]	$CF = \frac{FundsFromOperations_{t-6}}{MarketValue_t}$	up
EBIT	Artmann, Finter, and Kempf [2012]	$EBIT = \frac{EBIT_{t-6}}{MarketValue_t}$	up
Reversal	DeBondt and Thaler [1985]	$rREVERSAL = \frac{P_{t-3} - P_{t-60}}{P_{t-60}}$	down
Dividend Yield	Naranjo, Nimalendran, and Ryngaert [1998]	$rDivYield = \frac{Dividend_{t-6}}{P_t}$	up
Defensive proxies			
Low volatility	Blitz and Vliet [2007]	Realized volatility from t-36 to t-2 $\sigma_i = \sqrt{\frac{1}{N-1} \sum_{i=1}^N (r_i - \bar{r}_i)^2}$	down
Low beta	Black, Jensen, and Scholes [1972]	$\beta_i = \frac{1}{12} \sum_{t=1}^{12} \frac{COV(r_{it}, r_{mt})}{VAR(r_{mt})}$	down
Size	Banz [1981]	$SIZE = \log(MarketValue)$	down

Except for Ince and Porter [2006], no further data corrections have been made. The term up (down) as direction of sorts, indicates that we are sorting for ascending (descending) values. Ascending means, the highest values are placed in P05 and the lowest in P01. Descending means the lowest values are placed in P05 and the highest in P01. The hedge portfolio is constructed as P05 - P01.

Defensive is based on Blitz and Vliet [2007] and Fama and MacBeth [1973]. Blitz and Vliet [2007] find that global low vs. high volatility decile portfolios earn an annual alpha spread of about 12%. We use a rolling estimation window starting after 36 initial month to calculate the realized volatility. The same approach applies to low beta. Due to gaps in the data, the beta estimation appears to be very volatile which is why we additionally average the betas over a rolling 1-year window. Momentum calculates the returns from month t-12 to month t-2 to avoid the short-term reversal effect (see Jegadeesh and Titman [1993]). Another momentum related style is nominal price investing (see Hammerich, Fieberg, and Poddig [2016]). This strategy is implemented by sorting

for high nominal price stocks every month and going long the most expensive stocks while shorting the cheapest stocks. On a style of styles level we also use 1-year rolling sharpe ratio as a proxy for momentum. Thereby, we go long high sharpe ratio portfolios and short the lowest sharpe ratios.

An investment style based on fundamental data is value. This strategy can be implemented in different ways, either in accordance with Fama and French [1992] or with regards to Lakonishok, Shleifer, and Vishny [1994]. This paper deploys six different proxies to compose the value strategy. The classic BE/ME from Fama and French, CF and price-earnings (see Lakonishok, Shleifer, and Vishny [1994]), as well as EBIT/market equity. All proxies are lagged by six months to avoid a possible look-ahead bias and winsorized for the top and bottom 1% (see Fieberg, Varmaz, and Poddig [2016]). We also proxy value by long-term reversal which was originally found by DeBondt and Thaler [1985] in US stock returns. It is applied in the same fashion in this paper for European stocks, namely going long the loser stocks from t-60 to t-3 and short the winners.

Another fundamental-to-price value proxy is found by Naranjo, Nimalendran, and Ryn-gaert [1998]. They document a strong relationship between US stock returns and dividend yield using an improved dividend yield measure. The basic concept of their idea is utilized in this paper, by sorting every year for dividend yield data from Datastream with a six month time lag to avoid the look-ahead bias. Size was first introduced by Banz [1981]. Going long small cap stocks and shorting large cap stocks should generate positive monthly hedge portfolio returns. Therefore, we sort for the lowest market values in our data to form the size portfolios.

All styles are sorted into quintiles and return moments are based on equally weighted portfolios. The hedge portfolio is constructed by going long P05 and going short P01 (P05-P01). Transaction costs are not taken into account. For further performance evaluation, Jensen's alpha regressions with respect to the used data set are applied. In section 4, 5 and 6 we make use of Fama-French (FF) and Fama-MacBeth (FM) regressions to further investigate the characteristics of the examined styles of styles. Here, we apply 3-, 4- and 5-factor FF regressions against the European risk factors from Kenneth French's website and test the characteristic premium properties through

Table 3: Data: descriptive statistics

	Ret	Ret _{-2,-12}	log(BE/ME)	StdDev	log(Size)
Panel 1 - Company size					
Full Europe	0.4024	4.1537	-5.0914	4.5333	2.0615
Large	0.7028	4.8300	-4.9903	4.1833	2.2150
Medium	0.6818	5.5804	-5.1101	4.4279	2.0392
Small	-0.1765	3.7632	-5.1545	5.1227	1.9305
Panel 2 - Sectors					
Agriculture	0.1896	2.4637	-4.9461	5.0091	1.6772
Mining	0.6056	3.7611	-4.8826	6.4322	2.1837
Construction	0.3795	3.8559	-5.0164	5.7782	1.9075
Manufacturing	0.4765	4.8053	-4.8998	4.7100	2.0866
Transport & Public Utilities	0.4706	4.3004	-5.3622	4.3641	2.1503
Wholesale Trade	0.3712	3.5304	-5.2805	4.5842	1.8460
Retail Trade	0.4049	4.3833	-5.4652	4.6457	1.9604
Finance, Insurance, Real Estate	0.3360	2.9435	-4.4456	5.3667	2.0966
Services	0.1522	2.8240	-5.5569	5.6238	1.8737
Public Administration	-1.2691	-4.2164	-2.4991	12.8358	1.7057
Panel 3 - Countries					
Austria	0.1824	1.2211	-4.2818	5.5019	1.8823
Belgium	0.4822	6.0100	-4.0148	4.7448	2.0244
Denmark	0.5945	4.9017	-4.6944	5.1459	1.8912
Finland	0.5003	3.2855	-5.1999	7.0944	1.9736
France	0.5183	4.1006	-4.0808	5.2338	2.1370
Germany	0.2921	3.8784	-4.2236	4.8524	2.1106
Greece	-0.4374	-5.5021	-5.9112	9.4118	1.6288
Ireland	0.6965	6.9008	-6.4001	6.2969	1.9324
Italy	0.0381	3.0880	-5.8003	6.6606	2.0095
Netherlands	0.5215	4.2892	-5.0717	5.1476	2.1019
Norway	0.2584	2.3292	-5.4513	6.5057	1.8210
Portugal	0.0588	-0.3116	-6.2238	5.8434	1.9060
Spain	0.4710	4.6962	-5.4412	5.5043	2.0965
Sweden	0.6612	5.0348	-5.7528	5.9743	1.9540
Switzerland	0.4814	6.2404	-3.5992	4.5578	2.0841
UK	0.4647	4.5609	-6.0729	4.4041	2.0859

All data comes from Thomson Reuters Datastream and Worldscope and is corrected in line with Ince and Porter [2006]. Ret describes the average equally weighted monthly log return of each data set in %. Ret_{-2,-12} is the average return from month t-2 to month t-12 in % and log(BE/ME) describes the average log(book equity to market equity ratio). StdDev is the average monthly realized volatility in % and log(Size) is the average log of market value of equity.

FM regressions. All styles but value are rebalanced monthly. Value is rebalanced on a yearly basis except for the long-term reversal proxy which is rebalanced monthly.

3.3 Asset pricing models

To show the behaviour of the style of styles we run different asset pricing (FF) and Fama-MacBeth (FM) regressions. The asset pricing models are:

Fama-French 3-factor model (see Fama and French [1993]):

$$r_{it} = \alpha_i + \beta_i(R_{mt} - R_{ft}) + s_iSMB_t + h_iHML_t + \epsilon_{it} \quad (1)$$

Fama-French-Carhart 4-factor model (see Carhart [1997]):

$$r_{it} = \alpha_i + \beta_i(R_{mt} - R_{ft}) + s_iSMB_t + h_iHML_t + w_iWML_t + \epsilon_{it} \quad (2)$$

We do not include the factors investment and profitability explicitly for European stocks in sections 4 and 5. For the sake of completeness however, we run Fama-French 5-factor model regressions to gain additional insights on the styles of styles (see Fama and French [2015]):

$$r_{it} = \alpha_i + \beta_i(R_{mt} - R_{ft}) + s_iSMB_t + h_iHML_t + r_iRMW_t + c_iCMA_t + \epsilon_{it} \quad (3)$$

With r_{it} being the return of the style of styles i at time t , $(R_{mt} - R_{ft})$ being the value-weighted excess return of the European market portfolio, SMB mimicks the European size factor, HML proxies the European value factor, RMW represents the European profitability factor, CMA as the European investment factor and WML as the European momentum factor. The performance evaluation of the single styles and the stlyes of styles is accomplished via Jensen's alpha regressions (see Jensen [1968]). We regress the returns of the different styles and styles of styles against the equally weighted stock universe on which the different styles are based to see the benefits of the investment styles vs. the underlying equities.

$$r_i - r_f = \alpha_i + \beta_i(R_m - R_f) + \epsilon_i \quad (4)$$

With α_i being the abnormal return of style (of styles) i , r_i being the return of style i , the risk free rate r_f , the β of style i with respect to the equally weighted benchmark ($R_m - R_f$) and the error term ϵ .

Next to the time series regressions we run a rolling cross sectional regression to investigate if the single styles and styles of styles are sufficiently predicted in the underlying investment universe of single styles or stocks, respectively. The Fama-MacBeth regression (see Fama and MacBeth [1973]) is calculated as:

$$r_{it+1} = \lambda_{i0} + \lambda_1 d_{1it} + \dots + \lambda_k d_{kit} + \epsilon_{it} \quad (5)$$

With r_{it+1} being the return of the style (of styles) i in $t+1$, d_{kit} being some predictor used for the calculation of investment styles (i.e. BE/ME) and the error term ϵ . The t-statistics is calculated as:

$$t = \frac{\bar{\lambda}}{\sigma_M \sqrt{N}} \quad (6)$$

With $\bar{\lambda}$ as the mean of the lambdas and the standard error of the mean lambdas $\sigma_M \sqrt{N}$.

4 European style investing

4.1 Panel 1: Styles in the cross section

To investigate the styles in Europe more deeply, we split the data in three panels. The first panel makes use of large European data only. First, we construct a data set which includes all stocks from panel 3. Afterwards, we split this data set into three size terciles to see the behaviour of investment styles in data sets comprised of large, medium and small companies.

Table 4 shows the percentage of the different style proxies which independently achieve positive monthly hedge portfolio returns, significant alphas and correct as well as significant FM regression coefficients for each data set. This means a value of 83.33 can be read as "in 83.33% of the investigated value proxies can be found positive monthly hedge portfolio returns for the full European

Table 4: Cross sectional investment styles

Data set	Defensive	Momentum	Value	Size
Positive monthly hedge returns (%)	87.5	100	83.33	50
Full EU	100	100	83.33	0
Large cap	100	100	83.33	100
Medium cap	100	100	83.33	0
Small cap	50	100	83.33	100
Significant alpha (%)	0	50	12.5	0
Full EU	0	50	33.33	0
Large cap	0	50	0	0
Medium cap	0	50	0	0
Small cap	0	50	16.67	0
Correctly priced FM coefficient (%)	87.5	12.5	66.67	0
Full EU	100	0	83.33	0
Large cap	100	0	66.67	0
Medium cap	100	0	50	0
Small cap	50	50	66.67	0

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic $> |2|$) are produced. Further information on the single data sets can be found in table 1 and 3.

data set". Momentum for example appears to be a robust investment style in Europe in general. It produces positive average monthly hedge portfolio returns in all four data sets for both proxies, 2-12 months winner-loser and nominal prices. Furthermore, momentum generates a significant alpha in 50% of the cases when compared to underlying data set over the same period of time. FM regressions however do not hint at a priced characteristic premium.

Value appears to be very robust as well and generates positive monthly hedge portfolio returns in c. 83% of the cases. Defensive performs slightly better than value and seems to be priced more clearly as indicated by the FM regressions. Size works best within the small cap tercile but not on the other European data sets. Overall, the Durbin-Watson test does not imply first order autocorrelation in panel 1 (see appendix B.5). The residuals of the value and momentum return series seem to be subject to heteroskedasticity which could invalidate the obtained results. A more detailed analysis can be found in appendix A.1 to A.3 which contains the results for every single style proxy.

4.2 Panel 2: Styles within sectors

The same approach as described in section 4.1 is used for the second data panel. Here, we analyse the efficacy of the four investment styles within 7 European sectors. Tables 1 and 2 however, list 10 sectors in total of which 3 sectors contain not enough stocks for a proper analysis. The sectors are constructed in line with the standard industrial classification. Here again, we use all stocks from panel 3 for our calculations, split into the respective sectors. We assume that all companies stuck to their business model to use the SIC codes obtained in early 2017.

Table 5: Sector investment styles - positive monthly hedge returns

Data set	Defensive	Momentum	Value	Size
Construction	100	100	83	100
Manufacturing	100	100	83	0
Transport	100	50	83	100
Wholesale	100	100	100	100
Retail	50	100	83	0
Finance	100	100	83	100
Services	50	100	83	0
Mean	86	93	85	57

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns are produced. Further information on the single data sets can be found in table 1 and 3.

As can be seen in table 5, momentum, value and defensive can be found in the 7 different European sectors. The number for size might appear relatively large at this point. By looking at the detailed results in appendix C, it becomes clear that the size hedge portfolio returns are not statistically significant as indicated by a t-test with the null hypothesis of a mean equal to zero. However, the alphas of the value proxies shed negative light on their usage. They generate statistically significant and positive abnormal returns in only 24% of the cases (see appendix A.2, table 21). Here, it emerges that value proxies like dividend yield, EBIT and CF are superior to BEME in Europe. This is in line with the findings of Artmann, Finter, and Kempf [2012] who as well find a stronger performance of earnings based variables in Germany. This finding might additionally be interesting for fundamentally oriented sector analysts in banks or asset management firms who base

their analysis on company reports. The momentum proxies generate significant alphas in 29% of the 7 sectors and all other styles cannot produce any significant alpha.

Although not all of the reported styles can achieve superior returns, they do however increase diversification. The R^2 s reported in appendix C.10 lie mostly below 5% and thus represent almost uncorrelated strategies to the utilized data sets. The Durbin-Watson test of the residuals indicates no particular autocorrelation for any style in none of the examined sectors. The heteroskedasticity tests suggest only comparably infrequent concerns which supports the results shown in table 5. When looking at the FM regression results a disappointing picture emerges (see appendix A.2, table 22). Momentum appears to be priced correctly in none of the sectors. Defensive and value yield better results with 100% and 45%, respectively. A tremendously lower range can be observed for size with 0% of data sets with correctly and significantly priced FM coefficients.

4.3 Panel 3: Styles within countries

To conclude the analysis of style investing in European equity markets, we perform the same calculations on a country level. In panel 3 we examine the investment styles in 11 European countries (Switzerland, Norway and UK included).³ Overall, the country level results appear to be in line with the prior two data panels (see table 4 and 5). Only defensive seems to work a bit worse on a country level than on a sector level. Although, it still lacks to achieve significant Jensen alphas (see appendix A.3, table 24). The other investment styles are pretty much in line with panels 1 and 2. Momentum performs worse than in the prior panels. It generates significant alphas only in 23% of countries. All remaining styles appear to be existent at least to some extent in the data but are not able to achieve significant abnormal returns. The Durbin-Watson test in some cases hints at a positive/negative first order autocorrelation which is not enough to imply some structural flaw in the data. Heteroskedasticity as implied by the Breusch-Pagan and White tests however, appears mostly in momentum and value strategies residuals. The FM regression results also seem to be in line with

³Additional information on the major stock exchanges and the average number of stocks included in the respective countries can be found in the table 1.

panel 1 and 2.

Table 6: Country investment styles - positive monthly hedge returns

Data set	Defensive	Momentum	Value	Size
Denmark	0	50	83	100
France	100	100	100	100
Germany	100	100	83	0
Greece	50	100	67	0
Italy	100	50	33	100
Netherlands	100	50	100	0
Norway	50	100	83	0
Spain	100	100	100	0
Sweden	100	100	83	100
Switzerland	50	100	100	0
UK	100	100	83	0
Mean	77	86	83	36

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns are produced. Further information on the single data sets can be found in table 1 and 3.

Concluding section 4, it can be said that 1 out of the 4 examined investment styles (size) does not exist in European equities. Defensive produces better results in large cross sectional as well as homogenous data sets than in single countries. Momentum appears to be the most successful style out of the 4 investigated ones (in terms of returns). The nominal price proxy is clearly existent in the data but cannot always keep up with its counterpart momentum and seems not to be priced as stand-alone characteristic premium. The success of value differs with regards to the used proxy. PE, EBIT and dividend yield as proxies for value might work better in Europe than others. The results from panel 1 - when comparing the large cap to small cap stocks - support the findings of Asness et al. [2015a] and Fama and French [2012] who postulate that a value premium in large cap stocks might have never even existed and is mainly driven by small cap stocks. Similar to Fama and French [2012] we find a higher value characteristic premium in small stocks than in large stocks. When looking at panel 2 only, the non existence of value is a bit weakened since there are still primarily large cap stocks included in the data samples.

Defensive which appears to be existent in European equity markets might not always

achieve abnormal returns but can add substantial diversification potential in European equity portfolios. It might also reduce the overall volatility of such portfolios since their own realized volatilities lie mostly below 10%. FM regressions indicate at least some priced characteristic premia especially for defensive and value.

5 Style of Styles

From section 4 we now take the different single styles and concatenate them to one new asset universe. This means, we combine all styles from the three data panels (4 company size groups x 11 style proxies + 7 sectors x 11 style proxies + 11 countries x 11 style proxies) to 242 new asset series. Based on this new investment universe we focus on the most important investment styles (see Asness et al. [2015b]) and calculate the momentum (measured by 2-12 months WML and 1-year rolling sharpe ratio), defensive (in terms of low volatility and low beta) and value (as measured by long-term reversal) "style of styles". To construct the underlying style universe we run two analysis with long-only (where we only hold P05) and long-short styles. Choosing the 1-year rolling sharpe ratio as second momentum proxy at this point is due to the standardization of the single investment styles. In our 242 single styles sample, each series starts with an initial value of 1 and is then cumulated over time. Thus, a nominal price proxy would not make any sense here since (i) all prices tend to be more or less the same over the first months and (ii) those prices are not observed market prices.⁴ The choice for the value proxy has different reasons. When utilizing long-short portfolios in the underlying asset universe, the calculation of value cannot be done properly anymore. Assume for example value in terms of BE/ME. To construct the value style of styles one needs to know the mean BE/ME of every single style proxy at every moment in time. But what is the "true" BE/ME of a long-short portfolio? The mean BE/ME of the long portfolio could be used. Also the mean BE/ME of the short portfolio could be applied. A third approach might be the differential of both. Asness et al. [2000] for example, time the value style by the standardized difference between value

⁴Applying nominal prices to calculate the momentum style of styles yields a mean monthly hedge portfolio return of 0.4428% which is statistically different from zero at the 1% confidence level.

and growth portfolios. This approach could also be taken for the value style of styles by calculating the difference of the averages of some value proxy between the top and the bottom portfolio. This differential could then be used as sorting criterion. Since this approach somehow lacks economic rational, alternative measures must be found for characterization purposes. Further information on this issue and alternative calculation methodologies can be found in section 6.

Another problem would be the implementation of such style of styles when using long-short styles in the underlying universe. Levis and Tessaromatis [2004] show that a style rotation strategy is accompanied by different implementation difficulties which can be mitigated successfully. However, going short a long-short strategy means going short the long part and going short the short part, which equals a synthetic long position in the assets of the short portfolio. A second implementation approach on the other hand could be to calculate the style of styles on paper first and then take the single style portfolio compositions to buy/sell the stocks afterwards. Since there is no simple answer to the true mean predictor of a long-short portfolio and implementation can be realized in different ways, we leave these issues to further research and concentrate on a price based value proxy instead.⁵

To characterize the new style of styles, we report the same statistics as in the previous section. Furthermore, we apply FF- and FM-regressions to understand the nature of the style of styles in more depth. In this section we also do not only concentrate on long-short portfolios, but we additionally run the same calculations for long-only portfolios (were both the underlying style universe and the style of styles are long-only). This section begins with the statistics of long-short styles of styles and reports them for every strategy individually. The same approach is then undertaken for long-only portfolios.

5.1 Long-Short approach

By investigating the underlying long-short universe we find that neither the correlation coefficients of all sector nor the correlation coefficients of all country single styles show meaningful relationships between each other. After removing the diagonal with 1s, the average correlation

⁵For further information on alternative style of styles approaches see the robustness section 6.

coefficient of all sector styles is 8.69%. The correlation of all size classes amounts to 18.21% and of all country styles equals 6.87%. The combination of all company size, sector and country styles yields an average correlation coefficient of 9.12%. The lowest correlation coefficient can be found at -64.53% and the highest at 96.70%.

Table 7: Jensen’s alpha regressions long-short style of styles

	Low vol	Low beta	Momentum(WML)	Momentum(SR)	Value(reversal)
Alpha (%)	-0.2794	-0.3018	0.1718	0.4618	-0.3892
t-stat	-1.7916	-1.2072	0.7180	1.9948	-2.2900
p-value	0.0741	0.2282	0.4733	0.0469	0.0227
adjusted R2 (%)	55.4520	59.8102	5.8545	0.1833	-0.0838
Durbin Watson	1.3804	1.3541	1.6286	2.0518	1.5665
Breusch Pagan	25.0482	18.3785	46.7728	263.5859	51.0140
Breusch Pagan p-value	0.0000	0.0000	0.0000	0.0000	0.0000
White	3.3056	5.6070	9.1914	77.5366	13.5262
White p-value	0.3469	0.1324	0.0269	0.0000	0.0036
Beta	-1.8695	-3.2761	0.6562	0.1743	0.0865
t-stat beta	-20.1074	-21.9812	4.5987	1.2629	0.8536
p-value beta	0.0000	0.0000	0.0000	0.2075	0.3940

Alpha and adjusted R² can be read as percentage values (-0.2794 = -0.2794%) whereas all remaining numbers are taken directly from the regression results. Value is calculated as the 60 months reversal. Momentum (SR) goes long the highest sharpe ratios and short the lowest values. More information on the different style of styles can be found in the following subsections.

Before the single styles of styles are examined in more depth, table 7 contains the results of the Jensen’s alpha regressions for all styles of styles. In the Jensen’s alpha regressions the style of styles are regressed on an equally weighted portfolio of the underlying single styles to increase comparability. It can clearly be seen that both momentum proxies can produce economically significant alphas but only momentum as measured by sharpe ratio additionally generates a statistically significant alpha. Defensive (proxied by low volatility and low beta) and value (in terms of reversal) lack to deliver added value.⁶

5.1.1 Momentum

The first style of styles investigated in more detail is momentum. As can be seen in section 4, momentum appears to be a successful anomaly over all examined panels. This also holds true for

⁶Jensen’s alpha regressions against the Stoxx Europe 600 show more or less the same result. The alphas of low vol, low beta and value(reversal) remain negative. The alpha of momentum (WML) amounts to 0.2203% with a t-stat of 0.8937 and a p-value of 0.3722. The momentum (sharpe ratio) alpha amounts to 0.4702% with a t-stat of 2.0285 and a p-value of 0.0433. The R²s do also not surpass a value of 2.1158% (for low beta).

the style of styles universe. The magnitude of the average monthly hedge portfolio returns and the standard deviation of returns seems to be in line with the momentum returns in the previous section. The return/risk ratio, skewness and kurtosis are as well similar to the single momentum results.

Table 8: Style of styles momentum

Momentum(WML)	P01	P02	P03	P04	P05	P hedge	
Mean (%)	0.0295	0.2799	0.4241	0.5470	0.5473	0.5179	
t-stat	0.2087	2.7275	3.9132	4.1703	2.9138	2.0170	
p-value	0.8348	0.0067	0.0001	0.0000	0.0038	0.0445	
Standard Deviation (%)	2.4958	1.7970	1.8966	2.3027	3.3164	4.5342	
Return/Risk	0.0118	0.1558	0.2236	0.2376	0.1650	0.1142	
Skewness	0.3989	0.6644	-0.0083	0.9755	-0.3676	-1.0945	
Kurtosis	5.7591	10.2685	9.2990	10.4379	11.1006	11.7579	
<i>Characteristic</i>	-0.1803	-0.0410	0.0412	0.1346	0.3407	0.0802	
Momentum(SR)	P01	P02	P03	P04	P05	P hedge	
Mean (%)	-0.0607	0.2106	0.4128	0.5604	0.7258	0.7865	
t-stat	-0.4193	1.6942	3.4298	4.2893	4.6768	3.2615	
p-value	0.6753	0.0912	0.0007	0.0000	0.0000	0.0012	
Standard Deviation (%)	2.5570	2.1952	2.1244	2.3051	2.7377	4.2571	
Return/Risk	-0.0237	0.0959	0.1943	0.2431	0.2651	0.1848	
Skewness	-0.2506	0.1804	1.1645	0.0116	0.5519	0.4793	
Kurtosis	12.4452	11.4418	10.3424	7.8044	11.2026	7.5139	
<i>Characteristic</i>	-1.4345	-0.5559	0.0116	0.5706	1.4107	-0.0119	
Momentum(WML)	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	0.0049 (1.8729)*	-0.0008 (-0.0152)	0.1434 (1.2105)	0.0544 (0.5054)			
adj. R2 (%)	-0.39 (0.0000)						
GRS F-stat	1.9113						
FF 5-factor	0.0040 (1.4253)	0.0611 (0.9656)	0.1671 (1.4046)	-0.0902 (-0.5739)*	0.0727 (0.3547)	0.3495 (1.8470)*	
adj. R2 (%)	0.15 (0.0000)						
GRS F-stat	3.1449						
Carhart 4-factor	0.0018 (0.6640)	0.0577 (1.0446)	0.1263 (1.0899)	0.1624 (1.4926)			0.2660 (3.8980)***
adj. R2 (%)	4.03 (0.0000)						
GRS F-stat	6.8165						
Momentum(SR)	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	0.0081 (3.3151)***	-0.0200 (-0.3918)	-0.0862 (-0.7735)	-0.0298 (-0.2942)			
adj. R2 (%)	-0.71 (0.0000)						
GRS F-stat	3.6765						
FF 5-factor	0.0080 (3.0052)***	-0.0502 (-0.8411)	-0.0951 (-0.8470)	0.0920 (0.6209)	0.0685 (0.3542)	-0.2105 (-1.1790)	
adj. R2 (%)	-0.89 (0.0000)						
GRS F-stat	4.1669						
Carhart 4-factor	0.0079 (3.0791)***	-0.0162 (-0.3037)	-0.0873 (-0.7819)	-0.0226 (-0.2160)			0.0176 (0.2676)
adj. R2 (%)	-1.01 (0.0000)						
GRS F-stat	3.6073						
FM regression	Low Vol style of styles	Low Beta style of styles	Momentum(WML) style of styles	Momentum(SR) style of styles	Value(reversal) style of styles		
Univariate			0.0078 (1.9630)				
Univariate				0.0012 (1.6120)			
Multivariate			0.0077 (2.0979)	0.0014 (2.1968)			
Multivariate	-0.0442 (-2.7868)	0.0010 (0.7251)	0.0121 (3.9714)	0.0005 (1.1844)	0.0004 (0.6064)		

The numbers for mean and standard deviation can be read as percentage values. Return/ risk is the mean divided by the standard deviation. The factors for the FF regressions are taken from Ken French's website. The regression analysis ranges from June 1990 to December 2016 (except for the 4-factor model which starts from September 1990). The p-values for the GRS F-statistic are reported in parentheses below the GRS F-statistic. ***Significant at the 1%-level. **Significant at the 5%-level. *Significant at the 10%-level. For the FM regressions the coefficients are reported with t-statistics in parentheses below.

The results from the Jensen's alpha regression (table 7) strengthen this finding. Momentum (WML) applied as a style of styles delivers an economically significant alpha. Interesting to note is the relatively low adjusted R² of 5.8545%. This fact already hints at an additional diversification possibility which is supported by the FF regressions (see table 8). Here, it seems like the momentum style of styles can be explained by the Fama-French-Carhart 4-factor model and to a lesser extent by the FF-5-factor model. Naturally, the WML factor in this model captures large parts of the momentum style of styles returns and leaves the alpha insignificant. Interestingly, investment (CMA)

is significant at the 10%-level in the FF 5-factor model. When sorting by sharpe ratios the momentum strategy additionally appears to be successful.⁷ Surprisingly, it achieves a positive skewness and a lower kurtosis in contrast to the momentum (WML) style of styles. The momentum (SR) style of styles also exhibits alphas significant at the 1% level in all three asset pricing models. No factor appears to be significant in explaining the momentum (SR) returns. The R^2 s lie around 0%. The FM regression analysis also delivers significant coefficients. The t-statistics of 1.9630 and 1.6120 in the univariate cases and a t-statistics of 2.0979 and 2.1968 in the multivariate case both are significant. The facts that the different asset pricing models are not able to completely explain the momentum style of styles proxies and the existence of correct and significant coefficients from the FM regressions leave us with the conclusion that the momentum style of styles is able to form a successful, second layer investment style.

5.1.2 Defensive

Defensive as an investment style has worked better in homogeneous European data sets than on single country data. In the context of style of styles surprisingly, it generates only slightly negative monthly average returns (see table 9). Low beta produces lower mean monthly hedge portfolio returns than low volatility. This finding is interesting since it implies that high beta style proxies earn higher returns and low beta proxies lower returns which would reverse the anomaly on the single styles level. Research however shows, that most investment styles are independent from each other and not driven by any kind of "style beta".

The asset pricing models on the other hand are capable of explaining the defensive style of styles by leaving all alphas insignificant. The abnormal return from the Jensen's alpha regression (see table 7) appears to be considerably negative for both low volatility and low beta. The average returns of all style proxies are also capable of explaining the defensive style of styles with R^2 s around 60%. Also, the FM regressions deliver evidence for a successful stand-alone characteristic premium

⁷We are very well aware of the discussion surrounding the meaningfulness of negative sharpe ratios. When limiting the momentum (SR) style of styles to positive sharpe ratios only, we arrive at a lower but still significant mean monthly hedge portfolio return of 0.3297% with a t-stat of 1.9197 and a p-value of 0.0558.

Table 9: Style of styles defensive

Low Vol	P01	P02	P03	P04	P05	P hedge	
Mean (%)	0.4272	0.3935	0.3248	0.3624	0.2901	-0.1371	
t-stat	1.6469	3.0161	3.5875	4.7298	4.8013	-0.5243	
p-value	0.1006	0.0028	0.0004	0.0000	0.0000	0.6004	
Standard Deviation (%)	4.4084	2.2143	1.5355	1.2972	1.0229	4.4446	
Return/Risk	0.0969	0.1777	0.2115	0.2794	0.2836	-0.0308	
Skewness	0.2786	0.2749	0.9518	1.3073	0.6853	0.0165	
Kurtosis	6.8355	8.3594	9.3214	11.3442	8.6919	7.8472	
<i>Characteristic</i>	0.0818	0.0600	0.0485	0.0387	0.0275	0.0547	
Low Beta	P01	P02	P03	P04	P05	P hedge	
Mean (%)	0.3861	0.4855	0.4752	0.3598	0.1328	-0.2533	
t-stat	1.2116	2.9842	4.5278	4.6847	1.1194	-0.6047	
p-value	0.2265	0.0031	0.0000	0.0000	0.2638	0.5458	
Standard Deviation (%)	5.5652	2.8387	1.8291	1.3384	2.0717	7.3169	
Return/Risk	0.0694	0.1710	0.2598	0.2688	0.0641	-0.0346	
Skewness	0.1291	0.0828	0.8075	1.0925	0.3009	0.0195	
Kurtosis	5.6892	9.0568	9.5299	8.2584	6.6028	5.7505	
<i>Characteristic</i>	3.5855	1.5314	0.6394	-0.1001	-1.2133	1.1861	
Low Vol	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	-0.0014 (-0.5188)	0.1779 (3.3099)***	0.0653 (0.5554)	-0.2736 (-2.6304)***			
adj. R2 (%)	3.99						
GRS F-stat	5.3811 (0.0000)						
FF 5-factor	-0.0007 (-0.2377)	0.1047 (1.6420)	0.0417 (0.3534)	-0.0799 (-0.5227)	-0.0226 (-0.1104)	-0.4138 (-2.2156)**	
adj. R2 (%)	4.98						
GRS F-stat	7.2416 (0.0000)						
Carhart 4-factor	-0.0005 (-0.1773)	0.1606 (2.8672)***	0.0707 (0.6004)	-0.3027 (-2.8183)***			-0.0739 (-1.0818)
adj. R2 (%)	4.04						
GRS F-stat	5.6719 (0.0000)						
Low Beta	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	-0.0026 (-0.6228)	0.2627 (3.0067)***	0.1411 (0.7398)	-0.3813 (-2.2303)**			
adj. R2 (%)	2.82						
GRS F-stat	4.0848 (0.0000)						
FF 5-factor	-0.0006 (-0.0123)	0.1599 (1.5719)	0.1002 (0.5245)	-0.2630 (-1.0493)	-0.3623 (-1.1051)	-0.4809 (-1.5855)	
adj. R2 (%)	3.49						
GRS F-stat	5.5148 (0.0000)						
Carhart 4-factor	-0.0017 (-0.3897)	0.2464 (2.7107)***	0.1468 (0.7682)	-0.4115 (-2.3233)**			-0.0742 (-1.0611)
adj. R2 (%)	2.64						
GRS F-stat	4.1314 (0.0000)						
FM regression	Low Vol style of styles	Low Beta style of styles	Momentum(WML) style of styles	Momentum(SR) style of styles	Value(reversal) style of styles		
Univariate	-0.0058 (-0.1435)						
Univariate		0.0003 (0.2157)					
Multivariate	-0.0333 (-2.0942)	0.0004 (0.3302)					
Multivariate	-0.0442 (-2.7868)	0.0010 (0.7251)	0.0121 (3.9714)	0.0005 (1.1844)	0.0004 (0.6064)		

The numbers for mean and standard deviation can be read as percentage values. Return/ risk is the mean divided by the standard deviation. The factors for the FF regressions are taken from Ken French's website. The regression analysis ranges from June 1990 to December 2016 (except for the 4-factor model which starts from September 1990). The p-values for the GRS F-statistic are reported in parentheses below the GRS F-statistic. ***Significant at the 1%-level. **Significant at the 5%-level. *Significant at the 10%-level. For the FM regressions the coefficients are reported with t-statistics in parentheses below.

only for low volatility but not for low beta. Market, HML and CMA significantly capture parts of the return variations of the defensive style of styles. The adjusted R^2 s from the asset pricing models are in line with the other long-short single styles from the previous section.

5.1.3 Value

A common approach in the related literature (see i.e. Kroencke, Schindler, and Schrimpf [2013]) is to measure the value anomaly for asset classes other than equities by the 5-year (60 months) reversal. As found in section 4, a reversal premium does not exist on a single style level. We acknowledge this controversy but stick to the literature and report all statistics for the value style of styles as measured by long-term reversal.

Table 10: Style of styles value

Return moments	P01	P02	P03	P04	P05	P hedge	
Mean (%)	0.4190	0.4203	0.3727	0.3341	0.2938	-0.1252	
t-stat	2.7040	2.9822	2.9495	2.6605	1.9526	-0.6001	
p-value	0.0072	0.0031	0.0034	0.0082	0.0517	0.5489	
Standard Deviation (%)	2.5120	2.2833	2.0473	2.0360	2.4420	3.3916	
Return/Risk	0.1668	0.1841	0.1820	0.1641	0.1203	-0.0369	
Skewness	-0.3275	0.3490	0.0996	0.5288	0.2367	0.8408	
Kurtosis	8.1172	7.1169	8.9364	7.5604	8.2159	8.4172	
<i>Characteristic</i>	1.3312	0.5928	0.2854	0.0289	-0.2876	0.5218	
Asset pricing	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	-0.0012 (-0.5646)	-0.0715 (-1.6842)*	-0.1554 (-1.6338)	0.1377 (1.6827)*			
adj. R2 (%)	1.38						
GRS F-stat	2.7187 (0.0000)						
FF 5-factor	-0.0016 (-0.7013)	-0.0555 (-1.0735)	-0.1489 (-1.5490)	0.1270 (1.0484)	0.0649 (0.3950)	0.0608 (0.4076)	
adj. R2 (%)	0.75						
GRS F-stat	2.8549 (0.0000)						
Carhart 4-factor	-0.0008 (-0.3073)	-0.1091 (-2.4830)**	-0.1434 (-1.5263)	0.0770 (0.9216)			-0.1505 (-2.8481)***
adj. R2 (%)	4.00						
GRS F-stat	5.7981 (0.0000)						
FM regression	Low Vol style of styles	Low Beta style of styles	Momentum(WML) style of styles	Momentum(SR) style of styles	Value(reversal) style of styles		
Univariate					0.0002 (0.1629)		
Multivariate				0.0014 (1.6830)	-0.0001 (-0.0989)		
Multivariate	-0.0442 (-2.7868)	0.0010 (0.7251)	0.0121 (3.9714)	0.0005 (1.1844)	0.0004 (0.6064)		

The numbers for mean and standard deviation can be read as percentage values. Return/ risk is the mean divided by the standard deviation. The factors for the FF regressions are taken from Ken French's website. The regression analysis ranges from June 1990 to December 2016 (except for the 4-factor model which starts from September 1990). The p-values for the GRS F-statistic are reported in parentheses below the GRS F-statistic. ***Significant at the 1%-level. **Significant at the 5%-level. *Significant at the 10%-level. For the FM regressions the coefficients are reported with t-statistics in parentheses below.

The results in table 10 are in line with the findings from the previous section where no long-term reversal premium exists. The value style of styles exhibits the largest positive skewness of all style of styles but still suffers from an excess kurtosis. The value style of styles also generates negative monthly returns and a significant negative alpha. It also exhibits negative alphas in the FF regressions. Market, HML and WML significantly capture parts of the value style of styles. Also, its FM coefficients display the opposite sign. The negative FF alphas and incorrect FM coefficients lead to the conclusion that value does not add any diversification potential. This finding therefore gives grounds to believe that long-term reversal might not be a suitable predictor for value in a European style of styles context. The question of which predictor to use for the value style of styles calculation can however not be answered easily at this point which is why we leave this topic to further research.

5.2 Long-only approach

Section 5.1 has shown that momentum can form an additional characteristic premium on a style of styles level. Because of the short sale ban in Europe, the implementation under a long-short framework seems to be difficult. A way to circumvent this issue could be found in long-only investing. Here, we do not apply the style of styles on long-short portfolios but on underlying long-

only portfolios. To stay consistent in our analysis we also apply a long-only approach on the style of styles level.

Table 11: Jensen's alpha regressions long-only style of styles

	Low vol	Low beta	Momentum(WML)	Momentum(SR)	Value(reversal)
Alpha (%)	0.2002	0.0967	0.1955	0.2210	-0.1726
t-stat	3.7359	1.6734	2.0755	2.8646	-1.7709
p-value	0.0002	0.0952	0.0387	0.0044	0.0775
adjusted R2 (%)	77.3410	72.3550	82.2299	87.5229	81.5646
Durbin Watson	1.5340	1.4615	1.6482	1.9997	1.6426
Breusch Pagan	54.6859	33.6469	273.3234	156.6913	52.1429
Breusch Pagan p-value	0.0000	0.0000	0.0000	0.0000	0.0000
White	39.5941	26.0417	97.3232	71.0165	36.5260
White p-value	0.0000	0.0000	0.0000	0.0000	0.0000
Beta	0.4536	0.4285	0.9281	0.9357	0.9389
t-stat beta	33.2700	29.1376	38.7336	47.6839	37.8747
p-value beta	0.0000	0.0000	0.0000	0.0000	0.0000

Alpha and adjusted R² can be read as percentage values (0.2002 = 0.2002%) whereas all remaining numbers are taken directly from the regression results. Value is calculated as the 60 months reversal. Momentum (SR) goes long the highest sharpe ratios and short the lowest values. More information on the different style of styles can be found in the following subsections.

As expected, the average correlation coefficients clearly increase when compared to the long-short counterparts. The mean correlation coefficient of all long-only sector styles amounts to 48.83% and of all size classes equals 75.69%. For country styles it is lower with 39.55%. The combination of all three yields an average correlation coefficient of 53.78%. The lowest correlation can be found at -4.11% and the highest at 97.81% which is naturally a narrower range than in the hedge portfolio case. The Jensen's alpha regressions (see table 11) against the underlying long-only single style universe mainly depict better results as for the long-short style of styles. All alphas but value (reversal) are positive and statistically significant. Also the heteroskedasticity tests do not imply a structural flaw. Defensive only suffers from a slightly positive first-order autocorrelation.⁸

⁸Here again, Jensen's alpha regressions against the Stoxx Europe 600 show similar results. All alphas become positive. The alpha of momentum (WML) amounts to 0.5292% which is significant at the 5% level. The momentum (sharpe ratio) alpha yields 0.5542% with a p-value of 0.0090. The alpha of low vol and low beta amount to 0.3633% and 0.2494%, with p-values of 0.0011 and 0.0202. Only the value (reversal) alpha of 0.1670% is insignificant with a p-value of 0.4537. The R²s are tremendously lower for all styles with values between 3% and 6%. The Jensen's alpha regression results for the long-short and long-only cases can be made available upon request.

5.2.1 Momentum

Momentum, again, generates the highest alphas on a long-only style of styles level. The mean monthly return outperforms its long-short counterpart by several basis points. Transaction costs for a long-only variant should be lower which might lead to an even higher outperformance. As stated above, the average correlation of all styles is roughly 54%. The R^2 of the momentum (WML) style of styles however, amounts to 83% (see table 11). A Jensen's alpha regression against the Stoxx Europe 600 on the other hand yields an even lower R^2 of below 6%, adding substantial diversification potential to long-only equity portfolios.

Table 12: Style of styles long-only momentum

Momentum(WML)	P01	P02	P03	P04	P05		
Mean (%)	0.4073	0.6903	0.7002	0.7594	0.8707		
t-stat	1.5430	2.9176	3.0327	3.4525	3.7527		
p-value	0.1238	0.0038	0.0026	0.0006	0.0002		
Standard Deviation (%)	4.6624	4.1217	4.0560	3.8632	4.0745		
Return/Risk	0.0874	0.1675	0.1726	0.1966	0.2137		
Skewness	-0.5463	-0.6442	-0.8702	-0.7887	-0.6952		
Kurtosis	6.7705	6.6287	5.5197	4.4716	4.0343		
<i>Characteristic</i>	-0.0901	0.0257	0.0870	0.1503	0.3012		
Momentum(SR)	P01	P02	P03	P04	P05		
Mean (%)	0.5138	0.6941	0.7634	0.7602	0.8919		
t-stat	2.0332	2.8497	3.2314	3.3334	3.9615		
p-value	0.0428	0.0047	0.0014	0.0010	0.0001		
Standard Deviation (%)	4.4625	4.3005	4.1705	4.0258	3.9730		
Return/Risk	0.1151	0.1614	0.1831	0.1888	0.2245		
Skewness	-0.7028	-0.7468	-0.6433	-0.6632	-0.2049		
Kurtosis	4.5484	4.5135	5.4055	5.5850	6.5749		
<i>Characteristic</i>	-0.8512	-0.1873	0.1523	0.4910	1.1354		
Momentum(WML)	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	0.0081 (3.4678)***	0.1406 (2.8882)***	0.0335 (0.3162)	-0.0301 (-0.3148)			
adj. R2 (%)	1.74						
GRS F-stat	7.3819 (0.0000)						
FF 5-factor	0.0097 (3.8268)***	0.1288 (2.2686)**	0.0203 (0.1905)	-0.1485 (-1.0573)	-0.3101 (-1.6936)*	0.0474 (0.2792)	
adj. R2 (%)	2.02						
GRS F-stat	8.3911 (0.0000)						
Carhart 4-factor	0.0096 (3.9427)***	0.1134 (2.2579)**	0.0424 (0.4017)	-0.0820 (-0.8320)			-0.1265 (-2.0348)**
adj. R2 (%)	2.74						
GRS F-stat	8.6030 (0.0000)						
Momentum(SR)	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	0.0085 (3.7806)***	0.1546 (3.2967)***	-0.0411 (-0.4021)	-0.0945 (-1.0190)			
adj. R2 (%)	2.82						
GRS F-stat	9.0035 (0.0000)						
FF 5-factor	0.0099 (4.0465)***	0.1178 (2.1549)**	-0.0597 (-0.5810)	-0.0982 (-0.7238)	-0.2243 (-1.2672)	-0.1375 (-0.8414)	
adj. R2 (%)	2.98						
GRS F-stat	9.8842 (0.0000)						
Carhart 4-factor	0.0106 (4.5375)***	0.1159 (2.4076)**	-0.0298 (-0.2949)	-0.1660 (-1.7517)*			-0.1759 (-2.9607)***
adj. R2 (%)	5.21						
GRS F-stat	1.1763 (0.0000)						
FM regression	Low Vol style of styles	Low Beta style of styles	Momentum(WML) style of styles	Momentum(SR) style of styles	Value(reversal) style of styles		
Univariate			0.0117 (2.3650)				
Univariate				0.0005 (0.6917)			
Multivariate			0.0126 (2.6506)	0.0004 (0.6751)			
Multivariate	-0.0222 (-0.4165)	0.0016 (0.4588)	0.0096 (2.8275)	0.0009 (1.9351)	0.0009 (1.2164)		

The numbers for mean and standard deviation can be read as percentage values. Return/ risk is the mean divided by the standard deviation. The factors for the FF regressions are taken from Ken French's website. The regression analysis ranges from June 1990 to December 2016 (except for the 4-factor model which starts from September 1990). The p-values for the GRS F-statistic are reported in parentheses below the GRS F-statistic. ***Significant at the 1%-level. **Significant at the 5%-level. *Significant at the 10%-level. For the FM regressions the coefficients are reported with t-statistics in parentheses below.

The second, third and fourth moments of the return series differ not substantially from well

known momentum characteristics. None of the three asset pricing models can completely capture the long-only momentum style of styles (see table 12). The WML factor captures parts of both momentum style of styles proxies at the 5% and 1% significance level. Especially market does a good job in explaining the long-only momentum style of styles. The significant alphas in all three asset pricing models and the low R^2 s of the asset pricing models imply a large diversification potential for the long-only momentum style of styles. This is unexpected since we use a long-only approach to construct the portfolios. The three asset pricing models cannot explain the momentum (SR) style of styles either and leave it with highly significant alphas. The market and WML factors are the most significant explaining variables at the 1% and 5% level which is not surprising in a long-only case. HML as well captures parts of momentum (SR) in the Carhart 4-factor model. FM regressions also indicate correctly and statistically significant priced characteristic premia. This however, holds true for the momentum (WML) style of styles only. Thus, it appears that a second level momentum style can add huge diversification potential. The implementation of long-only styles might also be easier.

5.2.2 Defensive

In contrast to the long-short defensive style of styles, the long-only version generates economically and statistically significant positive average monthly returns. The mean monthly return of both defensive style of styles proxies are even capable of achieving significant alphas when compared to the underlying single style universe. With a monthly volatility of c. 2%, the return/risk ratio is slightly higher than for the long-only momentum style of styles. Thus, it is not surprising that the defensive style of styles can produce significant alphas versus well known asset pricing models (see table 13).

The Jensen alpha of low volatility outperforms the alpha of low beta, similar to the long-short approach. The average monthly returns also appear to be pretty much correlated to the underlying asset universe with an adjusted R^2 of 77% and 72% in the Jensen's alpha regressions. The time series of the defensive style of styles proxies suffer slightly from a positive first order

Table 13: Style of styles long-only defensive

Low Vol	P01	P02	P03	P04	P05		
Mean (%)	0.6861	0.7742	0.8081	0.8178	0.7347		
t-stat	1.9280	2.7795	3.1912	3.9655	5.9688		
p-value	0.0547	0.0058	0.0016	0.0001	0.0000		
Standard Deviation (%)	6.0462	4.7288	4.2972	3.4960	2.0786		
Return/Risk	0.1135	0.1637	0.1880	0.2339	0.3535		
Skewness	-0.4321	-0.7813	-0.9672	-0.9691	-0.9960		
Kurtosis	4.9846	5.5023	5.6196	4.9759	4.4284		
<i>Characteristic</i>	0.0793	0.0581	0.0501	0.0427	0.0285		
Low Beta	P01	P02	P03	P04	P05		
Mean (%)	0.6086	0.7369	0.7455	0.6977	0.5758		
t-stat	1.7296	2.6685	3.0880	3.5788	5.0813		
p-value	0.0847	0.0080	0.0022	0.0004	0.0000		
Standard Deviation (%)	6.1446	4.8196	4.2124	3.4005	1.9740		
Return/Risk	0.0991	0.1529	0.1770	0.2052	0.2917		
Skewness	-0.4214	-0.7532	-0.8453	-1.0716	-0.9153		
Kurtosis	4.6943	5.3464	5.3838	5.4577	4.3501		
<i>Characteristic</i>	1.3789	1.0934	0.9441	0.7479	0.3606		
Low Vol	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	0.0070 (5.6357)***	0.0644 (2.5309)**	-0.0103 (-0.1850)	0.0042 (0.0842)			
adj. R2 (%)	1.44						
GRS F-stat	1.4715 (0.0000)						
FF 5-factor	0.0077 (5.7487)***	0.0550 (1.8102)*	-0.0175 (-0.3111)	-0.0406 (-0.5568)	-0.1411 (-1.4459)	0.0045 (0.0503)	
adj. R2 (%)	1.47						
GRS F-stat	1.5531 (0.0000)						
Carhart 4-factor	0.0081 (6.3738)***	0.0415 (1.5865)	-0.0032 (-0.0584)	-0.0346 (-0.6893)			-0.0984 (-3.0838)***
adj. R2 (%)	4.30						
GRS F-stat	1.7937 (0.0000)						
Low Beta	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	0.0054 (4.7234)***	0.0701 (2.9718)***	-0.0287 (-0.5574)	0.0187 (0.4041)			
adj. R2 (%)	2.58						
GRS F-stat	1.2270 (0.0000)						
FF 5-factor	0.0062 (5.0559)***	0.0592 (2.1528)**	-0.0361 (-0.6985)	-0.0283 (-0.4174)	-0.1585 (-1.7870)*	-0.0038 (-0.0463)	
adj. R2 (%)	2.98						
GRS F-stat	1.3464 (0.0000)						
Carhart 4-factor	0.0065 (5.5836)***	0.0484 (2.0065)**	-0.0211 (-0.4163)	-0.0215 (-0.4567)			-0.0985 (-3.3087)***
adj. R2 (%)	5.69						
GRS F-stat	1.5881 (0.0000)						
FM regression	Low Vol style of styles	Low Beta style of styles	Momentum(WML) style of styles	Momentum(SR) style of styles	Value(reversal) style of styles		
Univariate	-0.0160 (-0.3135)						
Univariate		0.0000 (0.0015)					
Multivariate	-0.0616 (-1.1288)	0.0034 (1.0567)					
Multivariate	-0.0222 (-0.4165)	0.0016 (0.4588)	0.0096 (2.8275)	0.0009 (1.9351)	0.0009 (1.2164)		

The numbers for mean and standard deviation can be read as percentage values. Return/ risk is the mean divided by the standard deviation. The factors for the FF regressions are taken from Ken French's website. The regression analysis ranges from June 1990 to December 2016 (except for the 4-factor model which starts from September 1990). The p-values for the GRS F-statistic are reported in parentheses below the GRS F-statistic. ***Significant at the 1%-level. **Significant at the 5%-level. *Significant at the 10%-level. For the FM regressions the coefficients are reported with t-statistics in parentheses below.

autocorrelation, making the results a little bit more unreliable. When comparing the long-only defensive style of styles with the Stoxx Europe 600 Index these findings change only slightly. The alpha of both defensive style of styles proxies become larger and remain statistically significant. With an adjusted R^2 of around 4%, the dependence from broad equity markets appears to have nearly evaporated. Besides the relatively high Jensen's alpha R^2 s against the underlying long-only style universe, the asset pricing models (see table 13) cannot fully explain the long-only defensive style of styles. In the long-short case market and HML capture most of the defensive style of styles return variation. In the long-only approach the market and WML factors significantly explain the long-only defensive style of styles. Low R^2 s and significant alphas lead to the conclusion that the defensive style of styles can add substantial diversification potential but only limited return potential. The

sign of the low beta FM regression coefficients however, is opposite to what it should be. Therefore, our findings at this point cannot confirm a defensive effect on a style of styles level.

5.2.3 Value

To stay consistent in our analysis we measure the long-only value style of styles according to section 5.1.3 by long-term reversal. The mean monthly return is positive at 0.5711%. The return/risk ratio (0.1275) is clearly lower than for the other long-only style of styles. The skewness of the value style of styles is negative and the kurtosis is leptokurtic. The asset pricing models indicate that a long-only value style of styles based on reversal cannot be fully explained by any of the three models (see table 14) which is opposite to the long-short variant. Market and WML are significant explaining variables for the long-only value style of styles. All other variables are not significant in explaining the value style of styles. The FM regressions on the other hand show a wrongly priced value style of styles. The R^2 s of the asset pricing models however, are well below 5%.

Table 14: Style of styles long-only value

Return moments	P01	P02	P03	P04	P05		
Mean (%)	0.7115	0.7780	0.7729	0.7482	0.5711		
t-stat	2.6897	3.1441	3.1705	3.0053	2.0697		
p-value	0.0075	0.0018	0.0017	0.0029	0.0393		
Standard Deviation (%)	4.2885	4.0077	3.9480	4.0334	4.4780		
Return/Risk	0.1659	0.1941	0.1958	0.1855	0.1275		
Skewness	-1.3814	-1.0417	-0.9001	-0.4406	-0.3110		
Kurtosis	6.0439	5.3048	5.3117	5.7268	4.9457		
<i>Characteristic</i>	1.3675	0.8061	0.5691	0.3587	0.0304		
Asset pricing	Alpha	Rm-Rf	SMB	HML	RMW	CMA	WML
FF 3-factor	0.0051 (1.8358)*	0.1528 (2.7302)***	0.0239 (0.1910)	-0.0605 (-0.5612)			
adj. R2 (%)	1.70						
GRS F-stat	4.6095 (0.0000)						
FF 5-factor	0.0063 (2.0818)**	0.1340 (1.9706)**	0.0147 (0.1164)	-0.1204 (-0.7550)	-0.2202 (-1.0188)	-0.0087 (-0.0444)	
adj. R2 (%)	1.34						
GRS F-stat	5.0367 (0.0000)						
Carhart 4-factor	0.0074 (2.5811)**	0.1059 (1.8258)*	0.0390 (0.3143)	-0.1365 (-1.2384)			-0.1883 (-2.6988)***
adj. R2 (%)	4.02						
GRS F-stat	7.3771 (0.0000)						
FM regression	Low Vol style of styles	Low Beta style of styles	Momentum(WML) style of styles	Momentum(SR) style of styles	Value(reversal) style of styles		
Univariate					0.0004 (0.2849)		
Multivariate				0.0009 (1.1292)	0.0008 (0.5345)		
Multivariate	-0.0222 (-0.4165)	0.0016 (0.4588)	0.0096 (2.8275)	0.0009 (1.9351)	0.0009 (1.2164)		

The numbers for mean and standard deviation can be read as percentage values. Return/ risk is the mean divided by the standard deviation. The factors for the FF regressions are taken from Ken French's website. The regression analysis ranges from June 1990 to December 2016 (except for the 4-factor model which starts from September 1990). The p-values for the GRS F-statistic are reported in parentheses below the GRS F-statistic. ***Significant at the 1%-level. **Significant at the 5%-level. *Significant at the 10%-level. For the FM regressions the coefficients are reported with t-statistics in parentheses below.

This section has shown that both momentum styles of styles (long-short and long-only) can be regarded as an additional layer of characteristic premium. Value appears not to deliver positive results. Since a reversal effect cannot be found on a single style level in European equities the formulation of reversal as proxy for value might be flawed. Taking other measures as the value style

of styles proxy is discussed in the next section. The case for defensive by contrast is clear. It exists in European stock markets but not on a long-short style of styles level. In a long-only framework, defensive is able to produce significant asset pricing and Jensen's alphas but can not be regarded as a characteristic premium as indicated by the FM regression results.

6 Robustness

Next to the price based style of styles calculation approaches, other methodologies to form the style of styles can be applied. The most obvious alternative is the average of some style predictor in the long only case. Here, we simply take for instance the mean BEME of P05 of every single style in every point of time. This mean then is used as sorting criterion for the value style of styles. When calculating long-short style of styles, we additionally test two other calculation approaches. First, inspired by Asness et al. [2000] we calculate the difference between the mean of a style predictor in P05 and the mean in P01 and use this differential as sorting criterion on the second level (i.e. $\overline{BEME}_{differential} = \overline{BEME}_{P05} - \overline{BEME}_{P01}$). Second, we calculate the mean of P05 and P01 and sort for the average of both on the style of styles level (e.g. $\overline{BEME}_{average} = (\overline{BEME}_{P05} + \overline{BEME}_{P01})/2$). The results for the different alternative calculation approaches can be found in table 15 and 16. These approaches can additionally be utilized for any style predictor in contrast to the price based style of styles in section 5.

It appears that none of the mentioned alternatives produces results comparable to those from section 5. Only size generates convincing returns in all three approaches which is the most intriguing finding for the alternative long-short calculation approaches. Size produces positive mean monthly hedge portfolio returns but not correctly and significantly priced FM coefficients. It also lacks to achieve significant Jensen alphas. Momentum does not deliver any benefit in both long-short approaches. It performs worse than in section 5 when looking at the long-short robustness results. It produces only low negative mean monthly returns in both approaches, negative alphas and no significant FM coefficient with the correct sign. Defensive appears to perform better compared to

Table 15: Style of styles long-short robustness check

Differential approach	Mean return (%)	Volatility (%)	Jensen alpha (%)	Jensen t-statistics	FM coefficient	FM t-statistics
Low vol	0.1435	1.8592	-0.1693	-1.8777	0.0217	0.0195
Low beta	0.1959	1.9784	-0.1065	-1.0675	0.0052	0.0541
Momentum (WML)	-0.1085	2.8506	-0.4433	-3.0893	0.0242	0.0902
Nominal	-0.2230	1.7415	-0.5017	-5.2273	-0.0000	-0.0874
BEME	0.0892	1.9116	-0.1992	-1.9434	-0.0051	-0.0329
CF	0.1399	1.9524	-0.1519	-1.4401	0.0283	0.0437
Div Yield	0.0052	2.3873	-0.2788	-2.1599	0.0020	0.0375
EBIT	0.1814	1.7184	-0.1268	-1.3642	0.0193	0.1231
PE	0.0970	1.3574	-0.1838	-2.5312	0.0001	0.1065
Reversal	-0.0435	2.9438	-0.2669	-1.8231	0.0034	0.0291
Size	0.2890	1.8135	-0.0434	-0.6234	0.0018	0.0406
Average approach	Mean return (%)	Volatility (%)	Jensen alpha (%)	Jensen t-statistics	FM coefficient	FM t-statistics
Low vol	0.3691	1.8992	0.0696	0.6942	0.0356	0.0155
Low beta	0.3318	1.6448	0.0450	0.5102	0.0233	0.0723
Momentum (WML)	-0.0478	1.5629	-0.3552	-4.2022	0.0316	0.0615
Nominal	-0.1342	1.3233	-0.4277	-5.7777	0.0000	0.0841
BEME	0.0298	1.4407	-0.2642	-3.3558	0.0004	0.0013
CF	-0.0503	1.7024	-0.3496	-3.7531	-0.1200	-0.0953
Div Yield	-0.1977	1.7790	-0.4655	-5.0869	-0.0144	-0.1509
EBIT	-0.0799	1.6944	-0.3820	-4.1169	-0.0149	-0.0758
PE	0.1595	1.6568	-0.1131	-1.2426	-0.0001	-0.0376
Reversal	-0.0379	1.4467	-0.2944	-4.0510	-0.0295	-0.1545
Size	0.4519	1.6488	0.1459	1.7279	-0.0009	-0.0227

Mean return describes the mean monthly hedge portfolio return in %. Volatility is the monthly volatility in %. The Jensen alpha is the excess return of any given strategy in % when compared to the equally weighted returns of the 242 underlying investment styles. The FM columns describe the results of an univariate FM regression of any given style of styles on the underlying style universe.

the results from section 5. It produces slightly positive mean returns but the outcomes of value are mixed. Especially in the differential approach, most value proxies produce positive mean monthly hedge portfolio returns which would reject the results from section 5. The findings from the average approach however, appear to be opposite to the differential method which makes it difficult to draw a clear picture from this analysis. FM coefficients are as well either insignificant or wrongly priced.

In the long-only case (see table 16), both momentum proxies generate positive mean monthly returns and positive but insignificant alphas. As well, both seem to be priced with the correct sign, however with no significant t-statistics. The defensive proxies are more or less equal to its price based counterparts in section 5 in terms of mean return and alpha. The FM regressions additionally are in line with section 5.2. Value (reversal) from section 5 appears to perform worse than the other value proxies across the mean return, Jensen alpha and FM regression. Contrary to the long-short approach, the effect for the other value proxies seems to be clear. All value proxies produce positive mean returns and mostly positive alphas (even though insignificant). Only dividend yield underperforms in terms of alpha. FM regression coefficients however, are either insignificant

or priced in the wrong direction. Size on the other hand produces economically significant average returns and a statistically significant Jensen alpha. It also is correctly priced however, with an insignificant t-statistics.

Table 16: Style of styles long-only robustness check

Average approach	Mean return (%)	Volatility (%)	Jensen alpha (%)	Jensen t-statistics	FM coefficient	FM t-statistics
Low vol	0.8529	4.2254	0.1074	1.5763	-0.0269	-0.0176
Low beta	0.7932	4.0021	0.1007	1.6505	-0.0083	-0.0362
Momentum (WML)	0.6945	3.1807	0.0981	1.3836	0.0308	0.0471
Nominal	0.6912	3.5486	0.0645	1.3398	0.0000	0.0360
BEME	0.8045	4.5602	0.0689	1.2133	0.0054	0.0140
CF	0.7676	4.5849	0.0296	0.5573	-0.0284	-0.0200
Div Yield	0.7067	4.6393	-0.0345	-0.6711	0.0033	0.0354
EBIT	0.8486	4.4417	0.1257	1.9257	0.0212	0.0895
PE	0.8925	4.3658	0.1696	3.2718	0.0001	0.0523
Reversal	0.6872	4.3763	-0.0816	-0.9032	-0.0607	-0.2180
Size	0.8411	4.2812	0.1463	2.3410	0.0025	0.0545

Mean return describes the mean monthly hedge portfolio return in %. Volatility is the monthly volatility in %. The Jensen alpha is the excess return of any given strategy in % when compared to the equally weighted returns of the 242 underlying investment styles. The FM columns describe the results of an univariate FM regression of any given style of styles on the underlying style universe.

All in all this robustness check is not able to reject the results from section 5. Alternative style of styles approaches like differentials or averages tend to be mixed with no clear direction in the long-short variant. The long-only approach basically arrives at the same results as section 5.2. This might also lead to the conclusion that the price based calculation approach seems to be superior to alternative methods.

7 Conclusion

This paper aims at a set of goals. First, we utilize a large European data set comprised of data from 10 European sectors, 16 countries and 4 different company size groups to evaluate 4 different investment styles described in the academic literature. We show that 3 out of these 4 styles do exist in European data. Only size does not appear to be a successful investment strategy in Europe. For value, we can support the argument of Asness et al. [2015a] and Fama and French [2012] that the value style appears to be driven by small cap stocks. The styles, momentum and defensive deliver results in line with the academic literature.

After reviewing the 4 styles we apply a second layer of styles on 242 examined single styles

from the sector, company size and country styles universe. We evaluate momentum (as measured by 2-12 months WML and 1-year rolling sharpe ratio), defensive (as proxied by low volatility and low beta) and value (as measured by long-term reversal). It seems that momentum can form a successful second layer investment strategy or style of styles. Defensive and value lack to produce meaningful results within a long-short framework. From the results of the FF- and FM-regressions we draw the conclusion that momentum can be regarded as an additional characteristic premium. The two momentum style of styles proxies can add tremendous diversification potential both in a long-short and long-only environment. This finding can also not be rejected by alternative style of styles calculation methodologies.

An investigation of the styles of styles in other equity markets like the US, Asia/Japan or Emerging markets would be a necessary robustness check to confirm the described results. Further interesting fields for future research could be the behaviour of styles of styles in other asset classes like fixed income, foreign exchange, commodities or within a multi-asset framework. Also, the inclusion of styles of styles in an asset pricing model for single investment styles, mutual funds or equity markets in general could be considered. Additionally, there might even exist third-, fourth- or more level styles. We also have a first impression (when looking at the Jensen alpha R^2 s) that style of styles appear to be independent from traditional equity markets and single styles, but they are also explained to some extent by the mean single style proxy returns which could be similar to a "style market factor". For (hedge) fund of funds managers the styles of styles could additionally be interesting. Applying styles like momentum on a (hedge) fund of funds could produce additional returns.

References

1. Aitken, Michael J. et al. (2004). “The impact of electronic trading on bid-ask spreads: Evidence from futures markets in Hong Kong, London, and Sydney”. In: *Journal of Futures Markets* 24.7, pp. 675–696.
2. Angel, James J., Lawrence Harris, and Chester S. Spatt (2010). “Equity Trading in the 21st Century”. In: *Marshall School of Business Working Paper No. FBE 09-10*.
3. Arnott, Robert D et al. (1989). “Forecasting factor returns”. In: *The Journal of Portfolio Management* 16.1, pp. 28–35.
4. Arshanapalli, Bala G, T. Daniel Coggin, and John Doukas (1998). “Multifactor Asset Pricing Analysis of International Value Investment Strategies”. In: *The Journal of Portfolio Management* 24.4, pp. 10–23.
5. Arshanapalli, Bala G, Lorne N Switzer, and Karim Panju (2007). “Equity-style timing: A multi-style rotation model for the Russell large-cap and small-cap growth and value style indexes”. In: *Journal of Asset Management* 8.1, pp. 9–23.
6. Artmann, Sabine, Philipp Finter, and Alexander Kempf (2012). “Determinants of Expected Stock Returns: Large Sample Evidence from the German Market”. In: *Journal of Business Finance & Accounting*, pp. 758–784.
7. Asness, Clifford and Andrea Frazzini (2013). “The Devil in HML’s Details”. In: *The Journal of Portfolio Management* 39.4, pp. 49–68.
8. Asness, Clifford et al. (2015a). “Fact, Fiction, and Value Investing”. In: *The Journal of Portfolio Management* 42.1, pp. 34–52.
9. Asness, Clifford S. et al. (2015b). “Investing with Style”. In: *Journal of Investment Management* 13.1, pp. 27–63.
10. Asness, Clifford S et al. (2000). “Style Timing: Value versus Growth”. In: *The Journal of Portfolio Management* 26.3, pp. 50–60.

11. Banz, Rolf W. (1981). "The relationship between return and market value of common stocks". In: *Journal of Financial Economics* 9.1, pp. 3–18.
12. Barroso, Pedro and Pedro Santa-Clara (2015). "Momentum has its moments". In: *Journal of Financial Economics* 116.1, pp. 111–120.
13. Basu, S. (1977). "Investment Performance of common stocks in relation to their Price-Earnings ratios: A test of the efficient market hypothesis". In: *The Journal of Finance* 32.3, pp. 663–682.
14. Bird, Ron and Jonathan Whitaker (2003). "The performance of value and momentum investment portfolios: Recent experience in the major European markets". In: *Journal of Asset Management* 4.4, pp. 221–246.
15. Black, Fischer, Michael C. Jensen, and Myron Scholes (1972). "The Capital Asset Pricing Model: Some Empirical Tests". In: *Studies in the Theory of Capital Markets*. Ed. by Michael C. Jensen.
16. Blitz, David C and Pim van Vliet (2007). "The Volatility Effect". In: *The Journal of Portfolio Management* 34.1, pp. 102–113.
17. Blume, Marshall E. and Frank Husic (1973). "Price, Beta, And Exchange Listing". In: *The Journal of Finance* 28.2, pp. 283–299.
18. Brouwer, Iwan (1997). "Contrarian Investment Strategies in a European Context". In: *Journal of Business Finance & Accounting* 24.9&10, pp. 1353–1366.
19. Carhart, Mark M. (1997). "On Persistence in Mutual Fund Performance". In: *The Journal of Finance* 52.1, pp. 57–82.
20. Chen, Hsiu-Lang and Werner DeBondt (2004). "Style momentum within the S&P-500 index". In: *Journal of Empirical Finance* 11.4, pp. 483–507.
21. Copeland, Maggie M. and Thomas E. Copeland (1999). "Market Timing: Style and Size Rotation Using the VIX". In: *Financial Analysts Journal* 55.2, pp. 73–81.
22. Daniel, Kent and Tobias J. Moskowitz (2016). "Momentum crashes". In: *Journal of Financial Economics* 122.2, pp. 221–247.

23. DeBondt, Werner F. M. and Richard Thaler (1985). “Does the Stock Market Overreact?” In: *The Journal of Finance* 40.3, pp. 793–805.
24. Dijk, Mathijs A. van (2011). “Is size dead? A review of the size effect in equity returns”. In: *Journal of Banking & Finance* 35.12, pp. 3263–3274.
25. Doeswijk, R.Q. (1997). “Contrarian Investment in the Dutch Stock Market”. In: *De Economist* 145.4, pp. 573–598.
26. Edwards, Amy K., Lawrence E. Harris, and Michael S. Piwowar (2007). “Corporate Bond Market Transaction Costs and Transparency”. In: *The Journal of Finance* 62.3, pp. 1421–1451.
27. Elton, Edwin J., Martin J. Gruber, and Christopher R. Blake (1995). “Fundamental Economic Variables, Expected Returns, and Bond Fund Performance”. In: *The Journal of Finance* 50.4, pp. 1229–1256.
28. Fama, Eugene F. and Kenneth R. French (2015). “A five-factor asset pricing model”. In: *Journal of Financial Economics* 116.1, pp. 1–22.
29. Fama, Eugene F. and Kenneth R. French (1993). “Common risk factors in the returns on stocks and bonds”. In: *Journal of Financial Economics* 33.1, pp. 3–56.
30. Fama, Eugene F. and Kenneth R. French (1988). “Dividend yields and expected stock returns”. In: *Journal of Financial Economics* 22.1, pp. 3–25.
31. Fama, Eugene F. and Kenneth R. French (2017). “International tests of a five-factor asset pricing model”. In: *Journal of Financial Economics* 123.3, pp. 441–463.
32. Fama, Eugene F. and Kenneth R. French (2012). “Size, value, and momentum in international stock returns”. In: *Journal of Financial Economics* 105.3, pp. 457–472.
33. Fama, Eugene F. and Kenneth R. French (1992). “The Cross-Section of Expected Stock Returns”. In: *The Journal of Finance* 47.2, pp. 427–465.
34. Fama, Eugene F. and Kenneth R. French (1998). “Value versus Growth: The International Evidence”. In: *The Journal of Finance* 53.6, pp. 1975–1999.

35. Fama, Eugene F. and James D. MacBeth (1973). "Risk, Return, and Equilibrium: Empirical Tests". In: *Journal of Political Economy* 81.3, pp. 607–636.
36. Fieberg, Christian, Armin Varmaz, and Thorsten Poddig (2016). "Covariances vs. characteristics: what does explain the cross section of the German stock market returns?" In: *Business Research* 9.1, pp. 27–50.
37. Forner, Carlos and Joaquin Marhuenda (2003). "Contrarian and Momentum Strategies in the Spanish Stock Market". In: *European Financial Management* 9.1, pp. 67–88.
38. Frazzini, Andrea and Lasse Heje Pedersen (2014). "Betting against beta". In: *Journal of Financial Economics* 111.1, pp. 1–25.
39. Fuertes, Ana-Maria, Joëlle Miffre, and Adrian Fernandez-Perez (2014). "Commodity Strategies Based on Momentum, Term Structure, and Idiosyncratic Volatility". In: *Journal of Futures Markets* 35.3, pp. 274–297.
40. Gebhardt, William R., Soeren Hvidkjaer, and Bhaskaran Swaminathan (2005). "The cross-section of expected corporate bond returns: Betas or characteristics?" In: *Journal of Financial Economics* 75.1, pp. 85–114.
41. Graham, Benjamin and David Dodd (1934). *Security Analysis*. 1st ed. Whittlesey House.
42. Green, Jeremiah, John R. M. Hand, and X. Frank Zhang (2017). "The Characteristics that Provide Independent Information about Average U.S. Monthly Stock Returns". In: *The Review of Financial Studies*.
43. Hammerich, Ulrich J., Christian Fieberg, and Thorsten Poddig (2016). "Nominal Stock Price Investing". In: *Working Paper*.
44. Hendershott, Terrence, Charles M. Jones, and Albert J. Menkveld (2011). "Does Algorithmic Trading Improve Liquidity?" In: *The Journal of Finance* 66.1, pp. 1–33.
45. Hou, Kewei, G. Andrew Karolyi, and Bong-Chan Kho (2011). "What Factors Drive Global Stock Returns?" In: *Review of Financial Studies* 24.8, pp. 2527–2574.

46. Ince, Ozgur S. and R. Burt Porter (2006). "Individual Equity Return Data from Thomson Datastream: Handle with Care!" In: *Journal of Financial Research* 29.4, pp. 463–479.
47. Jacobs, Heiko and Sebastian Müller (2017). "Anomalies Across the Globe: Once Public, No Longer Existent?" In: *Working paper*.
48. Jegadeesh, Narasimhan and Sheridan Titman (1993). "Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency". In: *The Journal of Finance* 48.1, pp. 65–91.
49. Jensen, Michael C. (1968). "The performance of Mutual Funds in the period 1945–1964". In: *The Journal of Finance* 23.2, pp. 389–416. ISSN: 1540-6261.
50. Jostova, Gergana et al. (2013). "Momentum in Corporate Bond Returns". In: *Review of Financial Studies* 26.7, pp. 1649–1693.
51. Kao, Duen-Li and Robert D. Shumaker (1999). "Equity Style Timing". In: *Financial Analysts Journal* 55.1, pp. 37–48.
52. Kim, Dongcheol (1997). "A reexamination of Firm Size, Book-To-Market, and Earnings Price in the Cross-Section of Expected Stock Returns". In: *The Journal of Financial and Quantitative Analysis* 32.4, p. 463.
53. Kojien, Ralph S. J. et al. (2013). "Carry". In: *NBER working paper series* 19325.
54. Kroencke, Tim A., Felix Schindler, and Andreas Schrimpf (2013). "International Diversification Benefits with Foreign Exchange Investment Styles". In: *Review of Finance* 18.5, pp. 1847–1883.
55. Lakonishok, Josef, Andrei Shleifer, and Robert W. Vishny (1994). "Contrarian Investment, Extrapolation, and Risk". In: *The Journal of Finance* 49.5, pp. 1541–1578.
56. Levis, Mario and Manolis Liodakis (1999). "The Profitability of Style Rotation Strategies in the United Kingdom". In: *The Journal of Portfolio Management* 26.1, pp. 73–86.
57. Levis, Mario and Nicholas Tassaromatis (2004). "Style Rotation Strategies". In: *The Journal of Portfolio Management* 30.4, pp. 160–169.

58. Linnainmaa, Juhani and Michael Roberts (2016). “The History of the Cross Section of Stock Returns”. In: *Working paper*.
59. Lucas, André, Ronald van Dijk, and Teun Kloek (2002). “Stock selection, style rotation, and risk”. In: *Journal of Empirical Finance* 9.1, pp. 1–34.
60. McLean, R. David and Jeffrey Pontiff (2016). “Does Academic Research Destroy Stock Return Predictability?” In: *The Journal of Finance* 71.1, pp. 5–32.
61. Menkhoff, Lukas et al. (2012). “Currency momentum strategies”. In: *Journal of Financial Economics* 106.3, pp. 660–684.
62. Miffre, Joëlle and Georgios Rallis (2007). “Momentum strategies in commodity futures markets”. In: *Journal of Banking & Finance* 31.6, pp. 1863–1886.
63. Miller, Keith L et al. (2013). “Size Rotation in the U.S. Equity Market”. In: *The Journal of Portfolio Management* 39.2, pp. 116–127.
64. Moerlose, Sandrine de and Pierre Giot (2011). “Style investing and momentum investing: A case study”. In: *Journal of Asset Management* 12.6, pp. 407–417.
65. Naranjo, Andy, M. Nimalendran, and Mike Ryngaert (1998). “Stock Returns, Dividend Yields, and Taxes”. In: *The Journal of Finance* 53.6, pp. 2029–2057.
66. Peltomäki, Jarkko and Emilia Peni (2009). “Is There Momentum in Cross-Sectional Anomalies?” In: *The Journal of Wealth Management* 12.3, pp. 78–88.
67. Sarno, Lucio, Paul Schneider, and Christian Wagner (2012). “Properties of foreign exchange risk premiums”. In: *Journal of Financial Economics* 105.2, pp. 279–310.
68. Schmidt, Martin H. (2017). “Trading strategies based on past returns: evidence from Germany”. In: *Financial Markets and Portfolio Management* 31.2, pp. 201–256.
69. Sharpe, William F. (1966). “Mutual Fund Performance”. In: *The Journal of Business* 39.S1, p. 119.

70. Shen, Qian, Andrew C. Szakmary, and Subhash C. Sharma (2007). “An examination of momentum strategies in commodity futures markets”. In: *Journal of Futures Markets* 27.3, pp. 227–256.
71. Sweeney, Richard J. (1986). “Beating the Foreign Exchange Market”. In: *The Journal of Finance* 41.1, pp. 163–182.
72. Viale, Ariel M., James W. Kolari, and Donald R. Fraser (2009). “Common risk factors in bank stocks”. In: *Journal of Banking & Finance* 33.3, pp. 464–472.

Appendices

The numbers in appendix A describe whether a specific style or proxy fulfils the property stated in the table heading. A value of 1 is equivalent to a "yes" and a value of 0 could be read as "no". These outcomes are then averaged in the bottom line of each table. The columns "Defensive", "Momentum", "Value" and "Size" summarize the results from each proxy reported in the middle part of each table. Low Vol and Low Beta describe the style "Defensive", the proxies Momentum (WML) and Nominal are part of the "Momentum" group. "Value" is comprised of BEME, CF, Div Yield, EBIT, PE and Reversal. "Size" is solely described by Size.

The following tables in appendix B-D show the performance metrics of each investment style within every data panel described in section 4. The tables report the results of single-sorted and equally weighted portfolios. Returns are calculated as local total returns. In the end of each section we apply Jensen's alpha regressions of the the styles against the equally weighted mean return of each data set investigated. Additionally, we run several FM-regressions. The formulas for the calculation of the different strategies can be found in table 2.

Every style or proxy is sorted into 5 portfolios. We report the mean return (in %), the t-statistics from a t-test against the null hypothesis of a mean equal to zero, the p-value of the t-test and the standard deviation in (%) of the respective return series. Furthermore, we report the return/risk-ratio, skewness, kurtosis and the average of the respective sorting criterion ($\overline{Characteristic}$) for every single portfolio. The average sorting criterion of the hedge portfolio is the mean of the average sorting criterion from P05 and P01.

The Jensen's alpha regressions include the alpha (in %), the respective t-stat and p-value as described above and the adjusted R^2 (also in %). To check for autocorrelation and heteroskedacity we report Durbin Watson, Breusch Pagan and White test results. Additionally, we calculate the beta of every style or proxy with respect to the underlying asset universe. The FM-regressions are calculated as described in the methodology section.

Appendix A Investment style results

A.1 Full Europe investment styles

Table 17: Full Europe investment styles - positive monthly hedge returns

Data set	Low Vol	Low Beta	Momentum (WML)	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size	Defensive	Momentum	Value	Size
Full EU	1	1	1	1	1	1	1	1	1	0	0	1	1	0.83	0
Large cap	1	1	1	1	1	1	1	1	1	0	1	1	1	0.83	1
Medium cap	1	1	1	1	1	1	1	1	1	0	0	1	1	0.83	0
Small cap	1	0	1	1	1	1	1	1	1	0	1	0.5	1	0.83	1
Mean	1	0.75	1	1	1	1	1	1	1	0	0.5	0.875	1	0.83	0.5

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic > |2|) are produced. Further information on the single data sets can be found in table 1 and 3. 1 equals 100%.

Table 18: Full Europe investment styles - significant alpha

Data set	Low Vol	Low Beta	Momentum (WML)	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size	Defensive	Momentum	Value	Size
Full EU	0	0	1	0	0	1	0	1	0	0	0	0	0.5	0.33	0
Large cap	0	0	1	0	0	0	0	0	0	0	0	0	0.5	0	0
Medium cap	0	0	1	0	0	0	0	0	0	0	0	0	0.5	0	0
Small cap	0	0	1	0	0	0	0	1	0	0	0	0	0.5	0.167	0
Mean	0	0	1	0	0	0.25	0	0.5	0	0	0	0	0.5	0.125	0

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic > |2|) are produced. Further information on the single data sets can be found in table 1 and 3. 1 equals 100%.

Table 19: Full Europe investment styles - correctly priced FM coefficient

Data set	Low Vol	Low Beta	Momentum (WML)	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size	Defensive	Momentum	Value	Size
Full EU	1	1	0	0	1	1	1	0	1	1	0	1	0	0.83	0
Large cap	1	1	0	0	1	1	1	0	1	0	0	1	0	0.667	0
Medium cap	1	1	0	0	1	1	1	0	0	0	0	1	0	0.5	0
Small cap	1	0	1	0	1	1	1	0	1	0	0	0.5	0.5	0.667	0
Mean	1	0.75	0.25	0	1	1	1	0	0.75	0.25	0	0.875	0.125	0.667	0

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic > |2|) are produced. Further information on the single data sets can be found in table 1 and 3. 1 equals 100%.

A.2 Sector investment styles

Table 20: Sector investment styles - positive monthly hedge returns

Data set	Low Vol	Low Beta	Momentum (WML)	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size	Defensive	Momentum	Value	Size
Construction	1	1	1	1	1	1	1	1	1	0	1	1	1	0.83	1
Manufacturing	1	1	1	1	1	1	1	1	1	0	0	1	1	0.83	0
Transport	1	1	1	0	1	1	1	1	1	0	1	1	0.5	0.83	1
Wholesale	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Retail	1	0	1	1	1	1	1	1	1	0	0	0.5	1	0.83	0
Finance	1	1	1	1	1	1	1	1	1	0	1	1	1	0.83	1
Services	1	0	1	1	1	1	1	1	1	0	0	0.5	1	0.83	0
Mean	1	0.71	1	0.86	1	1	1	1	1	0.14	0.57	0.86	0.93	0.85	0.57

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic $> |2|$) are produced. Further information on the single data sets can be found in table 1 and 3. 1 equals 100%.

Table 21: Sector investment styles - significant alpha

Data set	Low Vol	Low Beta	Momentum (WML)	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size	Defensive	Momentum	Value	Size
Construction	0	0	0	0	0	1	0	0	0	0	0	0	0	0.17	0
Manufacturing	0	0	1	0	0	0	0	0	0	0	0	0	0.5	0	0
Transport	0	0	0	0	0	0	0	1	0	0	0	0	0	0.17	0
Wholesale	0	0	1	0	1	1	0	0	1	0	0	0	0.5	0.5	0
Retail	0	0	1	0	0	0	1	0	0	0	0	0	0.5	0.17	0
Finance	0	0	0	0	0	0	1	0	1	0	0	0	0	0.33	0
Services	0	0	1	0	0	0	1	1	0	0	0	0	0.5	0.33	0
Mean	0	0	0.57	0	0.14	0.29	0.43	0.29	0.29	0	0	0	0.29	0.24	0

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic $> |2|$) are produced. Further information on the single data sets can be found in table 1 and 3. 1 equals 100%.

Table 22: Sector investment styles - correctly priced FM coefficient

Data set	Low Vol	Low Beta	Momentum (WML)	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size	Defensive	Momentum	Value	Size
Construction	1	1	0	0	1	1	0	0	0	0	0	1	0	0.33	0
Manufacturing	1	1	0	0	1	1	1	0	0	1	0	1	0	0.67	0
Transport	1	1	0	0	0	0	1	0	1	0	0	1	0	0.33	0
Wholesale	1	1	0	0	0	1	1	0	0	1	0	1	0	0.5	0
Retail	1	1	0	0	1	0	1	0	0	0	0	1	0	0.33	0
Finance	1	1	0	0	1	0	1	0	1	0	0	1	0	0.5	0
Services	1	1	0	0	1	1	1	0	0	0	0	1	0	0.5	0
Mean	1	1	0	0	0.71	0.57	0.86	0	0.29	0.29	0	1	0	0.45	0

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic $> |2|$) are produced. Further information on the single data sets can be found in table 1 and 3. 1 equals 100%.

A.3 Country investment styles

Table 23: Country investment styles - positive monthly hedge returns

Data set	Low Vol	Low Beta	Momentum (WML)	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size	Defensive	Momentum	Value	Size
Denmark	0	0	1	0	1	1	1	0	1	1	1	0	0.5	0.83	1
France	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Germany	1	1	1	1	1	1	1	1	1	0	0	1	1	0.83	0
Greece	0	1	1	1	0	1	1	1	1	0	0	0.5	1	0.67	0
Italy	1	1	1	0	0	0	1	0	1	0	1	1	0.5	0.33	1
Netherlands	1	1	0	1	1	1	1	1	1	1	0	1	0.5	1	0
Norway	0	1	1	1	1	1	1	1	1	0	0	0.5	1	0.83	0
Spain	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
Sweden	1	1	1	1	1	1	1	1	1	0	1	1	1	0.83	1
Switzerland	0	1	1	1	1	1	1	1	1	1	0	0.5	1	1	0
UK	1	1	1	1	1	1	1	1	1	0	0	1	1	0.83	0
Mean	0.64	0.91	0.91	0.82	0.82	0.91	1	0.82	1	0.45	0.36	0.77	0.86	0.83	0.36

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic $> |2|$) are produced. Further information on the single data sets can be found in table 1 and 3. 1 equals 100%.

Table 24: Country investment styles - significant alpha

Data set	Low Vol	Low Beta	Momentum (WML)	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size	Defensive	Momentum	Value	Size
Denmark	0	0	1	0	0	0	0	0	0	0	0	0	0.5	0	0
France	0	0	1	0	0	0	0	0	0	0	0	0	0.5	0	0
Germany	0	0	0	0	1	0	1	1	0	0	0	0	0	0.5	0
Greece	0	0	1	0	0	0	0	1	0	0	0	0	0.5	0.17	0
Italy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	0	0	1	0	0	0	0	0	0	0	0	0	0.5	0	0
Spain	0	1	0	0	0	1	0	1	0	0	0	0.5	0	0.33	0
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switzerland	0	0	0	0	0	1	0	0	0	0	0	0	0	0.17	0
UK	1	0	1	0	0	0	0	0	0	0	0	0.5	0.5	0	0
Mean	0.09	0.09	0.45	0	0.09	0.18	0.09	0.27	0	0	0	0.09	0.23	0.11	0

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic $> |2|$) are produced. Further information on the single data sets can be found in table 1 and 3. 1 equals 100%.

Table 25: Country investment styles - correctly priced FM coefficient

Data set	Low Vol	Low Beta	Momentum (WML)	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size	Defensive	Momentum	Value	Size
Denmark	1	1	0	0	0	0	0	0	1	1	0	1	0	0.33	0
France	1	1	0	0	1	1	1	1	0	0	0	1	0	0.67	0
Germany	1	1	0	0	1	0	0	1	0	0	0	1	0	0.33	0
Greece	1	0	0	0	1	1	0	1	0	0	0	0.5	0	0.5	0
Italy	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
Netherlands	1	1	0	0	1	0	0	0	0	0	0	1	0	0.17	0
Norway	1	1	0	0	0	0	0	1	0	0	0	1	0	0.17	0
Spain	1	1	0	0	1	1	1	1	0	1	0	1	0	0.83	0
Sweden	1	1	0	0	0	0	0	0	0	1	0	1	0	0.17	0
Switzerland	1	1	0	0	0	1	0	0	0	0	0	1	0	0.17	0
UK	1	1	1	0	0	1	1	1	0	0	0	1	0.5	0.5	0
Mean	1	0.91	0.09	0	0.45	0.45	0.27	0.55	0.09	0.27	0	0.95	0.05	0.35	0

The numbers in the table describe the percentage value of the style proxies in which positive monthly hedge portfolio returns, significant alphas (significant at the 10%-level) and significant FM regression coefficients (significant with a t-statistic $> |2|$) are produced. Further information on the single data sets can be found in table 1 and 3. 1 equals 100%.

Appendix B European Investment styles

B.1 Full Europe

Table 26: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4213	0.2655	0.5967	0.8075	0.8112	0.3899
t-stat	1.1397	0.7478	2.2065	3.9555	6.1735	1.3211
p-value	0.2552	0.4551	0.0281	0.0001	0.0000	0.1874
Standard Deviation (%)	6.2833	6.0360	4.5937	3.4605	2.2177	5.0164
Return/Risk	0.0670	0.0440	0.1299	0.2333	0.3658	0.0777
Skewness	-0.6552	-0.6819	-0.9529	-1.0076	-0.9184	0.2960
Kurtosis	4.8025	4.9166	5.1830	4.7967	4.2164	5.2450
<i>Characteristic</i>	0.2487	0.1151	0.0872	0.0697	0.0473	0.1480

Table 27: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
	0.0824	0.3362	0.5537	0.7473	0.9422	0.8598
	0.2441	1.2674	2.3694	3.3828	3.8173	3.5217
	0.8073	0.2059	0.0184	0.0008	0.0002	0.0005
	5.9174	4.6480	4.0929	3.8668	4.3193	4.2731
	0.0139	0.0723	0.1353	0.1933	0.2181	0.2012
	-0.4546	-0.8302	-0.8954	-0.9038	-0.8049	-0.3587
	5.5148	5.7147	5.4144	4.5880	4.8851	7.2566
	-0.3396	-0.0789	0.0439	0.1726	0.4864	0.0734

Table 28: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7412	0.6152	0.5512	0.5053	0.4505	-0.2907
t-stat	2.9482	2.5036	2.1573	1.7128	1.4361	-1.8140
p-value	0.0034	0.0128	0.0317	0.0877	0.1519	0.0706
Standard Deviation (%)	4.0335	3.9466	4.1059	4.7439	5.0463	2.5765
Return/Risk	0.1838	0.1559	0.1342	0.1065	0.0893	-0.1128
Skewness	-1.1672	-1.0479	-0.7964	-0.5089	-0.6227	0.4235
Kurtosis	5.5248	4.9970	4.9102	4.3329	4.9197	4.1987
<i>Characteristic</i>	1.4209	0.4959	0.0988	-0.2360	-0.6292	0.3958

Table 29: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
	0.3787	0.4480	0.4006	0.5727	0.5534	0.1746
	1.2633	1.6341	1.5501	2.4463	2.5750	1.0599
	0.2074	0.1032	0.1221	0.0150	0.0105	0.2900
	5.3546	4.8958	4.6151	4.1807	3.8376	2.9428
	0.0707	0.0915	0.0868	0.1370	0.1442	0.0593
	-0.5209	-0.7730	-0.9622	-0.9861	-1.0036	-0.2732
	4.2208	4.5546	4.8153	5.1321	5.1727	4.4393
	2.3303	3.7403	4.5637	5.4991	6.8464	4.5884

Table 30: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3386	0.4495	0.7180	0.7232	0.6034	0.2648
t-stat	0.7483	1.4147	3.1360	4.3592	5.0982	0.6301
p-value	0.4548	0.1581	0.0019	0.0000	0.0000	0.5290
Standard Deviation (%)	7.9040	5.5484	3.9947	2.8919	2.0618	7.3390
Return/Risk	0.0428	0.0810	0.1797	0.2501	0.2927	0.0361
Skewness	-0.5787	-0.7289	-0.7830	-0.9273	-0.6886	0.3519
Kurtosis	4.7567	4.7134	4.8477	4.2231	4.2658	5.3109
<i>Characteristic</i>	2.2355	1.1584	0.8022	0.4805	-0.1866	1.0245

Table 31: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
	0.2063	0.4580	0.6694	0.7206	0.7810	0.5747
	0.6773	1.8038	2.7620	3.0354	3.2243	2.9806
	0.4987	0.0722	0.0061	0.0026	0.0014	0.0031
	5.3804	4.4842	4.2792	4.1914	4.2760	3.4042
	0.0383	0.1021	0.1564	0.1719	0.1827	0.1688
	-0.6994	-1.0868	-0.9289	-0.7182	-0.3932	0.7718
	4.5631	5.4703	5.0524	4.7367	4.5222	7.3384
	0.5556	1.6973	2.5006	3.4568	5.4731	3.0143

Table 32: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2673	0.5376	0.6460	0.7656	0.7481	0.4808
t-stat	0.9280	2.2372	2.7873	3.1833	2.7705	2.7879
p-value	0.3541	0.0260	0.0056	0.0016	0.0059	0.0056
Standard Deviation (%)	5.0874	4.2435	4.0918	4.2460	4.7674	3.0450
Return/Risk	0.0525	0.1267	0.1579	0.1803	0.1569	0.1579
Skewness	-0.7420	-0.9118	-0.9164	-0.8369	-0.5427	0.2644
Kurtosis	4.6498	5.0384	5.2612	5.1948	4.8977	9.1334
<i>Characteristic</i>	55.6258	23.2417	18.8274	15.2230	11.7684	33.6971

Table 33: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
	0.4008	0.4650	0.6088	0.5807	0.7624	0.3616
	1.5615	1.9911	2.5341	2.1975	2.6116	1.9811
	0.1194	0.0473	0.0117	0.0287	0.0094	0.0484
	4.5337	4.1244	4.2418	4.6664	5.1544	3.2230
	0.0884	0.1127	0.1435	0.1244	0.1479	0.1122
	-0.7194	-0.9584	-0.6869	-0.6695	-0.5982	-0.0169
	5.1570	5.0249	4.5021	4.5119	5.1887	8.6970
	0.1887	0.3302	0.4672	0.6509	1.0563	0.6225

Table 34: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2943	0.5200	0.6396	0.6664	0.8930	0.5987
t-stat	1.0655	2.2193	2.6969	2.6805	3.2590	3.3744
p-value	0.2874	0.0272	0.0074	0.0077	0.0012	0.0008
Standard Deviation (%)	4.8788	4.1374	4.1873	4.3893	4.8369	3.1318
Return/Risk	0.0603	0.1257	0.1527	0.1518	0.1846	0.1912
Skewness	-0.5770	-0.9801	-0.8750	-0.7846	-0.5106	-0.2463
Kurtosis	4.3889	4.9740	5.0962	5.2850	4.9430	8.3944
<i>Characteristic</i>	0.0613	0.0890	0.1163	0.1577	0.2627	0.1620

Table 35: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
	0.2988	0.5501	0.7140	0.7709	0.9381	0.6393
	1.1647	2.3685	3.1031	3.0158	3.5050	4.2040
	0.2450	0.0184	0.0021	0.0028	0.0005	0.0000
	4.5315	4.1011	4.0622	4.5131	4.7241	2.6831
	0.0659	0.1341	0.1758	0.1708	0.1986	0.2383
	-0.7171	-0.8851	-0.8080	-0.8442	-0.7447	-0.0985
	4.4027	4.7493	4.6973	5.3791	5.2529	6.4499
	0.0576	0.0812	0.1070	0.1490	0.5933	0.3254

Table 36: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5150	0.5175	0.4952	0.3549	0.4753	-0.0397
t-stat	2.1861	2.1747	1.9685	1.3378	1.6475	-0.2726
p-value	0.0295	0.0304	0.0499	0.1819	0.1004	0.7853
Standard Deviation (%)	4.2073	4.2498	4.4922	4.7384	5.1528	2.6016
Return/Risk	0.1224	0.1218	0.1102	0.0749	0.0922	-0.0153
Skewness	-0.7640	-0.8862	-0.8816	-0.9341	-0.7762	-0.3669
Kurtosis	3.9120	4.6483	4.8581	5.3284	5.2973	4.6366
<i>Characteristic</i>	9.6918	8.3686	7.7005	7.2072	6.7848	8.2383

B.2 Large stocks

Table 37: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4110	0.3577	0.4673	0.7461	0.8132	0.4022
t-stat	1.1828	1.0821	1.7525	3.6307	5.3004	1.4614
p-value	0.2378	0.2800	0.0806	0.0003	0.0000	0.1449
Standard Deviation (%)	5.9060	5.6191	4.5315	3.4850	2.5945	4.6781
Return/Risk	0.0696	0.0637	0.1031	0.2141	0.3134	0.0860
Skewness	-0.5697	-0.5903	-0.8043	-0.8859	-0.8298	0.1487
Kurtosis	4.5633	4.7538	4.2920	4.3731	4.1584	5.1963
<i>Characteristic</i>	0.2229	0.1069	0.0796	0.0653	0.0506	0.1368

Table 39: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6611	0.6080	0.4178	0.5630	0.5199	-0.1412
t-stat	2.6497	2.4345	1.6249	2.0508	1.6970	-0.8301
p-value	0.0085	0.0155	0.1052	0.0411	0.0907	0.4071
Standard Deviation (%)	4.0059	4.0115	4.1350	4.4124	4.9270	2.7382
Return/Risk	0.1650	0.1516	0.1010	0.1276	0.1055	-0.0516
Skewness	-0.8945	-0.9232	-0.9354	-0.7077	-0.7441	0.2270
Kurtosis	4.4952	4.7121	4.8251	4.0703	4.4153	3.7598
<i>Characteristic</i>	1.5829	0.5934	0.1784	-0.1785	-0.5971	0.4929

Table 41: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3000	0.4014	0.5927	0.6192	0.7099	0.4100
t-stat	0.6964	1.3122	2.6173	3.4558	4.9719	1.0453
p-value	0.4867	0.1904	0.0093	0.0006	0.0000	0.2967
Standard Deviation (%)	7.5224	5.3415	3.9522	3.1257	2.4876	6.8491
Return/Risk	0.0399	0.0751	0.1500	0.1981	0.2854	0.0599
Skewness	-0.6906	-0.6380	-0.7721	-0.9592	-0.6149	0.5386
Kurtosis	4.8999	4.5386	4.0592	4.2312	3.4286	5.4078
<i>Characteristic</i>	1.7844	1.0738	0.7809	0.5273	0.0872	0.9358

Table 43: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3158	0.5417	0.6987	0.6993	0.7369	0.4211
t-stat	1.0981	2.3096	2.9048	3.0273	2.8850	2.1925
p-value	0.2730	0.0215	0.0039	0.0027	0.0042	0.0291
Standard Deviation (%)	5.0795	4.1418	4.2469	4.0784	4.5093	3.3915
Return/Risk	0.0622	0.1308	0.1645	0.1715	0.1634	0.1242
Skewness	-0.6887	-0.6372	-0.8601	-0.7595	-0.6604	0.2013
Kurtosis	4.8343	3.6479	5.2193	4.3455	4.4079	7.1427
<i>Characteristic</i>	48.7224	23.4698	18.5436	15.7464	11.8971	30.3098

Table 45: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5282	0.5219	0.5558	0.6121	0.8768	0.3486
t-stat	2.0676	2.2518	2.3987	2.6579	3.2459	2.0062
p-value	0.0395	0.0250	0.0170	0.0083	0.0013	0.0457
Standard Deviation (%)	4.5115	4.0925	4.0913	4.0663	4.7686	3.0688
Return/Risk	0.1171	0.1275	0.1358	0.1505	0.1839	0.1136
Skewness	-0.4203	-0.7249	-0.8393	-0.7434	-0.7448	0.0791
Kurtosis	4.0109	3.8244	4.2240	4.0487	4.5842	4.7835
<i>Characteristic</i>	0.0601	0.0878	0.1165	0.1585	0.2637	0.1619

Table 47: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5288	0.5217	0.4886	0.4659	0.5347	0.0060
t-stat	2.2639	2.1609	1.9233	1.9018	2.1982	0.0466
p-value	0.0242	0.0314	0.0553	0.0581	0.0286	0.9628
Standard Deviation (%)	4.1711	4.3116	4.5365	4.3753	4.3443	2.2899
Return/Risk	0.1268	0.1210	0.1077	0.1065	0.1231	0.0026
Skewness	-0.6677	-0.6718	-0.8538	-0.8286	-0.7588	-0.0352
Kurtosis	3.6999	4.0207	4.4457	4.8208	4.5329	5.1809
<i>Characteristic</i>	10.5219	9.5474	9.0069	8.6439	8.3553	9.4386

Table 38: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1590	0.5146	0.5772	0.6664	0.8824	0.7233
t-stat	0.4960	2.0562	2.6483	3.0190	3.4661	2.9783
p-value	0.6203	0.0406	0.0085	0.0027	0.0006	0.0031
Standard Deviation (%)	5.6190	4.3835	3.8166	3.8645	4.4559	4.2523
Return/Risk	0.0283	0.1174	0.1512	0.1724	0.1980	0.1701
Skewness	-0.6250	-0.7984	-0.8030	-0.6160	-0.5355	-0.1180
Kurtosis	5.6831	4.5675	3.9028	3.7548	4.9368	6.5530
<i>Characteristic</i>	-0.2996	-0.0450	0.0678	0.1869	0.4792	0.0898

Table 40: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4987	0.4660	0.5086	0.5373	0.5288	0.0301
t-stat	1.7595	1.6865	2.0529	2.4105	2.5336	0.1669
p-value	0.0794	0.0927	0.0409	0.0165	0.0118	0.8676
Standard Deviation (%)	5.0623	4.9347	4.4243	3.9804	3.7274	3.2215
Return/Risk	0.0985	0.0944	0.1150	0.1350	0.1419	0.0093
Skewness	-0.3990	-0.8262	-0.7169	-0.8687	-0.9579	-0.1045
Kurtosis	3.6133	4.3646	4.2527	4.3035	5.0494	4.3926
<i>Characteristic</i>	2.6689	3.9601	4.6850	5.6269	7.1003	4.8846

Table 42: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3758	0.5839	0.5300	0.6968	0.7684	0.3927
t-stat	1.2864	2.3228	2.1076	2.9742	3.4009	1.8372
p-value	0.1992	0.0208	0.0358	0.0032	0.0008	0.0671
Standard Deviation (%)	5.1593	4.4391	4.4412	4.1361	3.9884	3.7749
Return/Risk	0.0728	0.1315	0.1193	0.1685	0.1927	0.1040
Skewness	-0.6082	-1.0179	-0.8266	-0.6605	-0.4995	0.5941
Kurtosis	4.3304	4.9845	4.5644	4.2812	3.5054	5.3315
<i>Characteristic</i>	0.9315	1.9320	2.7444	3.6534	5.4379	3.1847

Table 44: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4710	0.5152	0.6372	0.6656	0.6782	0.2073
t-stat	1.9549	2.2652	2.6323	2.4887	2.4505	1.1496
p-value	0.0514	0.0242	0.0089	0.0133	0.0148	0.2512
Standard Deviation (%)	4.2546	4.0162	4.2744	4.7223	4.8874	3.1848
Return/Risk	0.1107	0.1283	0.1491	0.1409	0.1388	0.0651
Skewness	-0.5529	-0.6350	-0.7854	-0.7107	-0.6576	-0.5743
Kurtosis	4.8003	3.7175	4.5425	4.5121	3.9247	6.9963
<i>Characteristic</i>	0.1779	0.3111	0.4278	0.5855	0.9379	0.5579

Table 46: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4558	0.5072	0.7248	0.6957	0.8409	0.3851
t-stat	1.8356	2.2909	3.2779	2.8544	3.0784	2.3564
p-value	0.0673	0.0226	0.0012	0.0046	0.0023	0.0190
Standard Deviation (%)	4.3851	3.9099	3.9034	4.3030	4.8223	2.8860
Return/Risk	0.1039	0.1297	0.1857	0.1617	0.1744	0.1334
Skewness	-0.6100	-0.7208	-0.8204	-0.7920	-0.8189	-0.2487
Kurtosis	4.0347	4.0741	4.2591	4.6280	4.5953	5.2889
<i>Characteristic</i>	0.0569	0.0799	0.1057	0.1451	0.4779	0.2674

B.3 Medium stocks

Table 48: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3936	0.2293	0.5161	0.9431	0.9860	0.5924
t-stat	1.0204	0.6558	1.8401	4.4088	6.7571	1.8626
p-value	0.3083	0.5124	0.0667	0.0000	0.0000	0.0634
Standard Deviation (%)	6.5572	5.9443	4.7657	3.6235	2.4593	5.4046
Return/Risk	0.0600	0.0386	0.1083	0.2603	0.4009	0.1096
Skewness	-0.6428	-0.7741	-0.9729	-0.8805	-0.8071	0.1615
Kurtosis	4.8255	4.8678	5.1574	4.5654	3.7928	5.3361
<i>Characteristic</i>	0.2305	0.1145	0.0892	0.0730	0.0532	0.1419

Table 50: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6916	0.8377	0.6034	0.3733	0.5243	-0.1673
t-stat	2.4796	3.2505	2.3350	1.1752	1.6712	-0.8660
p-value	0.0137	0.0013	0.0202	0.2408	0.0957	0.3871
Standard Deviation (%)	4.4793	4.1320	4.1516	5.1115	5.0454	3.1088
Return/Risk	0.1544	0.2027	0.1453	0.0730	0.1039	-0.0538
Skewness	-1.4510	-0.8632	-0.5134	-0.4014	-0.6224	0.4557
Kurtosis	7.2875	4.9241	4.1755	4.7096	4.1381	3.9940
<i>Characteristic</i>	1.4688	0.5723	0.1395	-0.2157	-0.6176	0.4256

Table 52: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1658	0.3424	0.6866	0.8167	0.8389	0.6731
t-stat	0.3622	1.0357	2.7626	4.3439	6.2600	1.6079
p-value	0.7174	0.3011	0.0061	0.0000	0.0000	0.1088
Standard Deviation (%)	7.9925	5.7725	4.3375	3.2774	2.3312	7.3098
Return/Risk	0.0207	0.0593	0.1583	0.2492	0.3598	0.0921
Skewness	-0.5290	-0.9250	-0.7475	-0.7675	-0.6940	0.1898
Kurtosis	4.7090	5.1335	4.9420	3.9131	4.4323	5.1408
<i>Characteristic</i>	1.8960	1.1739	0.8488	0.5600	0.0575	0.9767

Table 54: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1895	0.4726	0.6269	0.6828	0.7534	0.5639
t-stat	0.6702	1.8788	2.5682	2.6636	2.5919	2.6883
p-value	0.5032	0.0612	0.0107	0.0081	0.0100	0.0076
Standard Deviation (%)	4.9959	4.4428	4.3104	4.5264	5.1325	3.7034
Return/Risk	0.0379	0.1064	0.1454	0.1509	0.1468	0.1523
Skewness	-0.7435	-0.9856	-0.7919	-0.7217	-0.6305	-0.2084
Kurtosis	4.7724	5.7497	4.8222	4.7578	4.8535	4.9449
<i>Characteristic</i>	49.8400	23.0160	17.9643	15.1315	13.4411	31.6406

Table 56: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3240	0.4494	0.6048	0.5529	0.8676	0.5436
t-stat	1.1278	1.8498	2.4636	2.1770	2.8406	2.5674
p-value	0.2602	0.0653	0.0143	0.0302	0.0048	0.0107
Standard Deviation (%)	5.0741	4.2903	4.3348	4.4850	5.3922	3.7384
Return/Risk	0.0639	0.1047	0.1395	0.1233	0.1609	0.1454
Skewness	-0.7689	-0.9069	-0.6428	-0.9658	-0.4742	-0.3563
Kurtosis	4.9587	4.7187	4.9677	5.2755	5.3856	7.2307
<i>Characteristic</i>	0.0629	0.0885	0.1113	0.1486	0.2469	0.1549

Table 58: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5545	0.4032	0.4606	0.6275	0.5070	-0.0475
t-stat	2.2450	1.5444	1.7781	2.4248	1.8682	-0.4253
p-value	0.0254	0.1235	0.0763	0.0159	0.0626	0.6709
Standard Deviation (%)	4.4111	4.6632	4.6265	4.6212	4.8470	1.9941
Return/Risk	0.1257	0.0865	0.0996	0.1358	0.1046	-0.0238
Skewness	-0.9194	-1.0118	-0.7053	-0.8055	-0.8218	-0.4989
Kurtosis	4.6397	5.2696	4.7865	4.4439	4.8999	4.4219
<i>Characteristic</i>	8.1072	7.8844	7.6946	7.5226	7.3581	7.7327

Table 49: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1818	0.2845	0.5750	0.8143	1.0685	0.8867
t-stat	0.5368	1.0478	2.4150	3.5031	4.1289	3.4599
p-value	0.5918	0.2955	0.0163	0.0005	0.0000	0.0006
Standard Deviation (%)	5.9353	4.7576	4.1700	4.0686	4.5277	4.4858
Return/Risk	0.0306	0.0598	0.1379	0.2001	0.2360	0.1977
Skewness	-0.3973	-0.7494	-0.8983	-0.8672	-0.8954	-0.0883
Kurtosis	4.5197	5.6763	5.9445	4.7757	5.1166	5.5755
<i>Characteristic</i>	-0.3222	-0.0627	0.0651	0.2067	0.5371	0.1075

Table 51: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3981	0.4538	0.4049	0.6466	0.6365	0.2384
t-stat	1.3465	1.5896	1.5659	2.6506	2.7373	1.3054
p-value	0.1791	0.1129	0.1183	0.0084	0.0065	0.1927
Standard Deviation (%)	5.2798	5.0992	4.6175	4.3564	4.1523	3.2623
Return/Risk	0.0754	0.0890	0.0877	0.1484	0.1533	0.0731
Skewness	-0.4862	-0.7662	-1.0253	-0.7855	-1.0060	0.0475
Kurtosis	4.0383	4.3501	4.9307	4.6988	5.5914	3.5887
<i>Characteristic</i>	2.3320	3.7122	4.5977	5.5260	6.7899	4.5609

Table 53: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0792	0.5274	0.5897	0.6322	0.7107	0.6314
t-stat	0.2657	2.0139	2.3379	2.5510	2.7329	2.9746
p-value	0.7907	0.0448	0.0200	0.0112	0.0066	0.0032
Standard Deviation (%)	5.2675	4.6246	4.4541	4.3759	4.5913	3.7476
Return/Risk	0.0150	0.1140	0.1324	0.1445	0.1548	0.1685
Skewness	-0.6952	-1.1724	-0.8819	-0.6779	-0.4121	0.3653
Kurtosis	4.3815	6.6596	4.9385	4.1299	4.7419	4.4996
<i>Characteristic</i>	0.5282	1.6147	2.3984	3.3535	5.1956	2.8619

Table 55: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4110	0.3795	0.6112	0.4250	0.6403	0.2294
t-stat	1.4900	1.5490	2.6058	1.5380	2.0597	1.0388
p-value	0.1372	0.1223	0.0096	0.1250	0.0402	0.2997
Standard Deviation (%)	4.8714	4.3268	4.1418	4.8807	5.4902	3.9002
Return/Risk	0.0844	0.0877	0.1476	0.0871	0.1166	0.0588
Skewness	-0.6499	-1.0688	-0.5983	-0.5056	-0.6954	-0.5636
Kurtosis	5.2972	5.6090	4.1990	4.7858	4.9517	7.7072
<i>Characteristic</i>	0.1821	0.3177	0.4454	0.6202	1.0150	0.5985

Table 57: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2841	0.5478	0.6656	0.7386	0.8327	0.5486
t-stat	1.0588	2.2053	2.7210	2.7856	3.0849	3.1362
p-value	0.2905	0.0281	0.0069	0.0057	0.0022	0.0019
Standard Deviation (%)	4.7397	4.3863	4.3191	4.6817	4.7654	3.0879
Return/Risk	0.0599	0.1249	0.1541	0.1578	0.1747	0.1777
Skewness	-0.7360	-0.9995	-0.9002	-0.7198	-0.6308	-0.4125
Kurtosis	4.8101	6.0268	5.5070	5.1379	4.5107	4.4703
<i>Characteristic</i>	0.0586	0.0813	0.1051	0.1435	0.6436	0.3511

B.4 Small stocks

Table 59: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4209	0.2493	0.6426	0.7423	0.6369	0.2160
t-stat	1.0428	0.6179	2.1213	3.2161	4.3731	0.6905
p-value	0.2978	0.5371	0.0347	0.0014	0.0000	0.4904
Standard Deviation (%)	6.8616	6.8595	5.1466	3.9164	2.4672	5.3186
Return/Risk	0.0613	0.0363	0.1249	0.1895	0.2581	0.0406
Skewness	-0.4901	-0.8823	-1.0475	-1.1249	-1.2028	0.1307
Kurtosis	4.4467	5.8367	6.0284	5.4256	5.7735	4.1051
<i>Characteristic</i>	0.2441	0.1176	0.0920	0.0747	0.0516	0.1479

Table 61: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7965	0.4720	0.4674	0.6167	0.2041	-0.5924
t-stat	2.6903	1.5920	1.4086	1.6526	0.5428	-2.3257
p-value	0.0075	0.1124	0.1599	0.0994	0.5876	0.0207
Standard Deviation (%)	4.7532	4.7689	5.3383	6.0017	6.0543	4.0922
Return/Risk	0.1676	0.0990	0.0876	0.1028	0.0337	-0.1448
Skewness	-1.0733	-0.9939	-0.5737	-0.1840	-0.3136	0.1741
Kurtosis	6.2148	5.5107	5.0666	5.4087	4.7374	4.4923
<i>Characteristic</i>	0.8304	0.2495	-0.0484	-0.3220	-0.6529	0.0887

Table 63: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3452	0.6192	0.6600	0.6235	0.2877	-0.0575
t-stat	0.7247	1.7335	2.3366	2.9538	1.8813	-0.1351
p-value	0.4692	0.0840	0.0201	0.0034	0.0608	0.8927
Standard Deviation (%)	8.3191	6.2366	4.9308	3.6837	2.6701	7.4328
Return/Risk	0.0415	0.0993	0.1339	0.1693	0.1077	-0.0077
Skewness	-0.6168	-0.9347	-1.0976	-1.0665	-0.5877	0.3355
Kurtosis	4.9326	6.0658	5.8591	5.9573	4.3763	4.5541
<i>Characteristic</i>	2.1058	1.2023	0.8544	0.5396	-0.0343	1.0358

Table 65: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4019	0.4978	0.6547	0.8330	0.7124	0.3105
t-stat	1.4085	1.9701	2.5293	2.9700	2.1527	1.3789
p-value	0.1599	0.0497	0.0119	0.0032	0.0321	0.1689
Standard Deviation (%)	5.0395	4.4624	4.5703	4.9519	5.8440	3.9775
Return/Risk	0.0797	0.1116	0.1432	0.1682	0.1219	0.0781
Skewness	-0.7024	-0.8755	-0.7938	-0.8542	-0.4323	-0.1909
Kurtosis	4.5074	4.4580	5.7276	7.2231	5.6123	5.2676
<i>Characteristic</i>	78.6800	21.8424	17.7012	14.6888	11.5274	45.1037

Table 67: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2945	0.7142	0.7447	0.5608	0.8930	0.5986
t-stat	0.9689	2.8379	2.7484	1.9228	2.9046	2.5170
p-value	0.3333	0.0048	0.0063	0.0554	0.0039	0.0123
Standard Deviation (%)	5.3683	4.4432	4.7842	5.1510	5.4282	4.1993
Return/Risk	0.0549	0.1607	0.1557	0.1089	0.1645	0.1425
Skewness	-0.7643	-0.5731	-1.0808	-0.6226	-0.4674	0.2236
Kurtosis	4.6882	4.1272	6.1265	5.3415	7.1007	6.6306
<i>Characteristic</i>	0.0645	0.0925	0.1217	0.1609	0.2732	0.1689

Table 69: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3892	0.1676	0.3688	0.2984	0.8514	0.4622
t-stat	1.4143	0.6163	1.3127	1.0321	2.5228	2.7092
p-value	0.1582	0.5381	0.1902	0.3028	0.0121	0.0071
Standard Deviation (%)	4.9150	4.8587	5.0181	5.1646	6.0268	3.0464
Return/Risk	0.0792	0.0345	0.0735	0.0578	0.1413	0.1517
Skewness	-0.8547	-0.9633	-0.6850	-0.7381	-0.7084	0.3639
Kurtosis	5.3532	5.1024	5.3509	4.9258	5.4884	7.3741
<i>Characteristic</i>	7.2033	7.0598	6.9284	6.8019	6.6238	6.9135

Table 60: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0444	0.2504	0.5505	0.5455	0.9573	1.0016
t-stat	-0.1170	0.8125	2.0348	2.0158	3.5567	3.8194
p-value	0.9069	0.4171	0.0427	0.0446	0.0004	0.0002
Standard Deviation (%)	6.6416	5.3994	4.7387	4.7406	4.7109	4.5893
Return/Risk	-0.0067	0.0464	0.1162	0.1151	0.2032	0.2183
Skewness	-0.2869	-0.7930	-0.9193	-1.1497	-0.8486	-0.2858
Kurtosis	5.3978	6.9506	5.8922	6.8408	4.7496	5.2813
<i>Characteristic</i>	-0.3724	-0.1229	-0.0020	0.1184	0.4071	0.0174

Table 62: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3091	0.3789	0.3358	0.5155	0.4580	0.1489
t-stat	0.9021	1.2206	1.1852	1.8970	1.8112	0.7185
p-value	0.3677	0.2231	0.2368	0.0587	0.0710	0.4730
Standard Deviation (%)	6.1203	5.5438	5.0600	4.8529	4.5165	3.7017
Return/Risk	0.0505	0.0683	0.0664	0.1062	0.1014	0.0402
Skewness	-0.4680	-0.6609	-0.8788	-1.0169	-0.8972	-0.3063
Kurtosis	4.6992	5.0410	4.8530	5.7563	5.2210	4.0860
<i>Characteristic</i>	2.0567	3.5176	4.4140	5.3509	6.5457	4.3012

Table 64: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2745	0.2731	0.7059	0.8459	0.8966	0.6221
t-stat	0.8995	0.9831	2.7442	3.2984	3.0591	2.9577
p-value	0.3691	0.3263	0.0064	0.0011	0.0024	0.0033
Standard Deviation (%)	5.3908	4.9075	4.5416	4.5269	5.1744	3.7135
Return/Risk	0.0509	0.0557	0.1554	0.1869	0.1733	0.1675
Skewness	-0.4528	-1.0697	-0.7012	-0.8099	-0.4518	-0.0539
Kurtosis	4.1186	5.2490	6.0001	5.6855	5.2911	5.4366
<i>Characteristic</i>	0.3962	1.5786	2.3915	3.3514	5.4999	2.9480

Table 66: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4052	0.7094	0.4605	0.6548	0.8143	0.4092
t-stat	1.4080	2.7244	1.7470	2.2779	2.5283	1.7406
p-value	0.1601	0.0068	0.0816	0.0234	0.0119	0.0827
Standard Deviation (%)	5.0822	4.5973	4.6552	5.0765	5.6873	4.1519
Return/Risk	0.0797	0.1543	0.0989	0.1290	0.1432	0.0986
Skewness	-0.7578	-0.6666	-0.7887	-0.9225	-0.1319	0.3155
Kurtosis	4.5426	4.5332	4.7312	6.2955	4.7494	4.7519
<i>Characteristic</i>	0.2133	0.3669	0.5381	0.7404	1.1943	0.7038

Table 68: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1737	0.6460	0.7909	0.8768	0.8127	0.6390
t-stat	0.6180	2.5060	3.0422	3.0540	2.7320	3.1485
p-value	0.5370	0.0127	0.0025	0.0024	0.0066	0.0018
Standard Deviation (%)	4.9654	4.5516	4.5898	5.0682	5.2524	3.5828
Return/Risk	0.0350	0.1419	0.1723	0.1730	0.1547	0.1784
Skewness	-0.6530	-0.6453	-0.7166	-0.8756	-0.8844	0.0486
Kurtosis	4.3272	4.5582	4.6269	6.1582	6.0748	4.5197
<i>Characteristic</i>	0.0594	0.0860	0.1130	0.1628	0.6589	0.3591

B.5 Jensen's Alpha Regressions: Europe

Table 70: Full Europe

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.0091	-0.1705	0.5242	-0.1670	0.1498	0.3428	0.2560	0.4015	0.2221	-0.4484	-0.1634
t-stat	-0.0344	-0.4302	2.2430	-1.0272	0.8567	1.9947	1.3701	2.7382	1.3333	-3.3968	-1.1991
p-value	0.9726	0.6673	0.0256	0.3051	0.3922	0.0469	0.1716	0.0065	0.1834	0.0008	0.2314
adjusted R2 (%)	0.6655	1.1803	-0.3005	1.1995	2.5446	0.7372	-0.2384	2.4439	0.4926	0.0320	14.0781
Durbin Watson	1.6769	1.8860	1.7527	2.1329	1.6103	1.5577	1.6531	1.6292	1.5381	1.8814	1.9661
Breusch Pagan	53.8603	47.5754	8.4271	40.0866	0.0020	1.0309	18.6887	1.5793	2.8418	0.6436	21.9505
Breusch Pagan p-value	0.0000	0.0000	0.0037	0.0000	0.9640	0.3099	0.0000	0.2089	0.0918	0.4224	0.0000
White	24.8683	24.6071	2.7888	20.5913	2.8509	3.9107	8.9200	3.0543	4.1751	0.2838	12.3865
White p-value	0.0000	0.0000	0.4254	0.0001	0.4152	0.2713	0.0304	0.3833	0.2432	0.9631	0.0062
Beta	-0.0995	-0.1842	-0.0084	-0.0760	0.1133	0.0668	-0.0189	0.0932	0.0566	0.0292	0.2111
t-stat beta	-1.7806	-2.2067	-0.1714	-2.2211	3.0757	1.8456	-0.4791	3.0193	1.6136	1.0506	7.3544
p-value beta	0.0759	0.0280	0.8640	0.0270	0.0023	0.0659	0.6322	0.0027	0.1076	0.2942	0.0000

Table 71: Large stocks

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.0787	0.1142	0.3997	-0.2496	-0.0898	0.0457	0.0963	0.0783	0.1146	-0.3961	-0.2831
t-stat	0.3207	0.3121	1.7430	-1.4095	-0.5233	0.2768	0.4698	0.5090	0.6278	-2.9104	-2.2566
p-value	0.7486	0.7552	0.0823	0.1596	0.6011	0.7821	0.6388	0.6111	0.5306	0.0039	0.0247
adjusted R2 (%)	-0.1716	0.7106	-0.2397	-0.0850	1.5237	1.7929	-0.2793	3.8981	1.7188	-0.1094	3.2141
Durbin Watson	1.7670	1.8892	1.9784	2.1364	1.8812	1.7414	1.8612	1.8668	1.6687	2.0935	2.0771
Breusch Pagan	25.4898	41.5546	7.9314	18.0265	0.6539	0.0000	19.9317	1.3980	4.4682	0.3749	0.0947
Breusch Pagan p-value	0.0000	0.0000	0.0049	0.0000	0.4187	0.9945	0.0000	0.2371	0.0345	0.5403	0.7583
White	13.3504	22.6522	2.9938	11.8704	5.2636	5.0665	14.0835	3.4845	5.7089	0.5247	0.1330
White p-value	0.0039	0.0000	0.3926	0.0078	0.1535	0.1670	0.0028	0.3228	0.1267	0.9134	0.9876
Beta	-0.0358	-0.1457	0.0238	-0.0330	0.0920	0.0948	-0.0140	0.1264	0.1030	0.0239	0.0940
t-stat beta	-0.6670	-1.8217	0.4744	-0.8513	2.4522	2.6297	-0.3124	3.7606	2.5819	0.8037	3.4292
p-value beta	0.5052	0.0694	0.6355	0.3952	0.0147	0.0090	0.7549	0.0002	0.0103	0.4221	0.0007

Table 72: Medium stocks

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.2548	0.3643	0.5537	-0.0427	-0.0657	0.2374	0.3268	0.2381	0.2600	-0.4122	-0.3339
t-stat	0.9041	0.9340	2.2804	-0.2384	-0.3107	1.1664	1.6096	1.4209	1.2907	-2.6782	-3.0284
p-value	0.3666	0.3510	0.0232	0.8117	0.7562	0.2443	0.1085	0.1563	0.1977	0.0078	0.0027
adjusted R2 (%)	0.9821	1.1457	-0.2230	0.5231	0.1195	-0.1181	-0.1597	1.4714	-0.3061	0.0457	2.4712
Durbin Watson	1.5786	1.7612	1.6863	2.1112	1.8229	1.8897	1.7018	2.0436	1.5930	1.8763	2.2137
Breusch Pagan	57.7745	51.6584	5.3234	7.8129	0.0375	0.0705	0.1906	6.8162	0.1181	8.9711	15.7512
Breusch Pagan p-value	0.0000	0.0000	0.0210	0.0052	0.8464	0.7906	0.6624	0.0090	0.7312	0.0027	0.0001
White	27.4049	29.1730	3.7056	5.8960	1.0394	0.2724	4.8793	4.9053	1.3991	4.9779	12.4750
White p-value	0.0000	0.0000	0.2951	0.1168	0.7917	0.9651	0.1809	0.1789	0.7057	0.1734	0.0059
Beta	-0.1264	-0.1859	0.0280	-0.0644	0.0544	0.0350	-0.0309	0.0885	-0.0047	-0.0360	0.0731
t-stat beta	-2.0527	-2.1806	0.5282	-1.6443	1.1780	0.7860	-0.6953	2.4163	-0.1059	-1.0715	3.0347
p-value beta	0.0409	0.0299	0.5977	0.1011	0.2397	0.4325	0.4873	0.0162	0.9157	0.2847	0.0026

Table 73: Small stocks

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.0822	-0.3220	0.6678	-0.1331	0.1070	0.2844	0.3139	0.3237	0.0078	-0.7559	0.1665
t-stat	-0.2961	-0.8105	2.6956	-0.6543	0.4744	1.2486	1.5509	1.6665	0.0363	-3.7298	0.9975
p-value	0.7674	0.4182	0.0074	0.5134	0.6355	0.2127	0.1219	0.0966	0.9711	0.0002	0.3192
adjusted R2 (%)	0.4689	0.9815	-0.1083	-0.1497	0.0588	1.2208	-0.2371	1.5400	1.4379	-0.1861	0.8224
Durbin Watson	1.8186	1.9868	1.6830	2.0801	1.7850	1.8778	1.9453	1.9212	1.8346	1.9810	2.0079
Breusch Pagan	12.2411	27.7237	10.2043	14.6700	0.8906	4.7676	1.7619	9.5600	0.2655	0.5036	2.1423
Breusch Pagan p-value	0.0005	0.0000	0.0014	0.0001	0.3453	0.0290	0.1844	0.0020	0.6064	0.4779	0.1433
White	11.5295	21.4805	5.6527	9.0172	1.7896	3.4885	2.7225	6.1270	2.1079	0.3097	6.1070
White p-value	0.0092	0.0001	0.1298	0.0291	0.6172	0.3223	0.4364	0.1056	0.5503	0.9582	0.1065
Beta	-0.0965	-0.1782	-0.0436	-0.0319	0.0538	0.1114	0.0214	0.1046	0.1120	0.0279	0.0701
t-stat beta	-1.5895	-2.0522	-0.8060	-0.7182	1.0911	2.2371	0.4835	2.4632	2.3931	0.6309	1.9201
p-value beta	0.1129	0.0410	0.4209	0.4732	0.2760	0.0260	0.6291	0.0143	0.0173	0.5285	0.0557

B.6 Fama-MacBeth regressions: Europe

Table 74: Full Europe

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1121	-0.0039	0.0017	-0.0023	0.0097	0.0414	0.0014	0.0028	-0.0000	-0.0026	0.0001
t-stat	-9.4175	-2.6617	0.6426	-5.5373	4.8163	5.3781	3.9214	1.6376	-3.2485	-2.3765	0.2247

Table 75: Large stocks

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1766	-0.0067	-0.0062	-0.0028	0.0110	0.0352	0.0015	0.0032	-0.0001	-0.0038	-0.0003
t-stat	-6.9420	-2.1567	-1.6514	-4.5994	3.6297	3.3894	3.1014	0.9853	-3.0957	-3.0196	-0.3580

Table 76: Medium stocks

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1701	-0.0083	0.0048	-0.0018	0.0079	0.0455	0.0012	0.0033	-0.0001	-0.0027	0.0014
t-stat	-6.8695	-2.7046	1.4599	-3.4527	2.8538	3.8040	2.8562	1.1891	-1.4021	-1.7910	0.7863

Table 77: Small stocks

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1823	-0.0037	0.0094	-0.0026	0.0109	0.0416	0.0010	0.0056	-0.0001	0.0023	-0.0040
t-stat	-6.7612	-1.4414	2.5189	-4.6465	4.7956	4.5455	2.3253	1.9018	-2.7610	1.1684	-1.6271

Appendix C Sector Investment styles

C.1 Construction

Table 78: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0008	0.2672	0.8504	0.9467	0.8550	0.8559
t-stat	-0.0017	0.6087	2.3382	3.1895	3.9965	2.0923
p-value	0.9987	0.5432	0.0200	0.0016	0.0001	0.0372
Standard Deviation (%)	8.5602	7.4641	6.1779	5.0370	3.6267	6.9496
Return/Risk	-0.0001	0.0358	0.1377	0.1879	0.2358	0.1232
Skewness	-0.4029	-0.6920	-0.7132	-0.5591	-0.5719	0.0938
Kurtosis	4.6448	4.7630	5.6104	4.1110	5.2022	5.1775
<i>Characteristic</i>	0.2401	0.1261	0.0959	0.0794	0.0543	0.1472

Table 79: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
	-0.0413	0.2459	0.5512	0.7767	0.8919	0.9332
	-0.0943	0.6583	1.6091	2.3536	2.5757	2.4821
	0.9249	0.5108	0.1086	0.0192	0.0104	0.0136
	7.6790	6.5462	6.0015	5.7798	6.0639	6.5847
	-0.0054	0.0376	0.0919	0.1344	0.1471	0.1417
	-0.4109	-0.6990	-0.5796	-0.7675	-0.6480	0.1022
	4.8593	4.9880	4.4700	4.0201	4.6466	4.7637
	-0.3377	-0.0809	0.0517	0.1877	0.4464	0.0544

Table 80: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.9117	0.5144	0.6680	0.7747	0.5565	-0.3552
t-stat	2.2379	1.4000	1.7279	2.0044	1.2466	-0.9850
p-value	0.0259	0.1625	0.0850	0.0459	0.2134	0.3253
Standard Deviation (%)	6.5461	5.9106	6.2166	6.2124	7.1826	5.8035
Return/Risk	0.1393	0.0870	0.1075	0.1247	0.0775	-0.0612
Skewness	-0.8794	-0.6886	-0.5461	-0.2004	-0.4785	-0.1037
Kurtosis	6.8742	3.7779	3.7859	4.0403	4.5323	3.5079
<i>Characteristic</i>	1.6568	0.6592	0.2144	-0.1946	-0.6200	0.5184

Table 81: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
	0.0888	0.5920	0.6087	0.4806	0.4427	0.3539
	0.2198	1.5768	1.7398	1.4054	1.1859	0.9246
	0.8261	0.1158	0.0829	0.1609	0.2365	0.3558
	7.2156	6.7049	6.2486	6.1076	6.6671	6.8358
	0.0123	0.0883	0.0974	0.0787	0.0664	0.0518
	-0.5337	-0.4538	-0.4809	-0.7309	-0.6391	-0.0075
	3.7600	4.4858	4.8795	4.3323	4.9093	3.6256
	2.0085	3.4178	4.1883	5.1478	6.4466	4.2276

Table 82: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0504	0.5545	0.6397	0.9404	0.3434	0.2930
t-stat	0.0911	1.4193	1.9848	3.4078	1.4943	0.5962
p-value	0.9275	0.1568	0.0480	0.0007	0.1361	0.5515
Standard Deviation (%)	9.6654	6.8229	5.6272	4.8144	4.0128	5.8521
Return/Risk	0.0052	0.0813	0.1137	0.1953	0.0856	0.0341
Skewness	-0.4254	-0.7373	-0.5981	-0.2826	-0.6578	0.1770
Kurtosis	5.1883	5.0912	3.9058	5.3039	4.5338	6.0437
<i>Characteristic</i>	1.8712	1.0706	0.7961	0.5341	0.0290	0.9501

Table 83: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
	0.2616	0.3645	0.3384	0.7215	0.8153	0.5537
	0.6996	0.9974	0.9326	2.1866	2.1972	1.5943
	0.4847	0.3193	0.3517	0.0295	0.0287	0.1118
	6.6045	6.4548	6.4099	5.8268	6.5525	6.1336
	0.0396	0.0565	0.0528	0.1238	0.1244	0.0903
	-0.5693	-0.5500	-0.4752	-0.5560	-0.5247	0.2495
	3.9870	4.9572	4.3185	4.2005	6.1613	4.7086
	0.9121	2.2100	3.1200	4.1924	6.0419	3.4770

Table 84: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2777	0.4314	0.5253	0.6326	0.7078	0.4300
t-stat	0.7188	1.2373	1.4694	1.7930	1.8954	1.1294
p-value	0.4728	0.2169	0.1427	0.0739	0.0589	0.2596
Standard Deviation (%)	6.8256	6.1581	6.3145	6.2307	6.5947	6.7254
Return/Risk	0.0407	0.0700	0.0832	0.1015	0.1073	0.0639
Skewness	-0.6680	-0.6744	-0.6735	-0.6075	-0.4695	-0.1014
Kurtosis	4.0895	4.9051	6.0451	4.3039	4.7835	4.2481
<i>Characteristic</i>	55.4942	27.1256	14.2942	14.2795	9.0164	32.2553

Table 85: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
	-0.1034	0.4335	0.8010	0.8294	0.6186	0.7219
	-0.2962	1.3304	2.2815	2.2819	1.4504	2.0335
	0.7673	0.1843	0.0232	0.0231	0.1479	0.0428
	6.1657	5.7558	6.1994	6.4182	7.5325	6.2698
	-0.0168	0.0753	0.1292	0.1292	0.0821	0.1151
	-0.7687	-0.6102	-0.8241	-0.4146	-0.5247	-0.2858
	4.5969	4.6217	5.1671	3.7828	5.4051	6.4669
	0.3434	0.5158	0.6440	0.8190	1.2892	0.8163

Table 86: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0686	0.3949	0.8037	0.7871	0.9263	0.8577
t-stat	0.1813	1.1446	2.2464	2.1986	2.5388	2.5934
p-value	0.8562	0.2532	0.0254	0.0286	0.0116	0.0099
Standard Deviation (%)	6.6788	6.0940	6.3181	6.3220	6.4423	5.8399
Return/Risk	0.0103	0.0648	0.1272	0.1245	0.1438	0.1469
Skewness	-0.6080	-0.8220	-0.7985	-0.7205	0.0195	0.4945
Kurtosis	4.2998	5.0963	5.0094	4.3624	5.0863	5.3265
<i>Characteristic</i>	0.0699	0.1048	0.1368	0.1819	0.2955	0.1827

Table 87: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
	0.1405	0.2125	0.6787	0.7407	0.9349	0.7944
	0.3859	0.5571	1.9917	2.0092	2.6018	2.2902
	0.6998	0.5779	0.0472	0.0453	0.0097	0.0227
	6.4304	6.7394	6.0180	6.5108	6.3447	6.1254
	0.0218	0.0315	0.1128	0.1138	0.1474	0.1297
	-0.8297	-0.9448	-0.6432	-0.4856	-0.4262	0.4058
	5.3224	6.1553	4.9933	5.3125	4.2434	5.4372
	0.0793	0.1097	0.1390	0.1977	1.0865	0.5829

Table 88: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3277	0.3470	0.3597	0.6212	0.7674	0.4397
t-stat	1.0179	0.9151	1.0104	1.7594	2.0484	1.4089
p-value	0.3095	0.3608	0.3131	0.0794	0.0413	0.1598
Standard Deviation (%)	5.7501	6.7738	6.3584	6.3061	6.6805	5.3086
Return/Risk	0.0570	0.0512	0.0566	0.0985	0.1149	0.0828
Skewness	-0.5612	-0.7761	-0.5306	-0.4747	-0.3152	0.0236
Kurtosis	4.7802	4.2427	4.1755	5.7954	5.1114	4.7145
<i>Characteristic</i>	8.1675	7.1718	6.6543	6.2503	5.8482	7.0079

C.2 Manufacturing

Table 89: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5998	0.3646	0.6195	0.8253	0.8378	0.2380
t-stat	1.5820	0.9959	2.1773	3.8363	5.3954	0.8217
p-value	0.1146	0.3200	0.0302	0.0002	0.0000	0.4119
Standard Deviation (%)	6.4430	6.2242	4.8333	3.6474	2.6253	4.9243
Return/Risk	0.0931	0.0586	0.1282	0.2263	0.3191	0.0483
Skewness	-0.5975	-0.8347	-0.9924	-1.0885	-0.7942	0.2997
Kurtosis	4.3252	5.5029	5.1746	5.5087	3.9371	4.4955
<i>Characteristic</i>	0.2417	0.1101	0.0851	0.0691	0.0481	0.1449

Table 90: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1220	0.5133	0.5478	0.7887	0.9573	0.8353
t-stat	0.3564	1.8764	2.1576	3.2448	3.8012	3.4121
p-value	0.7218	0.0615	0.0317	0.0013	0.0002	0.0007
Standard Deviation (%)	5.9971	4.7925	4.4468	4.2552	4.4072	4.2854
Return/Risk	0.0203	0.1071	0.1232	0.1853	0.2172	0.1949
Skewness	-0.4200	-0.7926	-0.9647	-0.9724	-0.8818	-0.1449
Kurtosis	4.8892	6.0521	5.7706	4.7836	4.7795	6.8995
<i>Characteristic</i>	-0.3200	-0.0658	0.0498	0.1698	0.4459	0.0629

Table 91: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7744	0.6079	0.5544	0.6186	0.6884	-0.0859
t-stat	2.8651	2.3225	2.0583	1.9737	2.1574	-0.5401
p-value	0.0044	0.0208	0.0404	0.0493	0.0317	0.5895
Standard Deviation (%)	4.3373	4.2053	4.3296	5.0381	5.1281	2.5614
Return/Risk	0.1785	0.1446	0.1281	0.1228	0.1342	-0.0335
Skewness	-1.2906	-0.9008	-0.5762	-0.3605	-0.6925	0.2109
Kurtosis	6.0129	4.6111	4.3334	4.9744	4.3180	3.4814
<i>Characteristic</i>	1.3122	0.4913	0.1151	-0.2168	-0.6060	0.3531

Table 92: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4182	0.6029	0.4266	0.5571	0.6844	0.2663
t-stat	1.3187	2.0923	1.5596	2.2455	3.1680	1.4737
p-value	0.1882	0.0372	0.1198	0.0254	0.0017	0.1415
Standard Deviation (%)	5.6635	5.1465	4.8847	4.4303	3.8575	3.2268
Return/Risk	0.0738	0.1172	0.0873	0.1257	0.1774	0.0825
Skewness	-0.4436	-0.9701	-0.9114	-0.9694	-0.9564	-0.3576
Kurtosis	4.6013	4.9405	4.7804	4.9802	4.7416	4.6700
<i>Characteristic</i>	2.5625	3.9308	4.6394	5.4754	6.8225	4.6925

Table 93: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4375	0.5720	0.6720	0.7584	0.6737	0.2361
t-stat	0.9825	1.7132	2.7398	4.1832	4.8420	0.5919
p-value	0.3266	0.0876	0.0065	0.0000	0.0000	0.5543
Standard Deviation (%)	7.7771	5.8296	4.2810	3.1611	2.4242	6.9668
Return/Risk	0.0563	0.0981	0.1570	0.2399	0.2779	0.0339
Skewness	-0.6998	-0.8282	-0.7188	-0.9026	-0.6588	0.6159
Kurtosis	4.9159	5.1858	4.8029	4.3861	4.4773	5.6771
<i>Characteristic</i>	2.1571	1.1369	0.8079	0.5180	-0.0223	1.0674

Table 94: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3447	0.4729	0.6117	0.8443	0.8668	0.5221
t-stat	1.1197	1.8532	2.4168	3.3270	3.2044	2.7058
p-value	0.2637	0.0648	0.0162	0.0010	0.0015	0.0072
Standard Deviation (%)	5.4375	4.5070	4.4697	4.4794	4.7751	3.4069
Return/Risk	0.0634	0.1049	0.1369	0.1885	0.1815	0.1532
Skewness	-0.8540	-0.9162	-0.9664	-0.7089	-0.3822	0.8714
Kurtosis	4.9095	4.8379	5.0364	4.8267	4.3972	6.5976
<i>Characteristic</i>	0.7201	1.7216	2.4759	3.3147	4.9698	2.8449

Table 95: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3620	0.5748	0.7045	0.7453	0.8584	0.4964
t-stat	1.2925	2.3437	2.9891	2.9008	2.9018	3.0013
p-value	0.1971	0.0197	0.0030	0.0040	0.0040	0.0029
Standard Deviation (%)	4.9470	4.3311	4.1611	4.5364	5.2224	2.9197
Return/Risk	0.0732	0.1327	0.1693	0.1643	0.1644	0.1700
Skewness	-0.9302	-1.0035	-0.8695	-0.8205	-0.5610	1.1582
Kurtosis	4.7211	5.8971	5.2898	4.9545	4.6247	10.9269
<i>Characteristic</i>	45.5224	22.5162	18.2470	15.3928	11.2864	28.4044

Table 96: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5018	0.5000	0.6656	0.6700	0.8243	0.3225
t-stat	2.1639	2.0426	2.6162	2.3883	2.5629	1.6059
p-value	0.0312	0.0419	0.0093	0.0175	0.0108	0.1093
Standard Deviation (%)	4.0951	4.3233	4.4924	4.9535	5.6790	3.5468
Return/Risk	0.1225	0.1157	0.1482	0.1353	0.1451	0.0909
Skewness	-0.8781	-1.0644	-0.7427	-0.5738	-0.5569	0.0536
Kurtosis	4.7669	5.8255	4.4214	4.1729	4.9628	5.6672
<i>Characteristic</i>	0.2014	0.3329	0.4617	0.6381	1.0401	0.6207

Table 97: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4156	0.5156	0.6909	0.7074	0.9145	0.4989
t-stat	1.6631	2.1796	2.8433	2.5492	2.9650	2.7581
p-value	0.0972	0.0300	0.0047	0.0113	0.0033	0.0061
Standard Deviation (%)	4.4136	4.1773	4.2899	4.9000	5.4454	3.1937
Return/Risk	0.0942	0.1234	0.1610	0.1444	0.1679	0.1562
Skewness	-0.7305	-0.9893	-0.9001	-0.7531	-0.4812	-0.2093
Kurtosis	4.2267	5.4967	5.1228	5.1297	4.4856	6.0072
<i>Characteristic</i>	0.0620	0.0873	0.1136	0.1535	0.2522	0.1571

Table 98: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4919	0.6086	0.6366	0.8278	0.9224	0.4305
t-stat	2.0319	2.5920	2.5335	2.8988	3.3099	2.7732
p-value	0.0430	0.0100	0.0118	0.0040	0.0010	0.0059
Standard Deviation (%)	4.2753	4.1460	4.4368	5.0419	4.9193	2.7408
Return/Risk	0.1151	0.1468	0.1435	0.1642	0.1875	0.1571
Skewness	-0.5787	-0.9346	-0.8655	-0.8769	-0.7794	-0.1649
Kurtosis	3.8337	5.1569	5.1182	5.1686	4.9395	4.2066
<i>Characteristic</i>	0.0598	0.0829	0.1095	0.1586	0.7488	0.4043

Table 99: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6165	0.5912	0.4264	0.4849	0.5976	-0.0189
t-stat	2.6236	2.3073	1.5472	1.7246	2.0131	-0.1170
p-value	0.0091	0.0217	0.1228	0.0856	0.0449	0.9069
Standard Deviation (%)	4.1964	4.5759	4.9226	5.0215	5.3017	2.8873
Return/Risk	0.1469	0.1292	0.0866	0.0966	0.1127	-0.0066
Skewness	-0.8347	-0.9152	-1.0567	-0.8359	-0.6747	-0.2278
Kurtosis	4.0941	4.7714	5.5323	5.3320	4.6872	4.0943
<i>Characteristic</i>	9.9403	8.5714	7.8860	7.3987	6.9850	8.4627

C.3 Transport

Table 100: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1478	0.6425	0.6021	0.8269	0.8071	0.6593
t-stat	0.3671	1.8278	2.1134	4.1913	5.5916	1.7950
p-value	0.7138	0.0685	0.0353	0.0000	0.0000	0.0736
Standard Deviation (%)	6.8461	5.9729	4.8402	3.3430	2.4395	6.2416
Return/Risk	0.0216	0.1076	0.1244	0.2473	0.3308	0.1056
Skewness	-0.4015	0.1356	-0.3698	-0.5841	-0.3022	0.1132
Kurtosis	4.7656	5.1687	4.5177	3.3772	3.3499	5.5228
<i>Characteristic</i>	0.2151	0.1022	0.0782	0.0615	0.0429	0.1290

Table 101: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2704	0.3816	0.5276	0.7757	0.8845	0.6141
t-stat	0.7563	1.3223	2.1841	3.2692	3.3821	2.0459
p-value	0.4500	0.1870	0.0297	0.0012	0.0008	0.0416
Standard Deviation (%)	6.2655	5.0556	4.2312	4.1538	4.5780	5.2576
Return/Risk	0.0432	0.0755	0.1247	0.1867	0.1932	0.1168
Skewness	-0.3488	-1.0141	-0.6269	-0.0013	0.3211	0.0430
Kurtosis	5.2412	6.7345	4.3454	4.6855	5.1784	6.2289
<i>Characteristic</i>	-0.2951	-0.0657	0.0416	0.1662	0.4337	0.0693

Table 102: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6440	0.6073	0.3271	0.4564	0.4793	-0.1646
t-stat	2.4240	2.4882	1.1108	1.3610	1.4108	-0.6301
p-value	0.0159	0.0133	0.2675	0.1745	0.1593	0.5291
Standard Deviation (%)	4.2673	3.9202	4.7389	5.3954	5.4656	4.2059
Return/Risk	0.1509	0.1549	0.0690	0.0846	0.0877	-0.0391
Skewness	-0.4577	-0.5688	-1.0472	-0.6862	-0.2784	0.0827
Kurtosis	4.1132	4.3211	5.8073	4.5680	3.9807	4.7696
<i>Characteristic</i>	1.3235	0.4780	0.1288	-0.2160	-0.5790	0.3722

Table 103: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7140	0.3984	0.3712	0.6787	0.5291	-0.1849
t-stat	2.2563	1.4019	1.3826	2.7210	2.3705	-0.7506
p-value	0.0247	0.1619	0.1678	0.0069	0.0183	0.4534
Standard Deviation (%)	5.6512	5.0754	4.7950	4.4540	3.9858	4.3993
Return/Risk	0.1263	0.0785	0.0774	0.1524	0.1327	-0.0420
Skewness	0.1809	-0.4082	-0.3400	-0.8308	-0.7311	0.0624
Kurtosis	4.8147	3.5820	4.7930	4.8780	4.9457	5.5474
<i>Characteristic</i>	1.7652	3.2304	4.0588	5.0807	6.7958	4.2805

Table 104: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4556	0.5444	0.5931	0.9664	0.5443	0.0887
t-stat	1.0006	1.6535	2.5506	5.6474	3.4493	0.1960
p-value	0.3178	0.0992	0.0112	0.0000	0.0006	0.8447
Standard Deviation (%)	7.9523	5.7491	4.0589	2.9793	2.7529	7.9040
Return/Risk	0.0573	0.0947	0.1461	0.3244	0.1977	0.0112
Skewness	0.0616	-0.3266	-0.4771	-0.6976	-0.7181	-0.6778
Kurtosis	5.7024	4.5780	3.3826	3.9076	4.9979	8.8129
<i>Characteristic</i>	2.2093	1.0945	0.7667	0.4642	-0.0493	1.0800

Table 105: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3125	0.3625	0.5729	0.9856	0.6636	0.3511
t-stat	0.9555	1.2624	2.0789	3.8956	2.8923	1.1723
p-value	0.3401	0.2077	0.0384	0.0001	0.0049	0.2419
Standard Deviation (%)	5.7780	5.0724	4.8667	4.4650	4.1370	5.2901
Return/Risk	0.0541	0.0715	0.1177	0.2207	0.1604	0.0664
Skewness	-0.3083	-0.9086	-0.1336	-0.1415	-0.1986	0.0289
Kurtosis	4.8256	6.3558	5.0247	4.5199	3.3847	5.7709
<i>Characteristic</i>	0.7188	2.1756	3.1671	4.2666	6.1780	3.4484

Table 106: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3548	0.5416	0.6931	0.8909	0.7392	0.3844
t-stat	1.0956	1.9396	2.5345	3.6351	2.8469	1.3574
p-value	0.2741	0.0533	0.0117	0.0003	0.0047	0.1756
Standard Deviation (%)	5.7202	4.9312	4.8287	4.3256	4.5841	5.0017
Return/Risk	0.0620	0.1098	0.1435	0.2060	0.1612	0.0768
Skewness	-0.2281	-0.4581	-0.2600	-0.2618	-0.4023	-0.5470
Kurtosis	5.7834	4.6822	5.3242	3.7814	3.8394	8.4040
<i>Characteristic</i>	39.7850	23.6035	17.6742	14.7706	11.0866	25.4358

Table 107: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5100	0.3964	0.6514	0.6195	0.5382	0.0283
t-stat	1.7314	1.4935	2.3564	2.4748	1.8309	0.1065
p-value	0.0843	0.1363	0.0190	0.0138	0.0680	0.9152
Standard Deviation (%)	5.2018	4.6879	4.8813	4.4198	5.1917	4.6844
Return/Risk	0.0980	0.0846	0.1334	0.1402	0.1037	0.0060
Skewness	0.2578	-0.4197	-0.4753	-0.4006	-0.3330	-0.6458
Kurtosis	7.7756	4.3083	5.0708	3.0723	5.1246	8.6838
<i>Characteristic</i>	0.2136	0.3649	0.4973	0.6932	1.1121	0.6628

Table 108: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3620	0.5899	0.7167	0.8089	0.7603	0.3983
t-stat	1.1644	2.2615	2.9260	3.3067	2.6582	1.5804
p-value	0.2451	0.0244	0.0037	0.0010	0.0082	0.1150
Standard Deviation (%)	5.4913	4.6059	4.3243	4.3179	5.0498	4.4506
Return/Risk	0.0659	0.1281	0.1657	0.1873	0.1505	0.0895
Skewness	0.2738	-0.5138	-0.2861	-0.4462	-0.5055	-1.0485
Kurtosis	6.6802	4.7560	4.1460	4.2594	4.7743	10.6697
<i>Characteristic</i>	0.0763	0.1124	0.1498	0.1966	0.3436	0.2100

Table 109: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2053	0.6463	0.7590	0.7159	1.0747	0.8695
t-stat	0.7028	2.6301	3.3399	2.8416	4.0058	4.1520
p-value	0.4827	0.0089	0.0009	0.0048	0.0001	0.0000
Standard Deviation (%)	5.1593	4.3391	4.0114	4.4484	4.7344	3.6950
Return/Risk	0.0398	0.1490	0.1892	0.1609	0.2270	0.2353
Skewness	-0.1524	-0.2553	-0.3000	-0.2810	-0.2922	-0.0148
Kurtosis	7.8893	4.3201	3.7889	4.1669	3.8425	5.3525
<i>Characteristic</i>	0.0667	0.0938	0.1193	0.1493	0.4515	0.2591

Table 110: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4716	0.5223	0.5274	0.5198	0.6633	0.1917
t-stat	1.5859	2.0448	2.0994	2.0710	2.4398	0.7798
p-value	0.1137	0.0417	0.0366	0.0392	0.0152	0.4361
Standard Deviation (%)	5.3112	4.5617	4.4867	4.4829	4.8551	4.3908
Return/Risk	0.0888	0.1145	0.1176	0.1160	0.1366	0.0437
Skewness	-0.1794	-0.4482	-0.2894	-0.3176	-0.6614	-0.9820
Kurtosis	4.8989	3.8820	5.5782	3.7836	4.7448	9.4016
<i>Characteristic</i>	10.1300	9.1057	8.4681	7.9969	7.6151	8.8725

C.4 Wholesale Trade

Table 111: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1329	0.3636	0.6573	0.9222	0.7786	0.6457
t-stat	0.2999	0.9027	2.2832	4.0157	4.5552	1.7000
p-value	0.7644	0.3673	0.0231	0.0001	0.0000	0.0901
Standard Deviation (%)	7.5333	6.8479	4.8899	3.8928	2.8946	6.4546
Return/Risk	0.0176	0.0531	0.1344	0.2369	0.2690	0.1000
Skewness	-0.5180	-0.5808	-0.2560	-0.9747	-1.0523	0.0056
Kurtosis	6.2144	4.6576	3.6880	6.1896	6.4603	4.8938
<i>Characteristic</i>	0.2425	0.1213	0.0907	0.0722	0.0472	0.1448

Table 112: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
	-0.2628	0.2934	0.4481	0.7604	0.8291	1.0919
	-0.6352	1.0087	1.5702	2.7344	2.9662	3.0149
	0.5257	0.3139	0.1174	0.0066	0.0032	0.0028
	7.2484	5.0972	4.9992	4.8697	4.8942	6.3411
	-0.0363	0.0576	0.0896	0.1562	0.1694	0.1722
	-0.2344	-0.2749	-0.9364	-1.0796	-0.9921	-0.1612
	5.1703	5.6546	6.3062	6.0077	4.9013	4.5418
	-0.3578	-0.0919	0.0386	0.1785	0.4837	0.0630

Table 113: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4707	0.5117	0.5122	0.3169	0.7447	0.2740
t-stat	1.5550	1.4715	1.5203	0.8304	1.9053	0.8328
p-value	0.1209	0.1421	0.1294	0.4069	0.0576	0.4056
Standard Deviation (%)	4.8686	5.5939	5.4193	6.1432	6.2833	5.2948
Return/Risk	0.0967	0.0915	0.0945	0.0516	0.1185	0.0517
Skewness	-0.9663	-1.0244	-0.7526	-0.1125	-0.1998	0.0534
Kurtosis	5.3268	5.5641	6.0217	5.5648	3.8762	3.0962
<i>Characteristic</i>	1.4451	0.4562	0.0421	-0.2944	-0.6775	0.3838

Table 114: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
	0.2106	0.4597	0.5221	0.6599	0.4251	0.2144
	0.6160	1.4633	1.9806	2.1953	1.5881	0.7701
	0.5383	0.1444	0.0485	0.0289	0.1132	0.4418
	6.1071	5.6109	4.7079	5.3682	4.7802	4.9730
	0.0345	0.0819	0.1109	0.1229	0.0889	0.0431
	-0.2578	-0.8114	-0.7583	-0.4053	-1.0904	-0.1856
	3.6503	5.9866	4.4948	3.6775	7.3209	4.4777
	2.2777	3.5542	4.3626	5.3819	6.4751	4.3764

Table 115: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0653	0.4201	0.5854	0.8928	0.6834	0.6181
t-stat	0.1346	1.2802	2.1417	4.2975	3.6310	1.2753
p-value	0.8930	0.2014	0.0330	0.0000	0.0003	0.2031
Standard Deviation (%)	8.4724	5.7302	4.7715	3.6218	3.2827	8.4636
Return/Risk	0.0077	0.0733	0.1227	0.2465	0.2082	0.0730
Skewness	-0.5488	-0.4667	-0.8523	-0.5098	-0.1042	0.3783
Kurtosis	4.5031	4.3153	6.6110	4.7651	3.0155	3.9741
<i>Characteristic</i>	2.2730	1.0837	0.7162	0.4206	-0.1218	1.0756

Table 116: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
	0.0847	-0.1493	0.8330	0.8333	0.7947	0.7100
	0.2637	-0.4642	2.9677	2.8806	2.6197	2.4418
	0.7922	0.6428	0.0032	0.0042	0.0092	0.0151
	5.6737	5.6805	4.9553	5.1074	5.3565	5.1346
	0.0149	-0.0263	0.1681	0.1632	0.1484	0.1383
	-0.1476	-0.9381	-0.7552	-0.3516	-0.1867	0.1694
	4.1194	6.0403	5.0691	5.7294	4.2524	3.6563
	0.5308	1.8246	2.6793	3.5731	5.5885	3.0596

Table 117: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0166	0.4192	0.4985	0.7634	0.9588	0.9422
t-stat	0.0506	1.3395	1.7087	2.6671	2.9310	2.8745
p-value	0.9597	0.1814	0.0885	0.0080	0.0036	0.0043
Standard Deviation (%)	5.8049	5.5279	5.1527	5.0542	5.7752	5.7868
Return/Risk	0.0029	0.0758	0.0968	0.1511	0.1660	0.1628
Skewness	-0.6810	-0.5153	-0.5607	-0.4593	-0.6075	-0.0003
Kurtosis	4.2755	4.6653	5.8318	4.9968	6.1958	4.1237
<i>Characteristic</i>	301.7972	19.7193	16.0899	14.1547	12.7704	157.2838

Table 118: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
	0.0224	0.4751	0.5820	0.3297	0.7957	0.7733
	0.0763	1.6770	2.0920	0.9629	2.3202	2.4279
	0.9392	0.0945	0.0372	0.3363	0.0209	0.0157
	5.1945	5.0034	4.9127	6.0486	6.0561	5.6241
	0.0043	0.0950	0.1185	0.0545	0.1314	0.1375
	-0.4243	-1.0144	-0.5881	-1.5238	0.0680	-0.0414
	3.4441	5.6022	4.1510	8.9919	5.2266	4.2031
	0.1974	0.3361	0.4637	0.6881	1.0155	0.6065

Table 119: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0452	0.3930	0.4364	0.6726	0.9848	0.9396
t-stat	0.1372	1.3910	1.4649	2.2844	2.9276	2.9190
p-value	0.8909	0.1652	0.1439	0.0230	0.0037	0.0038
Standard Deviation (%)	5.8119	4.9908	5.2612	5.1995	5.9387	5.6831
Return/Risk	0.0078	0.0788	0.0829	0.1294	0.1658	0.1653
Skewness	-0.3672	-0.4188	-1.2440	-0.8820	0.1301	0.1628
Kurtosis	4.7045	4.2184	6.7425	5.6285	6.4435	5.4106
<i>Characteristic</i>	0.0661	0.0896	0.1101	0.1343	0.2096	0.1378

Table 120: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
	0.2640	0.5087	0.6142	0.4756	0.9520	0.6880
	0.8091	1.6713	2.0900	1.6340	2.9479	2.0539
	0.4191	0.0956	0.0374	0.1032	0.0034	0.0408
	5.7638	5.3758	5.1898	5.1404	5.7012	5.9151
	0.0458	0.0946	0.1184	0.0925	0.1670	0.1163
	-0.6602	-0.6799	-0.6839	-0.5865	-0.5246	0.0989
	4.6685	4.0463	4.8297	6.0028	5.3432	4.1228
	0.0606	0.0841	0.1091	0.1403	0.4514	0.2560

Table 121: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3861	0.4148	0.5589	0.4995	0.6171	0.2310
t-stat	1.3856	1.3555	2.0101	1.6085	1.9977	0.8936
p-value	0.1668	0.1762	0.0452	0.1087	0.0466	0.3722
Standard Deviation (%)	4.9772	5.4650	4.9654	5.5462	5.5173	4.6168
Return/Risk	0.0776	0.0759	0.1126	0.0901	0.1119	0.0500
Skewness	-0.6032	-0.9839	-0.4212	-0.4273	-0.2617	0.1247
Kurtosis	3.9307	6.5882	4.3752	4.2850	3.9923	4.1745
<i>Characteristic</i>	8.1450	6.7815	6.1547	5.7241	5.3431	6.7441

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Table 122: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4431	-0.1671	0.6356	0.6990	0.8146	0.3716
t-stat	1.0235	-0.4316	2.0973	2.9203	4.1392	1.0317
p-value	0.3069	0.6663	0.0367	0.0037	0.0000	0.3030
Standard Deviation (%)	7.3592	6.5841	5.1487	4.0631	3.3354	6.1232
Return/Risk	0.0602	-0.0254	0.1235	0.1720	0.2442	0.0607
Skewness	0.2018	-0.6219	-0.5328	-0.3937	-0.5590	-0.7314
Kurtosis	7.7016	4.7922	4.3602	4.0367	3.8171	9.2293
<i>Characteristic</i>	0.2586	0.1213	0.0892	0.0725	0.0518	0.1552

Table 123: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
	0.0271	0.1125	0.5032	0.5706	1.1348	1.1077
	0.0698	0.3600	1.6565	2.1798	4.1897	3.4266
	0.9444	0.7191	0.0986	0.0300	0.0000	0.0007
	6.8053	5.4771	5.3215	4.5849	4.7386	5.6586
	0.0040	0.0205	0.0946	0.1245	0.2395	0.1958
	-0.2906	-0.3042	-0.9825	-0.4590	-0.5273	-0.0611
	6.6802	4.9416	7.9320	4.3970	4.0905	5.6055
	-0.3382	-0.0801	0.0512	0.1877	0.5361	0.0990

Table 124: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7725	0.9616	0.7727	0.3894	0.0360	-0.7365
t-stat	2.4929	3.0996	2.3101	1.0959	0.0848	-2.0551
p-value	0.0132	0.0021	0.0215	0.2740	0.9325	0.0407
Standard Deviation (%)	4.9765	4.9758	5.3741	5.7176	6.8252	5.7602
Return/Risk	0.1552	0.1933	0.1438	0.0681	0.0053	-0.1279
Skewness	-0.4293	-0.6075	-0.2574	-0.3601	0.2101	0.4642
Kurtosis	4.0798	4.7953	4.5665	5.3738	4.6518	4.2460
<i>Characteristic</i>	1.9913	0.5670	0.1767	-0.1466	-0.5645	0.7134

Table 125: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
	0.2953	0.4283	0.3474	0.4550	0.8180	0.5227
	0.8221	1.4559	1.1137	1.6467	2.8809	1.7684
	0.4116	0.1464	0.2662	0.1006	0.0042	0.0779
	6.4163	5.2547	5.5717	4.9344	5.0703	5.2785
	0.0460	0.0815	0.0624	0.0922	0.1613	0.0990
	-0.4239	-0.4153	-0.3591	-0.7651	-0.5407	-0.1097
	5.9691	6.8024	3.4759	4.3591	4.1887	4.2891
	2.9688	4.1698	5.2112	5.9187	6.7657	4.8673

Table 126: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3936	0.2924	0.9279	0.7236	0.2862	-0.1074
t-stat	0.8293	0.8758	3.4212	3.2280	1.2056	-0.5046
p-value	0.4075	0.3818	0.0007	0.0014	0.2288	0.6142
Standard Deviation (%)	8.2893	5.8318	4.7314	3.9112	4.0907	7.7973
Return/Risk	0.0475	0.0501	0.1961	0.1850	0.0700	-0.0138
Skewness	-0.0298	-0.7094	-0.4716	-0.1590	-0.7358	-0.2567
Kurtosis	6.3472	6.3750	4.4592	2.9080	4.2127	5.1122
<i>Characteristic</i>	2.1422	1.0562	0.7415	0.4875	-0.0949	1.0237

Table 127: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
	-0.1461	0.6874	0.5407	0.6630	0.8070	0.9532
	-0.4086	2.3157	1.7977	2.3569	2.5603	2.9926
	0.6831	0.0212	0.0731	0.0190	0.0109	0.0030
	6.3178	5.2420	5.3114	4.9676	5.5658	6.6230
	-0.0231	0.1311	0.1018	0.1335	0.1450	0.1695
	-0.5996	-0.3228	-0.6972	-0.3708	-0.0780	0.4947
	3.8671	3.7809	4.5213	5.7612	5.5508	5.5291
	0.7035	1.8906	2.6520	3.3002	4.7158	2.7097

Table 128: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1761	0.4673	0.6465	0.5884	0.7640	0.5879
t-stat	0.5863	1.6126	2.2154	1.9006	2.2208	1.8061
p-value	0.5581	0.1078	0.0274	0.0582	0.0271	0.0718
Standard Deviation (%)	5.3055	5.1182	5.1530	5.4672	6.0751	5.7487
Return/Risk	0.0332	0.0913	0.1255	0.1076	0.1258	0.1023
Skewness	-0.5371	-0.6390	-0.3210	-0.4368	-0.1042	0.0035
Kurtosis	4.1904	6.3291	3.8008	5.3220	4.7911	4.2530
<i>Characteristic</i>	44.1610	22.3699	17.8502	14.5889	12.3901	28.2756

Table 129: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
	0.2268	0.6000	0.6234	0.5543	0.5056	0.2788
	0.7742	2.2287	1.8937	1.7776	1.3393	0.8169
	0.4394	0.0265	0.0592	0.0764	0.1814	0.4146
	5.1742	4.7540	5.8143	5.5076	6.6682	6.0293
	0.0438	0.1262	0.1072	0.1007	0.0758	0.0462
	-0.8777	-0.7459	-0.3548	-0.3199	-0.0982	-0.1785
	4.9396	4.4523	4.3945	3.6245	6.3606	6.6912
	0.1732	0.2902	0.4244	0.6253	1.0299	0.6016

Table 130: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3379	0.4365	0.5659	0.6728	0.6376	0.2996
t-stat	1.1030	1.5338	1.9544	2.2614	1.6086	0.8404
p-value	0.2709	0.1260	0.0515	0.0244	0.1087	0.4013
Standard Deviation (%)	5.4119	5.0263	5.1135	5.2537	7.0003	6.2982
Return/Risk	0.0624	0.0868	0.1107	0.1281	0.0911	0.0476
Skewness	-0.7849	-0.6461	-0.5008	-0.7430	0.6401	0.7078
Kurtosis	4.4731	4.9003	3.8683	5.2391	10.8177	8.6870
<i>Characteristic</i>	0.0604	0.0885	0.1104	0.1363	0.1876	0.1240

Table 131: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
	0.2488	0.5327	0.8336	0.5954	0.6936	0.4448
	0.8035	1.8352	2.9984	1.8895	2.0188	1.3996
	0.4223	0.0674	0.0029	0.0597	0.0443	0.1626
	5.4695	5.1267	4.9085	5.5654	6.0674	5.6134
	0.0455	0.1039	0.1698	0.1070	0.1143	0.0792
	-0.7519	-0.6216	-0.5757	-0.2564	0.6737	0.8771
	4.8396	4.3742	4.1377	4.2016	10.0832	7.4640
	0.0523	0.0759	0.0938	0.1245	0.3481	0.2002

Table 132: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5959	0.4725	0.1844	0.7459	0.4364	-0.1595
t-stat	2.2748	1.5505	0.6068	2.3637	1.2977	-0.5628
p-value	0.0236	0.1220	0.5444	0.0187	0.1953	0.5739
Standard Deviation (%)	4.6781	5.4430	5.4265	5.6352	6.0068	5.0602
Return/Risk	0.1274	0.0868	0.0340	0.1324	0.0727	-0.0315
Skewness	-0.4035	-0.5899	-0.5379	-0.5127	-0.1779	-0.0008
Kurtosis	4.1110	4.4523	4.4486	4.7624	4.3105	3.4437
<i>Characteristic</i>	9.0047	7.6148	6.8604	6.4557	6.0979	7.5513

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Table 133: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2408	0.3995	0.6845	0.8363	0.7710	0.5303
t-stat	0.5203	0.9762	2.1392	3.6070	5.5678	1.3932
p-value	0.6032	0.3297	0.0332	0.0004	0.0000	0.1645
Standard Deviation (%)	7.8672	6.9569	5.4360	3.9323	2.3406	6.4695
Return/Risk	0.0306	0.0574	0.1259	0.2127	0.3294	0.0820
Skewness	-0.2443	-0.8095	-0.7527	-0.8747	-0.5993	0.0082
Kurtosis	4.7239	5.9616	6.1799	4.9982	3.7159	4.7982
<i>Characteristic</i>	0.2305	0.1063	0.0823	0.0656	0.0396	0.1351

Table 134: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
	0.0599	0.2878	0.6244	0.6248	0.6910	0.6312
	0.1399	0.8349	1.9942	2.2700	2.4969	2.0582
	0.8888	0.4044	0.0470	0.0239	0.0130	0.0404
	7.4995	6.0408	5.4842	4.8205	4.8468	5.3715
	0.0080	0.0477	0.1138	0.1296	0.1426	0.1175
	0.0651	-0.9752	-0.7176	-0.7195	-0.8393	-0.7926
	6.2118	7.3566	7.1678	5.1859	5.2002	7.3025
	-0.3157	-0.0699	0.0348	0.1433	0.4208	0.0526

Table 135: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6977	0.5735	0.4451	0.4802	0.1256	-0.5720
t-stat	2.2119	1.6299	1.1758	1.0954	0.2974	-2.2392
p-value	0.0277	0.1041	0.2405	0.2742	0.7663	0.0258
Standard Deviation (%)	5.0683	5.6585	6.0917	7.0539	6.7998	4.1048
Return/Risk	0.1377	0.1013	0.0731	0.0681	0.0185	-0.1394
Skewness	-1.0466	-0.9011	-0.4654	-0.3098	-0.1533	0.1247
Kurtosis	4.9538	6.1631	5.9813	5.6101	4.8653	4.5106
<i>Characteristic</i>	1.2034	0.4303	0.0639	-0.2890	-0.6823	0.2605

Table 136: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
	0.1474	0.2592	0.6625	0.5272	0.5333	0.3859
	0.3852	0.8011	2.2777	1.9362	1.9992	1.5735
	0.7003	0.4237	0.0234	0.0537	0.0464	0.1166
	6.8329	5.7780	5.1939	4.8627	4.7637	4.3800
	0.0216	0.0449	0.1275	0.1084	0.1119	0.0881
	-0.3141	-0.6382	-0.7833	-0.9607	-0.8536	0.0368
	4.5165	5.0257	6.3188	5.8053	4.9026	3.8769
	1.7335	3.2690	4.3005	5.2549	6.6699	4.2017

Table 137: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1318	0.4930	0.6119	0.7383	0.6423	0.5105
t-stat	0.2567	1.3381	2.2447	3.7581	4.7101	1.1125
p-value	0.7976	0.1818	0.0255	0.0002	0.0000	0.2667
Standard Deviation (%)	8.9707	6.4343	4.7587	3.4262	2.3765	8.0136
Return/Risk	0.0147	0.0766	0.1286	0.2155	0.2703	0.0637
Skewness	-0.3679	-0.7085	-0.6341	-0.6374	-0.8249	0.1710
Kurtosis	5.0674	6.0599	5.3408	4.2329	4.8117	5.1954
<i>Characteristic</i>	1.9040	1.0667	0.7646	0.4844	-0.0489	0.9275

Table 138: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
	-0.0119	0.3839	0.4983	0.7110	0.6924	0.7043
	-0.0333	1.2126	1.6348	2.3378	2.2543	3.8993
	0.9734	0.2262	0.1031	0.0200	0.0248	0.0001
	6.2953	5.5919	5.3836	5.3703	5.4242	3.1876
	-0.0019	0.0687	0.0926	0.1324	0.1277	0.2210
	-0.3757	-1.0099	-0.9295	-0.5753	-0.1769	0.1208
	4.7636	5.9396	5.8945	5.2319	7.1218	3.3507
	0.8081	2.1815	3.1688	4.1736	6.1166	3.4624

Table 139: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2179	0.3466	0.5286	0.5942	0.8608	0.6429
t-stat	0.7251	1.1025	1.6870	1.8038	2.6671	3.9944
p-value	0.4689	0.2711	0.0926	0.0722	0.0080	0.0001
Standard Deviation (%)	5.3077	5.5529	5.5336	5.8175	5.6983	2.8401
Return/Risk	0.0411	0.0624	0.0955	0.1021	0.1511	0.2264
Skewness	-0.5306	-0.9215	-0.8244	-0.5925	-0.4163	-0.2310
Kurtosis	4.8615	6.0344	5.9023	5.7322	5.7091	4.1601
<i>Characteristic</i>	52.7521	20.7297	15.8417	13.0397	9.8369	31.2945

Table 140: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
	0.3288	0.3367	0.5599	0.5000	0.5633	0.2345
	1.1163	1.0877	1.8920	1.4896	1.4844	1.0474
	0.2651	0.2776	0.0594	0.1373	0.1387	0.2957
	5.2018	5.4673	5.2268	5.9285	6.7026	3.9554
	0.0632	0.0616	0.1071	0.0843	0.0840	0.0593
	-0.7143	-0.7778	-0.8292	-0.7045	-0.0980	0.1330
	5.3235	5.6740	5.8240	5.9515	5.5335	4.6415
	0.3124	0.5637	0.7418	0.9721	1.5051	0.9088

Table 141: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3716	0.6474	0.5787	0.3251	0.5481	0.1765
t-stat	1.3471	2.3975	1.8334	0.9351	1.4109	0.7567
p-value	0.1789	0.0171	0.0677	0.3504	0.1592	0.4498
Standard Deviation (%)	4.8728	4.7681	5.5746	6.1406	6.8612	4.1190
Return/Risk	0.0763	0.1358	0.1038	0.0529	0.0799	0.0428
Skewness	-0.9507	-0.9843	-0.6849	-0.5604	-0.5446	0.0387
Kurtosis	5.9967	5.7998	5.9817	5.3590	5.5039	4.7099
<i>Characteristic</i>	0.0592	0.0981	0.1511	0.2478	0.5684	0.3138

Table 142: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
	0.3965	0.5550	0.6380	0.6007	0.6486	0.2522
	1.4635	2.0901	2.1100	1.7268	1.8723	1.3308
	0.1443	0.0374	0.0356	0.0852	0.0621	0.1842
	4.7845	4.6890	5.3394	6.1443	6.1183	3.3471
	0.0829	0.1184	0.1195	0.0978	0.1060	0.0753
	-0.5504	-0.7850	-0.9320	-0.7955	-0.4220	0.5558
	4.4219	7.1339	5.2256	5.3443	5.9337	6.9733
	0.0659	0.1087	0.1482	0.2310	1.2787	0.6723

Table 143: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3104	0.3976	0.4381	0.2166	0.7262	0.4159
t-stat	0.8373	1.2202	1.5218	0.8082	2.7875	2.0699
p-value	0.4030	0.2233	0.1290	0.4195	0.0056	0.0393
Standard Deviation (%)	6.6207	5.8193	5.1414	4.7873	4.6524	3.5881
Return/Risk	0.0469	0.0683	0.0852	0.0453	0.1561	0.1159
Skewness	-0.6692	-0.6247	-0.7924	-0.9027	-0.2783	0.6243
Kurtosis	5.7978	4.7883	5.3269	5.4845	4.5566	5.2757
<i>Characteristic</i>	9.8826	8.6845	8.0146	7.5014	7.0993	8.4909

C.7 Services

Table 144: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6688	0.0528	0.2300	0.7224	0.9373	0.2685
t-stat	1.4716	0.1196	0.6593	2.6780	5.2086	0.7696
p-value	0.1421	0.9049	0.5101	0.0078	0.0000	0.4421
Standard Deviation (%)	7.7246	7.5030	5.9301	4.5802	3.0439	5.9318
Return/Risk	0.0866	0.0070	0.0388	0.1577	0.3079	0.0453
Skewness	-0.3177	-0.6051	-1.0958	-1.0493	-1.0751	-0.1988
Kurtosis	4.5768	5.7134	5.4984	5.7132	5.4706	5.7313
<i>Characteristic</i>	0.2810	0.1470	0.1102	0.0860	0.0572	0.1691

Table 146: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.9782	0.6316	0.5698	0.5388	0.6221	-0.3561
t-stat	2.8685	1.9836	1.6573	1.4892	1.6378	-1.3112
p-value	0.0044	0.0481	0.0984	0.1374	0.1024	0.1907
Standard Deviation (%)	5.4727	5.1181	5.5298	5.8195	6.1089	4.3700
Return/Risk	0.1787	0.1234	0.1030	0.0926	0.1018	-0.0815
Skewness	-0.8461	-0.7074	-0.7885	-0.7303	-0.5862	-0.0426
Kurtosis	6.0103	5.0634	4.2898	5.1952	4.5843	4.4644
<i>Characteristic</i>	1.7493	0.5603	0.0914	-0.2497	-0.6148	0.5673

Table 148: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3556	0.3505	0.4787	0.7169	0.3534	-0.0022
t-stat	0.6602	0.8814	1.6187	3.2796	1.9109	-0.0044
p-value	0.5096	0.3788	0.1065	0.0012	0.0569	0.9965
Standard Deviation (%)	9.4069	6.9446	5.1639	3.8136	3.2291	8.6518
Return/Risk	0.0378	0.0505	0.0927	0.1880	0.1094	-0.0003
Skewness	-0.2594	-0.7595	-1.0084	-1.0776	-0.6410	-0.2960
Kurtosis	4.5274	4.8992	5.4720	5.7700	4.8070	5.3660
<i>Characteristic</i>	2.2348	1.1183	0.7719	0.4731	-0.2124	1.0112

Table 150: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1312	0.5436	0.5653	0.7199	0.7241	0.5929
t-stat	0.3765	1.7106	1.8886	2.4949	2.1699	2.1983
p-value	0.7068	0.0881	0.0598	0.0131	0.0307	0.0286
Standard Deviation (%)	6.1564	5.6121	5.2861	5.0954	5.8928	4.7626
Return/Risk	0.0213	0.0969	0.1069	0.1413	0.1229	0.1245
Skewness	-0.6874	-0.5874	-1.0652	-0.8694	-0.6676	0.1772
Kurtosis	5.4221	4.9465	6.2386	5.2336	6.0483	6.1048
<i>Characteristic</i>	141.9967	28.7226	24.1389	17.9968	12.6493	77.3230

Table 152: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4616	0.5380	0.6898	0.6096	0.6176	0.1561
t-stat	1.2574	1.6267	2.3231	2.0517	1.9579	0.5528
p-value	0.2095	0.1048	0.0208	0.0410	0.0511	0.5808
Standard Deviation (%)	6.4835	5.8411	5.2431	5.2469	5.5710	4.9877
Return/Risk	0.0712	0.0921	0.1316	0.1162	0.1109	0.0313
Skewness	-0.3827	-0.7503	-0.9788	-0.7552	-0.7956	-0.1018
Kurtosis	4.7072	5.7390	6.3728	5.8005	5.0455	5.2262
<i>Characteristic</i>	0.0512	0.0738	0.0929	0.1234	0.2388	0.1450

Table 154: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3804	0.2679	0.3793	0.3675	0.2779	-0.1025
t-stat	1.2027	0.8393	1.2348	1.1276	0.8125	-0.5048
p-value	0.2300	0.4019	0.2178	0.2603	0.4171	0.6140
Standard Deviation (%)	5.6490	5.7009	5.4860	5.8210	6.1083	3.6279
Return/Risk	0.0673	0.0470	0.0691	0.0631	0.0455	-0.0283
Skewness	-0.4993	-0.8347	-0.7627	-0.8765	-0.6174	-0.6216
Kurtosis	4.7121	4.7548	4.3898	5.0734	4.4605	6.4632
<i>Characteristic</i>	8.2417	6.9766	6.3827	5.9297	5.4885	6.8651

Table 145: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0725	0.0488	0.3186	0.8265	0.9778	0.9054
t-stat	0.1807	0.1443	1.0336	3.0300	3.3165	3.3176
p-value	0.8567	0.8854	0.3021	0.0026	0.0010	0.0010
Standard Deviation (%)	7.0249	5.9278	5.4012	4.7761	5.1614	4.7773
Return/Risk	0.0103	0.0082	0.0590	0.1731	0.1895	0.1895
Skewness	-0.3142	-1.0002	-0.9931	-0.7316	-0.7817	-0.4408
Kurtosis	5.6307	5.8867	5.9828	5.0765	4.6085	6.6897
<i>Characteristic</i>	-0.3823	-0.1105	0.0400	0.2002	0.6240	0.1209

Table 147: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1237	0.2469	0.2814	0.4454	0.5693	0.4456
t-stat	0.3456	0.7263	0.8286	1.4651	2.0998	2.0786
p-value	0.7299	0.4682	0.4080	0.1439	0.0365	0.0384
Standard Deviation (%)	6.3931	6.0719	6.0659	5.4289	4.8422	3.8289
Return/Risk	0.0193	0.0407	0.0464	0.0820	0.1176	0.1164
Skewness	-0.5625	-0.8152	-0.7616	-0.6513	-0.9675	0.0656
Kurtosis	4.3095	4.6201	4.9091	4.5339	5.4700	3.4180
<i>Characteristic</i>	2.2568	3.5115	4.3174	5.2526	6.4753	4.3660

Table 149: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0547	0.2259	0.6243	0.7688	0.7385	0.7932
t-stat	-0.1513	0.6484	2.0340	2.5757	2.5361	3.1698
p-value	0.8798	0.5172	0.0428	0.0104	0.0117	0.0017
Standard Deviation (%)	6.3918	6.1542	5.4202	5.2703	5.1414	4.4176
Return/Risk	-0.0086	0.0367	0.1152	0.1459	0.1436	0.1796
Skewness	-0.6418	-0.7871	-0.9360	-0.6012	-0.7856	0.3502
Kurtosis	4.4012	5.7353	5.9597	4.9396	5.4966	5.2909
<i>Characteristic</i>	0.2345	1.1238	1.9352	2.9814	5.2786	2.7566

Table 151: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4551	0.4978	0.2109	0.5285	0.5354	0.0803
t-stat	1.3006	1.5652	0.6766	1.7328	1.6280	0.3210
p-value	0.1943	0.1185	0.4991	0.0841	0.1045	0.7484
Standard Deviation (%)	6.1804	5.6171	5.5068	5.3861	5.8082	4.4183
Return/Risk	0.0736	0.0886	0.0383	0.0981	0.0922	0.0182
Skewness	-0.6226	-0.6779	-0.6119	-0.9330	-0.8798	0.1373
Kurtosis	5.8493	5.2585	4.6066	5.4378	6.0865	5.3092
<i>Characteristic</i>	0.1483	0.2781	0.4125	0.5896	1.0159	0.5821

Table 153: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1086	0.8065	0.6996	0.6411	0.9178	0.8092
t-stat	0.3140	2.4722	2.3000	2.0675	3.1241	3.3820
p-value	0.7537	0.0139	0.0221	0.0395	0.0019	0.0008
Standard Deviation (%)	6.1099	5.7604	5.3716	5.4761	5.1864	4.2235
Return/Risk	0.0178	0.1400	0.1302	0.1171	0.1770	0.1916
Skewness	-0.7143	-0.5041	-0.7844	-0.8018	-0.6691	0.0579
Kurtosis	5.0530	6.2044	5.6344	5.3531	4.6562	5.1317
<i>Characteristic</i>	0.0465	0.0658	0.0863	0.1214	0.5063	0.2764

C.8 Jensen's Alpha Regressions: Sectors

Table 155: Construction

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.3536	-0.1633	0.5900	-0.0711	0.3676	0.5586	0.2503	0.5269	0.0918	-0.4964	0.1998
t-stat	0.9732	-0.3551	1.6463	-0.1895	1.0705	1.7440	0.7447	1.5704	0.2498	-1.7179	0.6848
p-value	0.3312	0.7228	0.1007	0.8498	0.2852	0.0821	0.4570	0.1173	0.8029	0.0868	0.4940
adjusted R2 (%)	1.9668	1.8910	-0.2951	2.2050	0.0051	-0.2560	-0.3096	0.0534	-0.0878	0.7650	0.8311
Durbin Watson	1.8355	2.0716	1.7790	1.9958	1.6794	1.9772	1.7253	1.8976	1.7767	1.9397	1.9858
Breusch Pagan	12.0201	3.2780	0.6938	0.0476	0.0985	0.3111	0.2690	0.9051	0.0708	0.7960	15.4901
Breusch Pagan p-value	0.0005	0.0702	0.4049	0.8273	0.7536	0.5770	0.6040	0.3414	0.7902	0.3723	0.0001
White	5.4315	1.2422	0.3531	1.8435	3.6888	2.7238	2.9113	3.6224	0.0713	0.5926	8.7620
White p-value	0.1428	0.7429	0.9498	0.6055	0.2971	0.4362	0.4055	0.3052	0.9950	0.8981	0.0326
Beta	-0.1621	-0.2018	-0.0126	-0.1763	-0.0564	0.0217	0.0006	0.0592	-0.0507	0.0881	0.0916
t-stat beta	-2.7386	-2.6917	-0.2160	-2.8819	-1.0082	0.4157	0.0117	1.0831	-0.8460	1.8702	1.9275
p-value beta	0.0065	0.0075	0.8291	0.0042	0.3141	0.6779	0.9907	0.2796	0.3982	0.0624	0.0548

Table 156: Manufacturing

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.1303	-0.1736	0.4804	-0.0898	0.1234	0.2656	0.1977	0.1996	0.2354	-0.3058	-0.1638
t-stat	-0.5021	-0.4626	2.0617	-0.5088	0.6443	1.5213	1.0588	1.3394	1.4743	-2.2869	-1.0680
p-value	0.6159	0.6439	0.0400	0.6112	0.5198	0.1292	0.2905	0.1814	0.1414	0.0228	0.2863
adjusted R2 (%)	0.5625	1.1616	-0.0910	2.1539	3.5936	2.1306	-0.0881	2.9836	0.7337	0.1324	11.1519
Durbin Watson	1.7738	1.9529	1.7446	1.8591	1.9138	1.7970	1.6455	2.0019	1.6823	1.9846	1.9095
Breusch Pagan	21.6134	52.3841	7.1325	28.6229	0.7590	0.1762	2.6394	0.0134	0.5682	0.3487	62.1185
Breusch Pagan p-value	0.0000	0.0000	0.0076	0.0000	0.3836	0.6746	0.1042	0.9079	0.4510	0.5549	0.0000
White	15.9908	25.1063	2.2722	14.4687	3.5420	3.7986	3.1543	1.0558	2.1986	0.8262	37.7398
White p-value	0.0011	0.0000	0.5179	0.0023	0.3154	0.2840	0.3684	0.7877	0.5322	0.8432	0.0000
Beta	-0.0880	-0.1658	-0.0394	-0.1014	0.1396	0.0998	-0.0318	0.0994	0.0593	0.0322	0.1994
t-stat beta	-1.6831	-2.1926	-0.8398	-2.8517	3.6162	2.8378	-0.8455	3.3112	1.8425	1.1956	6.4550
p-value beta	0.0933	0.0290	0.4016	0.0046	0.0003	0.0048	0.3985	0.0010	0.0663	0.2327	0.0000

Table 157: Transport

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.2514	-0.2499	0.3438	-0.4828	-0.2752	0.1112	0.0331	0.5610	0.0556	-0.4631	-0.0863
t-stat	0.7627	-0.5841	1.2047	-1.9770	-1.0708	0.4563	0.1148	2.7663	0.2032	-2.2349	-0.3528
p-value	0.4462	0.5595	0.2292	0.0489	0.2850	0.6485	0.9087	0.0060	0.8391	0.0261	0.7244
adjusted R2 (%)	0.2076	-0.0219	0.1943	-0.1815	-0.1812	-0.2721	-0.1916	-0.2781	-0.0416	0.8015	-0.2922
Durbin Watson	1.7585	1.8177	2.0267	2.0651	1.7850	1.9809	1.8627	1.9944	1.6503	2.0364	1.5948
Breusch Pagan	107.4409	35.7154	58.8936	22.3318	9.2295	49.8993	68.3356	50.2013	19.2801	59.3340	16.5053
Breusch Pagan p-value	0.0000	0.0000	0.0000	0.0000	0.0024	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
White	41.0503	8.6233	21.9654	10.0766	2.3529	10.0136	26.4628	22.3950	5.3195	30.2641	5.5537
White p-value	0.0000	0.0347	0.0001	0.0179	0.5025	0.0185	0.0000	0.0001	0.1498	0.0000	0.1355
Beta	-0.0919	-0.0888	0.0785	-0.0338	-0.0356	0.0183	-0.0384	0.0139	-0.0548	-0.0849	0.0125
t-stat beta	-1.2938	-0.9639	1.2770	-0.6425	-0.6435	0.3477	-0.6168	0.3187	-0.9302	-1.9021	0.2366
p-value beta	0.1966	0.3358	0.2025	0.5210	0.5204	0.7283	0.5378	0.7502	0.3530	0.0581	0.8131

Table 158: Wholesale Trade

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.1269	0.1091	0.7134	-0.1523	0.6034	0.7467	0.3883	0.5261	0.6324	-0.0415	0.0009
t-stat	0.3765	0.2397	2.0645	-0.5527	1.9693	2.4031	1.3736	1.6341	1.9895	-0.1560	0.0034
p-value	0.7068	0.8107	0.0398	0.5808	0.0498	0.0168	0.1705	0.1032	0.0475	0.8761	0.9973
adjusted R2 (%)	2.7657	1.9164	-0.1642	0.8167	2.4690	1.8236	-0.2872	2.3755	-0.2975	-0.2211	0.3145
Durbin Watson	1.8258	1.9852	1.9634	2.0313	1.8526	1.9141	2.1010	1.7708	1.8357	1.9987	2.1571
Breusch Pagan	28.2652	4.8759	17.6400	42.2490	1.2619	8.1180	0.0189	18.3319	0.2401	0.1005	5.8780
Breusch Pagan p-value	0.0000	0.0272	0.0000	0.0000	0.2613	0.0044	0.8906	0.0000	0.6242	0.7512	0.0153
White	15.1614	8.6743	15.2363	35.7755	7.0522	6.5776	2.8836	15.3595	0.4910	1.9285	4.2787
White p-value	0.0017	0.0339	0.0016	0.0000	0.0703	0.0867	0.4099	0.0015	0.9209	0.5874	0.2329
Beta	-0.2185	-0.2498	-0.0480	-0.1070	0.1884	0.1669	-0.0154	0.1945	0.0127	0.0288	0.0737
t-stat beta	-3.1962	-2.7075	-0.6847	-1.9152	3.0335	2.6492	-0.2684	2.9806	0.1975	0.5341	1.4221
p-value beta	0.0015	0.0071	0.4940	0.0563	0.0026	0.0085	0.7886	0.0031	0.8435	0.5936	0.1560

Table 159: Retail Trade

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.0401	-0.5648	0.7330	0.1288	-0.0209	0.0337	0.5729	0.2004	0.2987	-0.7809	-0.2633
t-stat	-0.1243	-1.3535	2.3706	0.4417	-0.0633	0.0974	1.8578	0.6503	0.9472	-2.7174	-0.9620
p-value	0.9012	0.1768	0.0183	0.6590	0.9496	0.9224	0.0641	0.5160	0.3443	0.0069	0.3367
adjusted R2 (%)	0.8199	0.1675	-0.1518	1.5171	-0.3030	-0.2126	0.2655	0.1699	-0.2709	1.0779	5.4907
Durbin Watson	1.8217	1.9645	1.9210	1.9227	1.7948	1.5902	1.9157	2.0095	1.8848	2.0191	1.8317
Breusch Pagan	1.3537	4.2846	0.8614	0.7088	5.7114	9.4370	0.0004	4.2442	6.5517	0.3719	1.2861
Breusch Pagan p-value	0.2446	0.0385	0.3533	0.3998	0.0169	0.0021	0.9832	0.0394	0.0105	0.5420	0.2568
White	0.6678	2.0585	0.4817	3.4046	3.7481	2.4536	1.5848	1.3818	5.8702	1.2047	3.6780
White p-value	0.8808	0.5604	0.9229	0.3334	0.2900	0.4837	0.6629	0.7098	0.1181	0.7519	0.2984
Beta	-0.1227	-0.1029	-0.0438	-0.1416	-0.0096	0.0384	-0.0835	0.0762	0.0221	0.1213	0.2418
t-stat beta	-1.9179	-1.2425	-0.7135	-2.4477	-0.1456	0.5590	-1.3647	1.2456	0.3529	2.1285	4.4523
p-value beta	0.0560	0.2150	0.4761	0.0149	0.8843	0.5766	0.1733	0.2138	0.7244	0.0341	0.0000

Table 160: Finance

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.0587	0.0559	0.2529	0.0432	0.0236	-0.1086	0.3668	0.0353	0.3380	-0.6548	0.1591
t-stat	0.1734	0.1298	0.8676	0.1776	0.1101	-0.4817	2.0965	0.1937	2.1563	-3.1226	0.7970
p-value	0.8624	0.8968	0.3862	0.8592	0.9124	0.6303	0.0368	0.8465	0.0318	0.0020	0.4260
adjusted R2 (%)	2.1947	1.4947	0.4476	0.5201	2.0176	-0.3049	0.1158	2.4915	-0.3049	1.0673	0.1441
Durbin Watson	1.8219	1.9770	1.7335	1.9821	1.7671	1.8860	1.7367	1.9020	1.7899	1.8639	2.0477
Breusch Pagan	27.2413	54.4415	66.9498	1.1281	10.9859	9.1432	0.0639	87.5879	43.9969	5.1888	6.3668
Breusch Pagan p-value	0.0000	0.0000	0.0000	0.2882	0.0009	0.0025	0.8005	0.0000	0.0000	0.0227	0.0116
White	13.7637	27.0146	19.4704	1.6036	5.1492	5.4299	0.1086	24.0138	26.6902	2.5345	4.8643
White p-value	0.0032	0.0000	0.0002	0.6586	0.1612	0.1429	0.9908	0.0000	0.0000	0.4691	0.1820
Beta	-0.1770	-0.1908	-0.0831	-0.0726	0.1082	0.0050	-0.0373	0.1011	0.0035	0.0809	0.0440
t-stat beta	-2.8758	-2.4323	-1.5674	-1.6413	2.7698	0.1228	-1.1729	3.0461	0.1234	2.1202	1.2115
p-value beta	0.0043	0.0155	0.1180	0.1017	0.0059	0.9024	0.2417	0.0025	0.9018	0.0347	0.2266

Table 161: Services

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.1562	-0.4579	0.6466	0.0970	-0.1350	-0.1289	0.4789	0.5466	0.3100	-0.6117	-0.3149
t-stat	-0.4984	-0.9757	2.4734	0.4557	-0.5544	-0.4663	1.9604	2.3332	1.1741	-2.7265	-1.5528
p-value	0.6185	0.3300	0.0139	0.6489	0.5797	0.6413	0.0508	0.0203	0.2412	0.0067	0.1214
adjusted R2 (%)	1.0037	1.0738	0.4801	0.4591	0.5157	-0.3084	-0.3095	0.1797	-0.2354	0.0028	0.8064
Durbin Watson	1.6657	1.8313	1.7480	1.9169	1.6111	1.5272	1.7449	1.5996	1.4656	1.9410	1.9772
Breusch Pagan	20.4305	73.5284	133.2020	59.0463	102.9120	16.2356	18.9746	49.6845	66.9932	59.7177	1.2782
Breusch Pagan p-value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.2582
White	7.4809	29.7493	51.5935	44.0771	46.9446	7.7621	10.3868	24.3194	25.6446	27.4645	0.5332
White p-value	0.0581	0.0000	0.0000	0.0000	0.0000	0.0512	0.0155	0.0000	0.0000	0.0000	0.9115
Beta	-0.1053	-0.1618	0.0679	-0.0546	0.0647	0.0027	-0.0008	0.0478	0.0209	-0.0366	0.0627
t-stat beta	-2.0700	-2.1253	1.6010	-1.5794	1.6369	0.0609	-0.0198	1.2583	0.4889	-1.0045	1.9063
p-value beta	0.0392	0.0343	0.1104	0.1152	0.1026	0.9515	0.9843	0.2092	0.6253	0.3159	0.0575

C.9 Fama-MacBeth regressions: Sectors

Table 162: Construction

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1260	-0.0088	0.0044	-0.0016	0.0117	0.0635	0.0007	0.0036	-0.0001	0.0002	-0.0015
t-stat	-5.1609	-3.1637	0.8279	-1.4764	3.0781	4.3220	0.9623	1.3489	-0.6526	0.0904	-1.0964

Table 163: Manufacturing

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1352	-0.0051	0.0023	-0.0027	0.0099	0.0475	0.0018	0.0009	-0.0000	-0.0033	-0.0000
t-stat	-7.9841	-2.7854	0.6886	-4.6415	4.3093	5.1090	4.1942	0.5005	-1.7213	-2.5838	-0.0006

Table 164: Transport

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1050	-0.0050	0.0016	-0.0018	0.0040	0.0214	0.0019	0.0073	-0.0003	-0.0010	-0.0012
t-stat	-3.8197	-2.4659	0.3049	-3.2465	1.1106	1.5047	3.0200	1.0600	-2.9771	-0.5148	-1.1502

Table 165: Wholesale Trade

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1508	-0.0082	0.0026	-0.0020	0.0043	0.0657	0.0021	-0.0023	-0.0001	-0.0070	-0.0002
t-stat	-4.6595	-3.5361	0.4755	-1.8288	0.4795	2.3749	3.6882	-0.3761	-0.7875	-2.9456	-0.2090

Table 166: Retail Trade

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1248	-0.0076	0.0062	-0.0026	0.0096	0.0509	0.0020	0.0110	-0.0003	-0.0017	0.0009
t-stat	-4.7257	-3.1836	1.3874	-2.0300	2.2227	1.5784	2.5567	1.2024	-1.7912	-0.6527	0.9080

Table 167: Finance

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1121	-0.0064	0.0021	-0.0017	0.0081	0.0056	0.0015	0.0013	-0.0002	-0.0011	-0.0010
t-stat	-5.1487	-2.6659	0.4171	-2.6728	3.1808	1.3116	3.2930	1.1269	-3.2389	-0.4768	-1.2270

Table 168: Services

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1034	-0.0049	0.0028	-0.0026	0.0110	0.0298	0.0022	0.0071	0.0000	-0.0018	0.0000
t-stat	-6.9021	-2.7190	0.7592	-3.7786	3.7503	2.6963	3.5903	1.9981	0.0215	-1.2030	0.0389

Appendix D Country Investment styles

D.1 Denmark

Table 169: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	1.1765	0.8715	0.5638	0.7225	0.7925	-0.3840
t-stat	2.6342	1.8830	1.5624	2.5115	3.3460	-1.0738
p-value	0.0088	0.0606	0.1192	0.0125	0.0009	0.2837
Standard Deviation (%)	7.5840	7.8639	6.1334	4.8854	3.9826	6.8678
Return/Risk	0.1551	0.1108	0.0919	0.1479	0.1990	-0.0559
Skewness	-0.6096	-0.0501	-0.8142	-0.8339	-0.3262	0.3959
Kurtosis	4.6890	5.3644	6.3830	5.5341	3.9231	5.7785
<i>Characteristic</i>	0.2904	0.1408	0.0979	0.0775	0.0554	0.1729

Table 170: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
	0.1822	0.2122	0.6116	0.6131	1.8732	1.6910
	0.4436	0.5866	1.7590	1.9505	5.3829	4.3697
	0.6577	0.5579	0.0795	0.0520	0.0000	0.0000
	7.1974	6.3379	6.0912	5.5063	6.0817	6.7693
	0.0253	0.0335	0.1004	0.1113	0.3080	0.2498
	-0.3282	-0.4062	-0.5613	-0.5252	-0.5717	-0.2059
	4.7435	5.3448	6.0682	4.1872	5.1627	4.1114
	-0.4181	-0.0913	0.0541	0.2185	0.5908	0.0863

Table 171: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5891	1.0822	0.8101	0.8236	0.7082	0.1191
t-stat	1.5121	2.6796	2.0432	2.2168	1.7100	0.3243
p-value	0.1315	0.0077	0.0418	0.0273	0.0882	0.7459
Standard Deviation (%)	6.2666	6.4841	6.3730	5.9700	6.6600	5.9104
Return/Risk	0.0940	0.1669	0.1271	0.1380	0.1063	0.0201
Skewness	-0.7970	-0.2944	-0.3916	-0.9724	-0.2175	0.2167
Kurtosis	5.2346	5.5230	3.9162	6.2813	4.4350	3.8160
<i>Characteristic</i>	2.0907	0.5571	-0.0075	-0.3711	-0.7188	0.6860

Table 172: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
	0.8498	0.7347	0.3224	0.7467	0.8393	-0.0105
	2.2519	2.1671	0.9526	2.4376	2.5976	-0.0343
	0.0250	0.0310	0.3415	0.0153	0.0098	0.9726
	6.7388	6.0541	6.0449	5.4706	5.7695	5.4649
	0.1261	0.1213	0.0533	0.1365	0.1455	-0.0019
	-0.2464	-0.1955	-0.6792	-0.7903	-0.6332	-0.0246
	3.7526	4.2140	4.9065	4.8312	4.8434	3.3639
	4.7023	5.5532	5.9609	6.4337	8.3091	6.5057

Table 173: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	1.0927	0.5385	0.5750	0.6684	0.4816	-0.6111
t-stat	2.2243	1.2803	1.7351	2.4742	1.7741	-1.6030
p-value	0.0268	0.2014	0.0837	0.0139	0.0770	0.1099
Standard Deviation (%)	8.5756	7.3457	5.7859	4.7159	4.6763	8.3223
Return/Risk	0.1274	0.0733	0.0994	0.1417	0.1030	-0.0734
Skewness	-0.2695	-0.3765	-0.8992	-0.5562	-1.2958	-0.5875
Kurtosis	4.3258	5.1068	6.1971	4.1864	11.4754	6.5918
<i>Characteristic</i>	2.3613	1.0030	0.6753	0.4361	0.0189	1.1901

Table 174: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
	0.9178	0.4985	0.6555	0.3312	1.0411	0.1233
	2.3350	1.2872	2.1916	0.9889	3.0651	0.3593
	0.0202	0.1989	0.0291	0.3234	0.0024	0.7196
	6.9409	6.7076	5.2817	5.9164	5.9677	6.0643
	0.1322	0.0743	0.1241	0.0560	0.1736	0.0203
	-0.3639	-0.6666	-0.4417	-0.4793	-0.6606	-0.4012
	3.9506	5.8767	4.1358	6.1047	5.8291	3.8011
	0.2319	0.6704	1.2048	1.9675	3.9042	2.0680

Table 175: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4654	0.7362	1.0156	0.6474	0.5514	0.0860
t-stat	1.1796	2.1482	2.9575	1.8121	1.5966	0.2197
p-value	0.2390	0.0324	0.0033	0.0709	0.1113	0.8263
Standard Deviation (%)	6.9686	6.0519	6.0624	6.3093	6.0995	6.9136
Return/Risk	0.0668	0.1216	0.1675	0.1026	0.0904	0.0124
Skewness	-0.4102	-0.9038	-0.5451	-0.8028	0.0483	-0.0991
Kurtosis	4.2773	5.0321	5.2429	5.5218	5.7742	4.2248
<i>Characteristic</i>	76.8138	61.1628	24.2053	19.1644	15.2422	46.0280

Table 176: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
	0.6689	0.8048	0.7443	0.4508	0.6854	0.0164
	1.9981	2.7173	2.1546	1.1831	1.8262	0.0431
	0.0465	0.0069	0.0319	0.2376	0.0687	0.9657
	5.9124	5.2294	6.1008	6.7307	6.6282	6.7370
	0.1131	0.1539	0.1220	0.0670	0.1034	0.0024
	-0.5321	-0.2441	-0.7430	-0.5660	0.0186	0.1042
	4.6494	4.0443	4.7555	4.6163	4.2234	4.4474
	0.1904	0.3388	0.5034	0.7418	1.3377	0.7641

Table 177: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3433	0.7016	0.5443	0.9460	1.0852	0.7419
t-stat	0.9229	2.1264	1.5465	2.7396	3.1213	1.9443
p-value	0.3568	0.0342	0.1230	0.0065	0.0020	0.0527
Standard Deviation (%)	6.5710	5.8263	6.2165	6.0968	6.1376	6.7383
Return/Risk	0.0522	0.1204	0.0876	0.1552	0.1768	0.1101
Skewness	-0.3939	-0.5287	-0.6721	-0.3841	0.1795	-0.0103
Kurtosis	4.1756	5.0831	4.6445	3.9723	4.5063	5.4968
<i>Characteristic</i>	0.0558	0.0798	0.1074	0.1521	0.3097	0.1828

Table 178: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
	0.7388	0.9879	0.7546	0.8679	0.6623	-0.0765
	2.0823	3.0715	2.0798	2.5268	1.9713	-0.2185
	0.0381	0.0023	0.0383	0.0120	0.0495	0.8272
	6.2655	5.6780	6.4077	6.0647	5.9334	6.1825
	0.1179	0.1740	0.1178	0.1431	0.1116	-0.0124
	-0.9277	-0.9826	-0.5522	-0.3967	0.3421	0.5861
	6.1051	5.6627	6.3794	4.6537	6.0412	5.8182
	0.4549	0.6193	0.8246	1.1826	2.2977	1.3763

Table 179: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6373	0.7456	0.8577	0.5659	0.7654	0.1281
t-stat	2.0461	2.5027	2.3166	1.5104	1.9397	0.3970
p-value	0.0416	0.0128	0.0212	0.1319	0.0533	0.6916
Standard Deviation (%)	5.5626	5.3205	6.6121	6.6919	6.9913	6.2335
Return/Risk	0.1146	0.1401	0.1297	0.0846	0.1095	0.0206
Skewness	-0.5077	-0.4401	-0.3729	-0.7160	-0.0601	0.8568
Kurtosis	4.5173	4.1849	5.4182	5.4646	6.5541	6.4618
<i>Characteristic</i>	8.3210	7.2279	6.6134	6.0756	5.6452	6.9831

D.2 France

Table 180: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7100	0.4152	0.5471	0.8939	0.8264	0.1163
t-stat	1.5857	1.0032	1.7437	3.4992	4.2949	0.3239
p-value	0.1138	0.3165	0.0822	0.0005	0.0000	0.7462
Standard Deviation (%)	7.6095	7.0354	5.3315	4.3334	3.2599	6.1075
Return/Risk	0.0933	0.0590	0.1026	0.2063	0.2535	0.0190
Skewness	-0.4307	-0.1581	-0.6441	-0.6660	-0.4964	-0.0538
Kurtosis	4.8611	3.9422	4.1268	4.2437	3.2795	5.8973
<i>Characteristic</i>	0.2222	0.1121	0.0842	0.0690	0.0506	0.1364

Table 181: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
	0.1438	0.5147	0.7175	0.6830	0.9551	0.8112
	0.3581	1.5341	2.5135	2.4154	3.3066	2.8053
	0.7205	0.1260	0.0124	0.0163	0.0011	0.0053
	7.0376	5.8779	4.9993	4.9523	5.0563	5.0638
	0.0204	0.0876	0.1435	0.1379	0.1889	0.1602
	-0.0825	-0.7279	-0.7270	-0.3884	-0.2383	-0.2184
	5.3671	5.3450	4.9992	3.5457	4.1850	6.6147
	-0.3155	-0.0735	0.0440	0.1645	0.4282	0.0563

Table 182: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.8166	0.8408	0.5895	0.3951	0.4912	-0.3253
t-stat	2.5148	2.7273	1.7587	1.1155	1.1909	-1.2502
p-value	0.0124	0.0067	0.0796	0.2655	0.2346	0.2121
Standard Deviation (%)	5.2148	4.9486	5.3901	5.6991	6.6372	4.1872
Return/Risk	0.1566	0.1699	0.1094	0.0693	0.0740	-0.0777
Skewness	-0.8143	-0.7146	-0.4898	-0.3154	-0.3472	0.2299
Kurtosis	4.8646	4.2927	3.9140	4.1447	4.2924	4.1304
<i>Characteristic</i>	1.4060	0.4731	0.0470	-0.2638	-0.6041	0.4009

Table 183: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
	0.3191	0.6425	0.5254	0.6109	0.7761	0.4570
	0.8449	1.9113	1.7165	2.2534	2.8094	1.6975
	0.3988	0.0568	0.0870	0.0249	0.0053	0.0906
	6.7458	6.0033	5.4662	4.8415	4.9332	4.8085
	0.0473	0.1070	0.0961	0.1262	0.1573	0.0950
	-0.2283	-0.3144	-0.6870	-0.5404	-0.4143	-0.3437
	5.1488	3.9664	4.8109	4.2175	5.4500	6.4780
	2.9165	3.7550	4.1823	4.5886	5.4788	4.1977

Table 184: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5201	0.6100	0.7622	0.7609	0.7580	0.2379
t-stat	1.0682	1.6624	2.5895	3.4551	4.2348	0.5489
p-value	0.2862	0.0974	0.0100	0.0006	0.0000	0.5834
Standard Deviation (%)	8.5026	6.4072	5.1378	3.8417	3.1204	7.5701
Return/Risk	0.0612	0.0952	0.1484	0.1981	0.2429	0.0314
Skewness	-0.2080	-0.2041	-0.6836	-0.3184	-0.4780	0.0570
Kurtosis	4.7493	3.7679	4.8195	3.5587	3.6860	5.3442
<i>Characteristic</i>	2.0265	1.0885	0.8154	0.5731	0.1451	1.0858

Table 185: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
	0.4600	0.6031	0.5530	0.6664	0.9664	0.5064
	1.2970	2.0716	1.7532	2.1461	3.3223	2.2203
	0.1956	0.0391	0.0805	0.0326	0.0010	0.0271
	6.2640	5.1410	5.5709	5.4831	5.1346	4.0277
	0.0734	0.1173	0.0993	0.1215	0.1882	0.1257
	-0.2319	-0.6562	-0.7698	-0.3851	-0.0597	-0.2537
	4.1245	4.9547	4.9555	3.8170	4.4766	4.1485
	0.8153	1.9154	2.5948	3.3379	5.2445	3.0299

Table 186: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4531	0.4428	0.7191	0.7752	0.8244	0.3713
t-stat	1.3209	1.4640	2.5123	2.4851	2.6963	1.6402
p-value	0.1875	0.1442	0.0125	0.0135	0.0074	0.1019
Standard Deviation (%)	6.0590	5.3420	5.0545	5.5082	5.3983	3.9977
Return/Risk	0.0748	0.0829	0.1423	0.1407	0.1527	0.0929
Skewness	-0.6154	-0.5354	-0.1551	-0.6815	-0.2535	-0.0794
Kurtosis	5.5849	4.4220	5.3229	4.3504	3.9973	6.5242
<i>Characteristic</i>	46.1110	26.5218	20.1499	16.2883	12.0073	29.0592

Table 187: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
	0.6644	0.5779	0.7122	0.6089	0.6983	0.0338
	2.0635	1.9951	2.2115	1.9574	1.9381	0.1238
	0.0399	0.0469	0.0277	0.0512	0.0535	0.9016
	5.6863	5.1153	5.6869	5.4938	6.3628	4.8267
	0.1168	0.1130	0.1252	0.1108	0.1097	0.0070
	-0.1394	-0.7166	-0.0136	-0.2893	-0.3459	-1.2524
	5.9416	4.5123	4.3793	4.5569	4.0110	11.5185
	0.2324	0.3685	0.4894	0.6317	0.9114	0.5719

Table 188: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6180	0.5771	0.7097	0.6537	0.8272	0.2093
t-stat	1.9990	1.8658	2.3340	2.1886	2.4251	0.8420
p-value	0.0464	0.0630	0.0202	0.0293	0.0158	0.4004
Standard Deviation (%)	5.4594	5.4624	5.3692	5.2745	6.0233	4.3898
Return/Risk	0.1132	0.1056	0.1322	0.1239	0.1373	0.0477
Skewness	-0.2428	-0.6142	-0.4337	-0.5027	-0.1306	-0.1540
Kurtosis	4.2578	4.9359	3.8625	4.1192	4.7920	5.6369
<i>Characteristic</i>	0.0578	0.0869	0.1135	0.1532	0.2389	0.1483

Table 189: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
	0.6752	0.6211	0.7327	0.7458	0.9607	0.2855
	2.1179	2.0207	2.5519	2.5269	2.9271	1.1452
	0.0349	0.0441	0.0112	0.0120	0.0037	0.2530
	5.6297	5.4286	5.0694	5.2111	5.7942	4.4037
	0.1199	0.1144	0.1445	0.1431	0.1658	0.0648
	-0.1195	-0.6603	-0.4889	-0.5428	-0.1683	-1.3410
	4.8936	5.3109	4.1060	4.5558	3.9159	14.7428
	0.0605	0.0823	0.1071	0.1406	0.2045	0.1325

Table 190: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4579	0.5331	0.6090	0.4627	0.8252	0.3673
t-stat	1.6845	1.6413	2.0637	1.4454	2.4461	1.5741
p-value	0.0931	0.1017	0.0398	0.1493	0.0150	0.1164
Standard Deviation (%)	4.8550	5.8014	5.2704	5.7172	6.0245	4.1671
Return/Risk	0.0943	0.0919	0.1156	0.0809	0.1370	0.0881
Skewness	-0.4143	-0.5359	-0.7330	-0.6430	-0.3379	-0.3747
Kurtosis	3.4873	4.0834	5.2314	4.7462	4.2112	4.6515
<i>Characteristic</i>	10.1322	9.0265	8.3701	7.8990	7.4436	8.7879

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Table 191: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3844	0.3493	0.5840	0.7225	0.6737	0.2892
t-stat	0.9782	0.8151	1.7419	2.9711	5.6190	8.8025
p-value	0.3287	0.4156	0.0825	0.0032	0.0000	0.4228
Standard Deviation (%)	6.6808	7.2852	5.6973	4.1278	2.0261	6.1274
Return/Risk	0.0575	0.0479	0.1025	0.1750	0.3325	0.0472
Skewness	0.2302	-0.6795	-0.8815	-0.9260	-0.3829	-0.7315
Kurtosis	6.6515	5.3947	5.1137	4.8419	3.4900	8.7570
<i>Characteristic</i>	0.2803	0.1380	0.0893	0.0679	0.0403	0.1603

Table 193: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6309	0.6890	0.8659	0.7256	0.3623	-0.2686
t-stat	2.0964	2.0553	2.6403	2.2185	1.0540	-1.0210
p-value	0.0368	0.0407	0.0087	0.0272	0.2927	0.3080
Standard Deviation (%)	4.8367	5.3880	5.2658	5.2553	5.5322	4.2331
Return/Risk	0.1304	0.1279	0.1644	0.1381	0.0655	-0.0634
Skewness	-0.8414	-0.7070	-0.6227	-0.6055	-0.5893	0.0128
Kurtosis	5.0440	6.9510	5.8346	3.8035	4.6848	3.8500
<i>Characteristic</i>	1.2729	0.3946	-0.0313	-0.3673	-0.6814	0.2957

Table 195: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2006	0.3937	0.4621	0.6680	0.5830	0.3825
t-stat	0.4241	1.0033	1.6429	3.5507	4.5658	8.8021
p-value	0.6718	0.3165	0.1014	0.0004	0.0000	0.4231
Standard Deviation (%)	8.2613	6.8532	4.9119	3.2817	2.2257	8.3275
Return/Risk	0.0243	0.0575	0.0941	0.2036	0.2620	0.0459
Skewness	-0.6158	-0.5621	-0.7748	-0.5883	0.0963	0.7030
Kurtosis	5.3759	5.1227	4.3950	4.0095	3.3805	6.7459
<i>Characteristic</i>	2.4170	1.1011	0.7197	0.3933	-0.1445	1.1363

Table 197: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1149	0.7847	0.5758	0.5878	0.5047	0.3899
t-stat	0.3495	2.7967	1.9828	1.9166	1.6392	1.5516
p-value	0.7270	0.0055	0.0482	0.0562	0.1021	0.1217
Standard Deviation (%)	5.8058	4.9536	5.1285	5.4162	5.4379	4.4376
Return/Risk	0.0198	0.1584	0.1123	0.1085	0.0928	0.0879
Skewness	-0.5017	-0.6403	-1.4995	-0.4335	-0.4035	0.5953
Kurtosis	4.2478	4.4680	8.7729	4.5904	4.1816	6.9778
<i>Characteristic</i>	74.8973	28.1634	26.4020	19.1681	13.0350	43.9662

Table 199: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2405	0.4170	0.4615	0.6805	0.8152	0.5746
t-stat	0.8704	1.5065	1.7120	2.2527	2.5999	2.4468
p-value	0.3847	0.1329	0.0879	0.0249	0.0098	0.0149
Standard Deviation (%)	4.8817	4.8886	4.7608	5.3343	5.5362	4.1470
Return/Risk	0.0493	0.0853	0.0969	0.1276	0.1472	0.1386
Skewness	-1.0112	-0.9651	-0.6647	-0.8738	-0.2295	0.4820
Kurtosis	7.0532	5.6978	4.4415	5.7182	6.2896	8.1859
<i>Characteristic</i>	0.0661	0.1036	0.1462	0.2021	0.3667	0.2164

Table 201: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5311	0.3401	0.2517	0.3237	0.4653	-0.0659
t-stat	1.6248	1.2457	0.9131	1.2329	1.5291	-0.2878
p-value	0.1052	0.2138	0.3619	0.2185	0.1272	0.7737
Standard Deviation (%)	5.8382	4.8767	4.9239	4.6888	5.4343	4.0885
Return/Risk	0.0910	0.0697	0.0511	0.0690	0.0856	-0.0161
Skewness	-0.7288	-1.0609	-0.9921	-0.7808	-0.4197	-0.0476
Kurtosis	4.4839	5.5376	5.7100	4.8344	4.0923	3.7271
<i>Characteristic</i>	10.0284	8.7788	8.1263	7.6240	7.1739	8.6011

Table 192: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0283	0.1249	0.4622	0.7052	0.8930	0.8647
t-stat	0.0739	0.3825	1.7144	2.7386	3.4760	2.6856
p-value	0.9412	0.7024	0.0874	0.0065	0.0006	0.0076
Standard Deviation (%)	6.7102	5.7237	4.7227	4.5093	4.4966	5.6380
Return/Risk	0.0042	0.0218	0.0979	0.1564	0.1986	0.1534
Skewness	-0.2971	-0.8952	-0.5065	-0.7367	-0.7313	-0.1077
Kurtosis	7.1666	6.5946	5.0823	4.9012	4.7041	9.1538
<i>Characteristic</i>	-0.3451	-0.0772	0.0361	0.1522	0.4134	0.0341

Table 194: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2928	0.2982	0.4696	0.3328	0.5081	0.2152
t-stat	0.8241	0.9677	1.6478	1.2451	2.1655	0.8391
p-value	0.4105	0.3339	0.1004	0.2140	0.0311	0.4020
Standard Deviation (%)	6.3468	5.5040	5.0900	4.7743	4.1902	4.5816
Return/Risk	0.0461	0.0542	0.0923	0.0697	0.1213	0.0470
Skewness	-0.5024	-0.9146	-0.6878	-0.7348	-0.6393	0.2695
Kurtosis	5.0722	5.2176	4.3934	4.5757	4.4513	6.2914
<i>Characteristic</i>	2.9657	3.8215	4.2833	4.6977	5.5213	4.2435

Table 196: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.1948	0.4891	0.4803	0.6671	0.7749	0.9697
t-stat	-0.5518	1.7890	1.7362	2.4906	2.9287	3.9326
p-value	0.5815	0.0746	0.0835	0.0133	0.0036	0.0001
Standard Deviation (%)	6.2375	4.8286	4.8858	4.7298	4.6712	4.3515
Return/Risk	-0.0312	0.1013	0.0983	0.1411	0.1659	0.2228
Skewness	-0.7666	-0.5695	-0.9021	-0.6167	-0.5639	0.8101
Kurtosis	5.6734	4.2455	5.0421	5.4008	5.0225	12.6811
<i>Characteristic</i>	0.5646	1.3734	2.0151	2.7469	4.1684	2.3665

Table 198: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0628	0.4739	0.4467	0.5689	0.7351	0.7979
t-stat	-0.2169	1.8389	1.4569	2.0630	2.1407	3.0825
p-value	0.8284	0.0668	0.1461	0.0399	0.0330	0.0022
Standard Deviation (%)	5.1131	4.5512	5.4157	4.8699	6.0643	4.5698
Return/Risk	-0.0123	0.1041	0.0825	0.1168	0.1212	0.1746
Skewness	-0.7105	-0.6748	-1.1916	-0.1951	-0.5331	0.4393
Kurtosis	5.4482	4.5993	8.1163	4.4150	4.4323	6.4414
<i>Characteristic</i>	0.2134	0.3629	0.4837	0.6227	0.9622	0.5878

Table 200: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3438	0.1336	0.6295	0.8238	0.9851	0.6413
t-stat	1.3022	0.5191	2.2756	2.7693	3.2671	2.7643
p-value	0.1938	0.6040	0.0235	0.0059	0.0012	0.0060
Standard Deviation (%)	4.6631	4.5459	4.8847	5.2524	5.3226	4.0962
Return/Risk	0.0737	0.0294	0.1289	0.1568	0.1851	0.1566
Skewness	-0.6252	-0.9121	-0.9660	-0.3962	-0.8417	-0.1895
Kurtosis	4.8702	5.2608	5.4194	4.5398	4.9774	5.1721
<i>Characteristic</i>	0.0606	0.0904	0.1128	0.1442	0.2243	0.1424

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Table 202: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4403	-0.4266	-0.0491	0.1053	0.2312	-0.2091
t-stat	0.5616	-0.6343	-0.0868	0.2182	0.7129	-0.3486
p-value	0.5748	0.5264	0.9309	0.8274	0.4764	0.7276
Standard Deviation (%)	13.3310	11.4366	9.6262	8.2014	5.5147	10.1967
Return/Risk	0.0330	-0.0373	-0.0051	0.0128	0.0419	-0.0205
Skewness	0.2695	0.1241	0.0880	-0.1109	0.2890	-0.2623
Kurtosis	3.9041	4.1253	4.3430	4.0613	5.1699	3.8207
<i>Characteristic</i>	0.2481	0.1642	0.1345	0.1101	0.0703	0.1592

Table 203: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
	-0.8454	-0.2153	-0.2389	0.2059	0.5279	1.3733
	-1.3011	-0.3802	-0.4392	0.4148	1.0305	3.2024
	0.1941	0.7041	0.6608	0.6786	0.3035	0.0015
	11.3835	9.9224	9.5311	8.6971	8.9762	7.5075
	-0.0743	-0.0217	-0.0251	0.0237	0.0588	0.1829
	0.1102	-0.1006	-0.1549	-0.0270	0.2843	-0.1847
	4.2033	4.2785	4.0123	4.0307	5.3978	4.4048
	-0.3815	-0.1709	-0.0127	0.1643	0.5611	0.0898

Table 204: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.2239	0.2342	0.1400	0.2968	-0.6608	-0.4368
t-stat	-0.4205	0.3981	0.2243	0.4453	-0.8898	-0.8946
p-value	0.6744	0.6908	0.8227	0.6564	0.3742	0.3716
Standard Deviation (%)	8.5729	9.4709	10.0482	10.7305	11.9518	7.8585
Return/Risk	-0.0261	0.0247	0.0139	0.0277	-0.0553	-0.0556
Skewness	-0.2806	0.0389	-0.0168	0.1193	0.2622	0.3901
Kurtosis	5.2530	3.5941	4.2073	5.1871	3.7725	4.0735
<i>Characteristic</i>	1.4730	0.3354	-0.0345	-0.2894	-0.5661	0.4535

Table 205: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
	-0.4518	-0.5067	-0.2365	-0.0824	0.1960	0.6478
	-0.6932	-0.8549	-0.4341	-0.1698	0.4380	1.6130
	0.4887	0.3933	0.6645	0.8652	0.6617	0.1077
	11.6419	10.5867	9.7284	8.6707	7.9921	7.1723
	-0.0388	-0.0479	-0.0243	-0.0095	0.0245	0.0903
	0.3177	0.0488	0.0315	-0.1025	0.3985	-0.2071
	4.0321	4.2494	4.1482	3.9307	5.4971	3.5544
	0.9938	1.5774	1.9739	2.4052	3.1960	2.0949

Table 206: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.2651	-0.3260	0.0221	0.3036	-0.2060	0.0591
t-stat	-0.3282	-0.5049	0.0409	0.7459	-0.5913	0.1172
p-value	0.7430	0.6140	0.9674	0.4563	0.5547	0.9068
Standard Deviation (%)	14.0840	11.2777	9.4439	7.1081	6.0742	12.0466
Return/Risk	-0.0188	-0.0289	0.0023	0.0427	-0.0339	0.0049
Skewness	0.2093	0.0612	0.1255	0.0767	0.3623	-0.1297
Kurtosis	3.6641	4.0636	4.8113	4.7731	5.9665	4.0324
<i>Characteristic</i>	1.8334	1.1270	0.8470	0.5880	0.0971	0.9652

Table 207: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
	-0.5913	-0.5684	-0.1065	0.3087	0.1649	0.7561
	-1.0023	-0.9280	-0.1799	0.5559	0.3244	2.3943
	0.3169	0.3541	0.8573	0.5787	0.7458	0.0172
	10.4196	9.7239	9.8383	9.8102	8.9786	5.5766
	-0.0567	-0.0585	-0.0108	0.0315	0.0184	0.1356
	0.1114	-0.0656	-0.0035	0.0385	0.4047	0.0362
	3.6096	3.9854	3.6343	4.3038	5.1620	3.9629
	0.4780	1.2939	2.0557	2.8834	6.0168	3.2474

Table 208: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.2470	-0.2588	-0.2482	0.3622	0.1349	0.3819
t-stat	-0.4173	-0.4962	-0.4224	0.6847	0.2359	1.0251
p-value	0.6767	0.6201	0.6730	0.4940	0.8137	0.3061
Standard Deviation (%)	10.4550	9.2122	10.3796	9.3444	10.1044	6.5804
Return/Risk	-0.0236	-0.0281	-0.0239	0.0388	0.0134	0.0580
Skewness	-0.2045	-0.0776	0.0374	-0.0742	0.1914	-0.0214
Kurtosis	4.1485	3.9383	3.8231	3.9109	4.5649	3.9370
<i>Characteristic</i>	133.5912	32.5520	22.1613	18.2668	11.4360	72.5136

Table 209: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
	-0.0802	-0.0921	-0.0838	0.0794	-0.3142	-0.2341
	-0.1549	-0.1798	-0.1574	0.1344	-0.4796	-0.5928
	0.8770	0.8574	0.8750	0.8932	0.6319	0.5537
	9.1377	9.0488	9.3473	10.4311	11.5751	6.9757
	-0.0088	-0.0102	-0.0090	0.0076	-0.0271	-0.0336
	0.1223	-0.0956	-0.0470	0.2910	0.2523	0.2809
	5.0761	3.6272	4.4140	3.5944	4.2728	4.2500
	0.2813	0.4845	0.6734	0.9167	1.7485	1.0149

Table 210: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.4563	0.2238	0.2033	0.2081	0.2631	0.7194
t-stat	-0.8363	0.4249	0.3704	0.3783	0.4570	2.0011
p-value	0.4036	0.6712	0.7113	0.7055	0.6480	0.0462
Standard Deviation (%)	9.6376	9.3060	9.6931	9.7157	10.1707	6.3490
Return/Risk	-0.0473	0.0241	0.0210	0.0214	0.0259	0.1133
Skewness	-0.0189	-0.0410	0.0717	0.0722	0.3587	-0.4587
Kurtosis	4.0227	4.1159	4.2189	4.7214	3.9932	4.8280
<i>Characteristic</i>	0.0609	0.0931	0.1195	0.1623	0.3022	0.1816

Table 211: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
	-0.6051	-0.0687	0.1672	0.3972	0.2566	0.8618
	-1.0824	-0.1255	0.3388	0.6999	0.4190	2.4147
	0.2799	0.9002	0.7350	0.4845	0.6755	0.0163
	9.8750	9.6657	8.7150	10.0256	10.8194	6.3018
	-0.0613	-0.0071	0.0192	0.0396	0.0237	0.1367
	-0.0202	0.0667	-0.0133	0.0838	0.0750	-0.2713
	4.3218	4.2926	4.0866	4.2051	4.1652	3.7663
	0.0621	0.1081	0.1293	0.1600	0.2300	0.1461

Table 212: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.1354	-0.0836	-0.3870	-0.4996	-0.2444	-0.1090
t-stat	-0.2836	-0.1558	-0.7180	-0.8654	-0.3905	-0.3106
p-value	0.7769	0.8763	0.4733	0.3874	0.6964	0.7563
Standard Deviation (%)	8.5264	9.5840	9.6266	10.3112	11.1621	6.8731
Return/Risk	-0.0159	-0.0087	-0.0402	-0.0485	-0.0219	-0.0159
Skewness	0.1075	0.0755	0.0536	0.3028	0.4588	0.6116
Kurtosis	4.4703	4.1801	4.1926	4.4001	4.3601	4.1347
<i>Characteristic</i>	6.7385	5.6271	5.0652	4.6525	4.2510	5.4948

D.5 Italy

Table 213: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0302	0.5096	0.5058	0.5430	0.7883	0.8184
t-stat	-0.0518	1.1270	1.2882	1.6700	2.6952	1.6647
p-value	0.9588	0.2606	0.1986	0.0959	0.0074	0.0969
Standard Deviation (%)	9.9196	7.6873	6.6744	5.5252	4.9572	8.1330
Return/Risk	-0.0030	0.0663	0.0758	0.0983	0.1590	0.1006
Skewness	0.2410	0.0369	0.1997	-0.0426	0.6318	-0.0048
Kurtosis	5.3341	4.4549	4.9361	3.8075	7.4428	5.2408
<i>Characteristic</i>	0.1781	0.1082	0.0890	0.0736	0.0513	0.1147

Table 215: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6679	-0.1872	0.3433	0.5277	0.3297	-0.3382
t-stat	1.4189	-0.4024	0.8504	1.0591	0.6563	-0.8278
p-value	0.1569	0.6877	0.3957	0.2903	0.5121	0.4084
Standard Deviation (%)	7.5721	7.4595	6.4462	7.9247	7.9770	7.2477
Return/Risk	0.0882	-0.0251	0.0532	0.0666	0.0413	-0.0467
Skewness	0.6753	-0.9426	0.0111	0.3714	-0.1781	-0.4100
Kurtosis	6.5373	10.9645	4.7386	7.4038	3.6445	4.7974
<i>Characteristic</i>	1.8765	0.7221	0.2609	0.0258	-0.3026	0.7870

Table 217: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.1196	0.2228	0.5840	0.6411	0.3662	0.4859
t-stat	-0.1943	0.4843	1.6028	2.1043	1.0762	0.8802
p-value	0.8460	0.6285	0.1099	0.0361	0.2826	0.3794
Standard Deviation (%)	10.7533	8.0347	6.3617	5.3185	5.9427	9.6407
Return/Risk	-0.0111	0.0277	0.0918	0.1205	0.0616	0.0504
Skewness	0.4536	0.3707	0.1640	0.2711	1.3125	-0.9246
Kurtosis	6.6145	5.1130	4.5657	5.1576	12.2457	12.6483
<i>Characteristic</i>	1.9994	1.0737	0.8033	0.5602	0.1710	1.0852

Table 219: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0128	0.3728	0.3318	0.4414	0.4067	0.4195
t-stat	-0.0272	0.9890	0.8264	1.1182	1.0387	1.2883
p-value	0.9783	0.3234	0.4092	0.2643	0.2997	0.1986
Standard Deviation (%)	8.3006	6.6584	7.0916	6.9732	6.9156	5.7510
Return/Risk	-0.0015	0.0560	0.0468	0.0633	0.0588	0.0729
Skewness	0.2539	0.0954	0.0099	0.1190	0.1759	-0.4686
Kurtosis	6.2994	5.1051	5.2787	4.8516	4.4034	4.7717
<i>Characteristic</i>	49.7966	24.2176	20.3978	15.9102	12.0756	30.9361

Table 221: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3673	0.5185	0.3383	0.4551	0.1732	-0.1941
t-stat	0.8492	1.1818	0.8692	1.2112	0.3982	-0.5107
p-value	0.3964	0.2381	0.3854	0.2267	0.6907	0.6099
Standard Deviation (%)	7.6392	7.7497	6.8757	6.6370	7.6832	6.7135
Return/Risk	0.0481	0.0669	0.0492	0.0686	0.0225	-0.0289
Skewness	1.1864	0.3668	-0.0190	-0.0373	0.2549	-1.6834
Kurtosis	10.8830	9.3343	5.3485	4.3183	4.2499	15.1471
<i>Characteristic</i>	0.0771	0.1085	0.1503	0.2085	0.4680	0.2725

Table 223: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2502	-0.0583	-0.0158	0.0122	0.2676	0.0173
t-stat	0.6901	-0.1478	-0.0362	0.0299	0.6219	0.2079
p-value	0.4906	0.8826	0.9711	0.9762	0.5345	0.8354
Standard Deviation (%)	6.4768	7.0422	7.7883	7.3172	7.6731	4.9963
Return/Risk	0.0386	-0.0083	-0.0020	0.0017	0.0349	0.0035
Skewness	0.3549	0.4085	0.4820	0.0624	-0.2671	-0.1240
Kurtosis	4.4695	5.5146	5.9394	4.5189	4.2335	3.7564
<i>Characteristic</i>	9.3108	7.9306	7.3179	6.8917	6.5241	7.9175

Table 214: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0723	-0.1825	-0.1847	0.5243	0.5655	0.4933
t-stat	0.1557	-0.4662	-0.4418	1.3749	1.3352	1.1306
p-value	0.8763	0.6414	0.6589	0.1701	0.1827	0.2590
Standard Deviation (%)	8.1308	6.8607	7.3245	6.6809	7.4206	7.6439
Return/Risk	0.0089	-0.0266	-0.0252	0.0785	0.0762	0.0645
Skewness	0.2070	0.0019	-0.1714	0.3815	1.2051	0.2585
Kurtosis	4.6143	3.9840	5.2964	4.5872	14.2319	11.1645
<i>Characteristic</i>	-0.2530	-0.0806	0.0331	0.1736	0.4648	0.1059

Table 216: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0253	0.0971	0.2907	0.3500	-0.2464	-0.2718
t-stat	0.0592	0.2274	0.8267	0.9381	-0.5653	-0.8501
p-value	0.9528	0.8203	0.4090	0.3489	0.5722	0.3959
Standard Deviation (%)	7.6451	7.6276	6.2804	6.6634	7.7860	5.7102
Return/Risk	0.0033	0.0127	0.0463	0.0525	-0.0317	-0.0476
Skewness	-0.1013	0.5504	-0.1093	-0.0561	0.0543	0.1233
Kurtosis	4.2127	5.8342	4.1474	3.8293	6.0119	5.3763
<i>Characteristic</i>	0.5143	1.2230	1.7756	2.2384	2.9919	1.7531

Table 218: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2078	-0.0876	0.3509	0.4125	0.4574	0.2496
t-stat	0.4246	-0.1962	0.8712	1.0450	1.2652	0.7269
p-value	0.6714	0.8446	0.3843	0.2968	0.2067	0.4678
Standard Deviation (%)	8.6456	7.8843	7.1149	6.9733	6.3851	6.0655
Return/Risk	0.0240	-0.0111	0.0493	0.0592	0.0716	0.0411
Skewness	0.3838	0.0448	0.0085	0.7032	0.1073	-0.3548
Kurtosis	6.4877	4.5669	4.8010	6.6204	4.0594	5.7584
<i>Characteristic</i>	0.5371	1.5053	2.3940	3.5609	5.5646	3.0508

Table 220: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1822	0.5673	0.2425	0.3386	0.0878	-0.0944
t-stat	0.4606	1.3612	0.6260	0.7924	0.1877	-0.5055
p-value	0.6454	0.1744	0.5318	0.4287	0.8512	0.6135
Standard Deviation (%)	6.9878	7.3609	6.8421	7.5472	8.1935	6.2410
Return/Risk	0.0261	0.0771	0.0354	0.0449	0.0107	-0.0151
Skewness	0.2434	0.3714	0.3806	0.3211	0.1517	-0.5053
Kurtosis	9.0867	5.7329	5.1698	4.7561	3.9228	6.1107
<i>Characteristic</i>	0.2939	0.4507	0.6663	0.9770	1.5942	0.9441

Table 222: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2664	0.2021	0.5843	0.6772	0.0378	-0.2286
t-stat	0.6074	0.4833	1.5298	1.8971	0.0874	-0.6390
p-value	0.5440	0.6292	0.1270	0.0587	0.9304	0.5233
Standard Deviation (%)	7.7466	7.3883	6.7453	6.3037	7.6302	6.3203
Return/Risk	0.0344	0.0274	0.0866	0.1074	0.0049	-0.0362
Skewness	0.8749	-0.0201	0.0783	0.0415	0.1026	-1.1586
Kurtosis	8.2604	7.1763	4.4863	4.3372	4.8811	8.7434
<i>Characteristic</i>	0.0746	0.1010	0.1360	0.1796	0.3976	0.2361

D.6 Netherlands

Table 224: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0192	0.8294	0.6100	0.9330	0.6274	0.6466
t-stat	-0.0322	1.7265	1.7408	3.2900	2.8890	1.1600
p-value	0.9743	0.0852	0.0827	0.0011	0.0041	0.2469
Standard Deviation (%)	10.1076	8.1632	5.9549	4.8116	3.6868	9.4751
Return/Risk	-0.0019	0.1016	0.1024	0.1939	0.1702	0.0682
Skewness	-0.4500	-0.7571	-0.4753	-0.6323	-0.3098	0.2438
Kurtosis	5.1017	4.3923	3.9163	4.6342	3.5707	6.1540
<i>Characteristic</i>	0.2261	0.1270	0.0902	0.0688	0.0483	0.1372

Table 225: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7483	0.2841	0.5393	0.8712	0.4910	-0.2573
t-stat	1.6841	0.7605	1.7776	2.9209	1.3949	-0.6012
p-value	0.0931	0.4475	0.0764	0.0037	0.1640	0.5481
Standard Deviation (%)	7.7842	6.5456	5.3145	5.2224	6.1669	7.4995
Return/Risk	0.0961	0.0434	0.1015	0.1668	0.0796	-0.0343
Skewness	-0.3229	-0.7643	-0.5932	-0.3916	-0.4924	0.0746
Kurtosis	4.7501	5.1881	3.6952	5.0154	5.0484	5.2586
<i>Characteristic</i>	-0.3247	-0.0660	0.0577	0.1848	0.4719	0.0736

Table 226: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3111	0.5594	0.8019	0.4484	0.7075	0.3964
t-stat	0.7717	1.5638	1.9907	1.1746	1.7326	1.0010
p-value	0.4409	0.1189	0.0473	0.2410	0.0841	0.3176
Standard Deviation (%)	6.4886	5.7540	6.4749	6.1422	6.5664	6.3729
Return/Risk	0.0479	0.0972	0.1238	0.0730	0.1077	0.0622
Skewness	-0.3718	-1.0727	-0.4773	-0.3092	-0.5421	-0.1872
Kurtosis	5.3940	6.6815	5.5521	3.7482	3.7677	5.7888
<i>Characteristic</i>	1.3781	0.4088	0.0820	-0.1909	-0.5563	0.4109

Table 227: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4056	0.5257	0.6515	0.6922	0.5999	0.1943
t-stat	1.0449	1.3629	2.0684	2.2640	1.9158	0.4921
p-value	0.2969	0.1739	0.0394	0.0242	0.0563	0.6230
Standard Deviation (%)	6.9325	6.8892	5.6253	5.4604	5.5920	7.0529
Return/Risk	0.0585	0.0763	0.1158	0.1268	0.1073	0.0275
Skewness	-0.0808	-0.6128	-0.7235	-0.5278	-0.5220	-0.1248
Kurtosis	4.4604	4.7824	4.2075	3.2866	6.6489	5.4409
<i>Characteristic</i>	2.3023	3.0359	3.4309	3.7882	4.4652	3.3838

Table 228: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4273	0.6227	0.7837	0.7569	0.5741	0.1467
t-stat	0.7410	1.4747	2.5610	3.1679	2.4588	0.3165
p-value	0.4592	0.1413	0.0109	0.0017	0.0145	0.7518
Standard Deviation (%)	10.0381	7.3731	5.3411	4.1686	4.0618	10.0948
Return/Risk	0.0426	0.0845	0.1467	0.1816	0.1413	0.0145
Skewness	-0.3091	-0.6921	-0.3634	-0.3884	-1.2411	-0.2250
Kurtosis	4.3814	4.5825	3.1796	3.7671	8.0038	5.3092
<i>Characteristic</i>	2.3368	1.1593	0.7759	0.4917	0.0039	1.1704

Table 229: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5382	0.6866	0.6014	0.6401	1.0516	0.5133
t-stat	1.3093	2.1290	1.9183	1.9341	3.1157	1.3677
p-value	0.1913	0.0340	0.0559	0.0540	0.0020	0.1724
Standard Deviation (%)	7.2606	5.6954	5.5364	5.8449	5.9582	6.6295
Return/Risk	0.0741	0.1206	0.1086	0.1095	0.1765	0.0774
Skewness	-0.3725	-0.7940	-0.6882	-0.8477	-0.5158	0.0705
Kurtosis	3.9045	4.1133	4.3333	5.0673	5.2790	3.9930
<i>Characteristic</i>	0.6056	1.7007	2.5166	3.1873	4.3467	2.4761

Table 230: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4999	0.4996	0.8825	0.6543	1.0591	0.5592
t-stat	1.3167	1.5739	3.1093	1.9907	2.7475	1.6266
p-value	0.1889	0.1165	0.0020	0.0473	0.0063	0.1048
Standard Deviation (%)	6.7056	5.6060	5.0107	5.8047	6.8058	6.0714
Return/Risk	0.0745	0.0891	0.1761	0.1127	0.1556	0.0921
Skewness	-0.5659	-0.7581	-0.5334	-0.4775	-0.8413	-0.0930
Kurtosis	4.5610	4.2937	4.5668	4.1175	5.4192	4.5867
<i>Characteristic</i>	54.5833	23.1221	19.2098	16.8267	12.5253	33.5543

Table 231: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6544	0.7868	0.6669	0.5526	0.9020	0.5133
t-stat	1.8977	2.2699	2.2626	1.5702	2.2739	0.7710
p-value	0.0586	0.0239	0.0243	0.1173	0.0236	0.4413
Standard Deviation (%)	6.0900	6.1212	5.2047	6.2155	7.0053	5.6738
Return/Risk	0.1075	0.1285	0.1281	0.0889	0.1288	0.0436
Skewness	-0.4813	-0.5898	-0.7012	-0.7489	-0.5168	0.1220
Kurtosis	3.6059	4.1328	4.4987	5.4630	4.6500	4.2549
<i>Characteristic</i>	0.1725	0.2780	0.3596	0.4751	0.7598	0.4661

Table 232: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4151	0.6864	0.6883	0.7917	1.0881	0.6730
t-stat	1.0768	1.9808	2.1181	2.4675	3.3771	1.9537
p-value	0.2824	0.0485	0.0349	0.0141	0.0008	0.0516
Standard Deviation (%)	6.8092	6.1195	5.7383	5.6654	5.6872	6.0831
Return/Risk	0.0610	0.1122	0.1199	0.1397	0.1913	0.1106
Skewness	-0.4516	-0.8174	-0.8873	-0.6405	-0.2460	-0.2131
Kurtosis	4.2419	4.3170	5.5077	4.5190	4.5850	3.7503
<i>Characteristic</i>	0.0645	0.0979	0.1202	0.1488	0.2292	0.1469

Table 233: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7711	0.5228	0.8975	0.7932	0.7891	0.0180
t-stat	2.0635	1.6206	2.9086	2.7542	2.3576	0.0496
p-value	0.0399	0.1061	0.0039	0.0062	0.0190	0.9605
Standard Deviation (%)	6.5995	5.6980	5.4477	5.0848	5.9104	6.3998
Return/Risk	0.1168	0.0918	0.1647	0.1560	0.1335	0.0028
Skewness	-0.1775	-0.7955	-0.4884	-0.8233	-0.8775	-0.1639
Kurtosis	4.1183	4.1686	3.7444	4.6981	5.3174	4.7962
<i>Characteristic</i>	0.0594	0.0868	0.1056	0.1316	0.1858	0.1226

Table 234: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6628	0.6787	0.4395	0.7279	0.3610	-0.3018
t-stat	2.3777	2.1797	1.2874	2.0710	0.8690	-0.9004
p-value	0.0180	0.0300	0.1989	0.0392	0.3855	0.3686
Standard Deviation (%)	4.9785	5.5606	6.0977	6.2770	7.4199	5.9876
Return/Risk	0.1331	0.1221	0.0721	0.1160	0.0487	-0.0504
Skewness	-0.4413	-0.4313	-0.6254	-0.3482	-0.4340	0.2011
Kurtosis	3.9957	3.4324	3.6611	3.8420	8.7728	5.9826
<i>Characteristic</i>	9.7289	8.8142	8.1870	7.5814	7.1139	8.4214

D.7 Norway

Table 235: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.9798	0.1622	0.7820	0.7584	0.9263	-0.0535
t-stat	1.8356	0.3157	1.9651	2.4134	4.2046	-0.0979
p-value	0.0673	0.7524	0.0503	0.0164	0.0000	0.9221
Standard Deviation (%)	9.0705	8.7356	6.7613	5.3374	3.7195	7.6949
Return/Risk	0.1080	0.0186	0.1157	0.1421	0.2490	-0.0070
Skewness	-0.0217	-0.5236	-0.7988	-0.8261	-0.6110	-0.1328
Kurtosis	4.0090	3.8960	5.4609	5.6759	4.5342	3.5245
<i>Characteristic</i>	0.2725	0.1508	0.1089	0.0843	0.0576	0.1650

Table 237: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6262	1.1249	0.5010	0.8726	-0.4298	-1.0560
t-stat	1.4808	2.9362	1.1573	2.1118	-0.8226	-2.3401
p-value	0.1396	0.0036	0.2480	0.0355	0.4114	0.0199
Standard Deviation (%)	6.8021	6.1469	6.9659	6.6408	8.4096	7.2492
Return/Risk	0.0921	0.1830	0.0719	0.1314	-0.0511	-0.1457
Skewness	-0.8574	-0.4420	-0.6396	-0.3880	0.0066	0.1570
Kurtosis	6.3939	4.5661	4.7893	4.3461	4.1054	4.3921
<i>Characteristic</i>	2.1840	0.6444	0.1584	-0.2169	-0.6132	0.7854

Table 239: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1893	0.2220	0.7127	0.9644	0.5732	0.3839
t-stat	0.3073	0.4720	1.9065	3.4206	2.0174	0.6466
p-value	0.7588	0.6372	0.0575	0.0007	0.0445	0.5184
Standard Deviation (%)	10.7589	8.2141	6.5266	4.9187	4.9608	10.3708
Return/Risk	0.0176	0.0270	0.1092	0.1961	0.1156	0.0370
Skewness	-0.3085	-0.5158	-0.8629	-0.5460	-0.5183	0.2762
Kurtosis	4.0778	4.2289	4.8288	4.5479	6.1631	4.3747
<i>Characteristic</i>	2.2477	1.0877	0.7655	0.4973	-0.0211	1.1133

Table 241: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0537	0.6937	0.7676	0.9080	0.7902	0.7365
t-stat	0.1227	1.7401	2.1526	2.3675	1.8632	2.0636
p-value	0.9024	0.0828	0.0321	0.0185	0.0633	0.0399
Standard Deviation (%)	7.7333	7.0065	6.1735	6.7721	7.4898	6.3026
Return/Risk	0.0069	0.0990	0.1243	0.1341	0.1055	0.1169
Skewness	-0.7797	-0.7338	-0.9535	-0.5229	-0.0342	0.0432
Kurtosis	5.0150	5.0269	5.0377	5.4336	4.9424	3.5348
<i>Characteristic</i>	69.7271	20.9743	17.7122	13.1260	10.1264	39.9267

Table 243: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6740	0.5879	0.8165	0.7738	0.7022	0.0282
t-stat	1.4801	1.5196	2.3530	1.8895	1.7207	0.0723
p-value	0.1398	0.1296	0.0192	0.0597	0.0863	0.9424
Standard Deviation (%)	8.0430	6.8331	6.1278	7.2329	7.2077	6.8999
Return/Risk	0.0838	0.0860	0.1333	0.1070	0.0974	0.0041
Skewness	-0.4787	-0.4250	-0.7060	-0.4128	-0.5746	-0.0998
Kurtosis	4.5065	4.4112	4.5390	4.8293	5.1053	3.9092
<i>Characteristic</i>	0.0669	0.1085	0.1516	0.2112	0.3677	0.2173

Table 245: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4547	0.1485	0.7875	0.2859	0.3675	-0.0872
t-stat	1.2327	0.3796	1.8400	0.7455	0.8046	-0.2462
p-value	0.2186	0.7045	0.0667	0.4565	0.4216	0.8057
Standard Deviation (%)	6.5873	6.9854	7.6442	6.8494	8.1576	6.3226
Return/Risk	0.0690	0.0213	0.1030	0.0417	0.0450	-0.0138
Skewness	-0.7907	-0.4076	-0.5866	-0.3169	-0.5058	-0.3356
Kurtosis	4.5688	4.9166	5.3266	4.1768	5.0537	4.2858
<i>Characteristic</i>	7.8234	6.5292	6.0325	5.6686	5.2882	6.5558

Table 236: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0223	-0.1895	0.3046	0.9075	1.4248	1.4470
t-stat	-0.0419	-0.4766	0.8140	2.5162	3.5738	3.1893
p-value	0.9666	0.6340	0.4163	0.0123	0.0004	0.0016
Standard Deviation (%)	9.3250	6.9660	6.5563	6.3161	6.9778	7.9433
Return/Risk	-0.0024	-0.0272	0.0465	0.1437	0.2452	0.1822
Skewness	-0.4847	-0.4487	-0.6542	-0.7557	-0.2606	0.1012
Kurtosis	4.8615	4.4367	5.0660	5.3008	4.3732	4.7577
<i>Characteristic</i>	-0.3647	-0.0985	0.0460	0.2055	0.9032	0.2692

Table 238: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.1925	0.8469	0.3471	0.4951	0.5614	0.7538
t-stat	-0.3931	2.1190	0.9196	1.2934	1.5456	2.0658
p-value	0.6945	0.0349	0.3585	0.1968	0.1232	0.0396
Standard Deviation (%)	8.7437	7.1374	6.7413	6.8376	6.4867	6.5167
Return/Risk	-0.0220	0.1187	0.0515	0.0724	0.0865	0.1157
Skewness	-0.2172	-0.4194	-0.6662	-0.8706	-0.9562	-0.3153
Kurtosis	4.8098	4.0222	4.5772	5.0501	5.6866	4.3159
<i>Characteristic</i>	3.0838	4.0459	4.4466	4.8806	5.5542	4.3190

Table 240: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2396	-0.2828	0.6559	0.8975	0.7716	0.5320
t-stat	0.4883	-0.3763	1.6166	2.6262	2.3196	1.4161
p-value	0.6256	0.7069	0.1069	0.0090	0.0210	0.1577
Standard Deviation (%)	8.6657	10.4217	7.1660	6.0345	5.8742	6.6358
Return/Risk	0.0276	-0.0271	0.0915	0.1487	0.1314	0.0802
Skewness	-0.2391	-0.6755	-0.5466	-0.6109	-0.6725	-0.0514
Kurtosis	3.7460	4.3676	4.2444	4.2597	5.1802	3.2802
<i>Characteristic</i>	0.1161	0.8800	1.4037	2.6286	4.8509	2.4835

Table 242: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0232	0.5836	0.7494	0.4904	0.7682	0.7450
t-stat	0.0530	1.4583	2.0553	1.2029	1.7423	1.7411
p-value	0.9577	0.1457	0.0407	0.2299	0.0824	0.0826
Standard Deviation (%)	7.7206	7.0684	6.4393	7.2008	7.7872	7.5577
Return/Risk	0.0030	0.0826	0.1164	0.0681	0.0987	0.0986
Skewness	-0.5217	-0.4855	-0.4924	-0.5113	-0.1216	0.2060
Kurtosis	4.9147	4.1046	4.8304	5.0676	4.3907	3.7714
<i>Characteristic</i>	0.2950	0.4667	0.6384	0.9111	1.5232	0.9091

Table 244: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3968	0.9199	0.6662	0.6669	1.2136	0.8169
t-stat	0.8749	2.4294	1.7992	1.6165	3.0527	2.0972
p-value	0.3823	0.0157	0.0729	0.1070	0.0025	0.0368
Standard Deviation (%)	8.0104	6.6866	6.5396	7.2860	7.0183	6.8784
Return/Risk	0.0495	0.1376	0.1019	0.0915	0.1729	0.1188
Skewness	-0.8766	-1.0004	-0.1514	-0.8984	-0.6068	0.4456
Kurtosis	6.4085	6.1978	4.4381	5.2144	6.7855	6.1224
<i>Characteristic</i>	0.5679	0.8577	1.1394	1.4753	2.5136	1.5408

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Table 246: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2230	0.4381	0.4738	1.1430	0.9985	0.7755
t-stat	0.4787	1.0473	1.3958	4.0690	4.4521	2.0051
p-value	0.6325	0.2958	0.1637	0.0001	0.0000	0.0458
Standard Deviation (%)	7.9051	7.1109	5.7699	4.7611	3.7987	6.5509
Return/Risk	0.0282	0.0616	0.0821	0.2401	0.2628	0.1184
Skewness	-0.2562	-0.2405	-0.0802	-0.0681	-0.3149	0.1802
Kurtosis	4.5097	3.7990	3.4890	3.5143	3.5986	7.0683
<i>Characteristic</i>	0.1933	0.1126	0.0866	0.0678	0.0484	0.1208

Table 248: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.8071	0.7253	0.6261	0.6053	1.0306	0.2235
t-stat	2.4369	2.1001	1.6506	1.6902	2.5062	0.6765
p-value	0.0154	0.0365	0.0998	0.0920	0.0127	0.4992
Standard Deviation (%)	5.3199	5.5503	6.1005	5.7592	6.6043	5.3180
Return/Risk	0.1517	0.1307	0.1026	0.1051	0.1561	0.0420
Skewness	-0.4780	-0.5018	-0.2247	0.1857	-0.1275	0.3754
Kurtosis	4.2581	3.7005	3.8892	3.8569	4.2452	4.5445
<i>Characteristic</i>	1.5107	0.5425	0.1638	-0.1059	-0.4503	0.5302

Table 250: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0571	0.5169	0.6663	0.9461	1.1203	1.1774
t-stat	-0.1101	1.4246	2.1476	3.6037	4.4722	2.2142
p-value	0.9124	0.1552	0.0325	0.0004	0.0000	0.0275
Standard Deviation (%)	9.0556	6.3358	5.4162	4.5795	4.3512	8.7978
Return/Risk	-0.0063	0.0816	0.1230	0.2066	0.2575	0.1338
Skewness	-0.3304	-0.1742	-0.0174	0.0159	-0.4267	0.1427
Kurtosis	4.0178	3.6971	3.6059	3.5849	4.2210	5.1727
<i>Characteristic</i>	1.9968	1.0790	0.7588	0.5372	0.1749	1.0859

Table 252: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1278	0.6494	0.7685	1.0406	0.8511	0.7233
t-stat	0.3632	2.1784	2.2375	3.2304	2.3986	2.3031
p-value	0.7167	0.0301	0.0259	0.0014	0.0170	0.0219
Standard Deviation (%)	6.2159	5.2639	6.0650	5.6865	6.2652	5.5456
Return/Risk	0.0206	0.1234	0.1267	0.1830	0.1358	0.1304
Skewness	-0.2933	-0.3537	-0.1263	-0.2418	-0.3494	-0.6267
Kurtosis	3.2191	4.0618	3.6928	3.0282	4.2997	5.6368
<i>Characteristic</i>	36.8358	21.0231	16.3674	14.6610	11.2649	24.0503

Table 254: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0826	0.5119	0.5844	0.9248	1.2258	1.1432
t-stat	0.2524	1.4780	1.8046	2.8004	3.4802	4.0145
p-value	0.8009	0.1404	0.0721	0.0054	0.0006	0.0001
Standard Deviation (%)	5.7821	6.1178	5.7199	5.8306	6.2170	5.0249
Return/Risk	0.0143	0.0837	0.1022	0.1586	0.1972	0.2275
Skewness	-0.3862	-0.1501	-0.3606	-0.1690	-0.2926	-0.0849
Kurtosis	3.7352	3.5775	3.9921	3.3082	3.7809	3.7523
<i>Characteristic</i>	0.0695	0.1047	0.1283	0.1669	0.2574	0.1634

Table 256: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7627	0.5826	0.4162	0.4489	0.2587	-0.5040
t-stat	2.4024	1.9569	1.1662	1.2351	0.6322	-1.5510
p-value	0.0168	0.0512	0.2444	0.2177	0.5277	0.1219
Standard Deviation (%)	5.6692	5.3169	6.3734	6.4911	7.3086	5.8037
Return/Risk	0.1345	0.1096	0.0653	0.0692	0.0354	-0.0868
Skewness	-0.2502	-0.2915	-0.4271	-0.2773	-0.2524	-0.1008
Kurtosis	3.5630	3.9435	3.9133	4.8990	5.0283	5.3942
<i>Characteristic</i>	9.7913	8.5979	8.0037	7.5613	7.2100	8.5007

Table 247: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1355	0.3534	0.7119	0.8084	0.8978	0.7623
t-stat	0.3172	1.0090	2.1332	2.6549	2.9949	2.1558
p-value	0.7513	0.3137	0.0337	0.0083	0.0030	0.0318
Standard Deviation (%)	7.4850	6.1358	5.8454	5.3322	5.2490	6.1939
Return/Risk	0.0181	0.0576	0.1218	0.1516	0.1710	0.1231
Skewness	-0.1950	-0.7370	-0.2878	-0.0103	-0.4477	0.2427
Kurtosis	4.9102	4.7332	4.1848	3.1761	4.7868	4.9518
<i>Characteristic</i>	-0.2845	-0.0618	0.0561	0.1638	0.3707	0.0431

Table 249: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4816	0.6322	0.4852	0.4508	0.5055	0.0239
t-stat	1.3581	1.8056	1.5203	1.2225	1.4344	0.0782
p-value	0.1754	0.0719	0.1294	0.2224	0.1524	0.9377
Standard Deviation (%)	6.3333	6.2529	5.7007	6.5865	6.2944	5.4662
Return/Risk	0.0760	0.1011	0.0851	0.0684	0.0803	0.0044
Skewness	-0.1336	-0.4542	-0.1934	-0.6417	-0.3362	-0.1562
Kurtosis	4.4650	4.7042	4.1546	5.3639	4.0439	6.0387
<i>Characteristic</i>	1.9369	2.5721	2.9082	3.3074	4.1164	3.0267

Table 251: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1420	0.4257	0.7188	0.8897	0.9919	0.8499
t-stat	0.3488	1.2255	2.1444	3.0654	2.9770	2.2246
p-value	0.7275	0.2213	0.0327	0.0024	0.0031	0.0268
Standard Deviation (%)	7.1910	6.1361	5.9193	5.1238	5.8823	6.7466
Return/Risk	0.0197	0.0694	0.1214	0.1736	0.1686	0.1260
Skewness	-0.5136	-0.3749	-0.3963	-0.1987	-0.2452	-0.4322
Kurtosis	4.7564	3.5821	4.8478	3.8565	3.9436	6.3710
<i>Characteristic</i>	1.1349	2.3349	3.1810	4.2159	5.8128	3.4738

Table 253: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2210	0.6019	0.8127	0.6315	0.9905	0.7695
t-stat	0.6601	1.8581	2.3045	1.8393	2.7127	2.3399
p-value	0.5097	0.0641	0.0218	0.0668	0.0070	0.0199
Standard Deviation (%)	5.9134	5.7207	6.2273	6.0634	6.4471	5.8075
Return/Risk	0.0374	0.1052	0.1305	0.1041	0.1536	0.1325
Skewness	-0.6174	-0.2092	-0.0480	-0.2881	-0.2442	-0.0352
Kurtosis	5.3124	4.2094	4.2600	4.2167	4.2167	4.2099
<i>Characteristic</i>	0.1907	0.3724	0.5057	0.6885	0.9912	0.5909

Table 255: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.0095	0.6780	0.6446	1.1260	0.9598	0.9693
t-stat	-0.0270	2.1852	2.0488	3.2775	2.7559	3.1229
p-value	0.9785	0.0296	0.0413	0.0012	0.0062	0.0020
Standard Deviation (%)	6.1850	5.4793	5.5565	6.0643	6.1493	5.4793
Return/Risk	-0.0015	0.1237	0.1160	0.1857	0.1561	0.1769
Skewness	-0.5536	-0.0457	-0.5737	-0.0954	-0.2789	0.1241
Kurtosis	4.5467	3.4099	4.7317	3.8594	3.5743	4.3450
<i>Characteristic</i>	0.0664	0.0951	0.1257	0.1626	0.2382	0.1523

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Table 257: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.8802	0.9176	0.8451	1.0646	1.1045	0.2243
t-stat	1.7657	2.0770	2.3743	3.7919	4.8550	0.6654
p-value	0.0784	0.0386	0.0182	0.0002	0.0000	0.5063
Standard Deviation (%)	8.4714	7.5056	6.0457	4.7604	3.8073	7.4052
Return/Risk	0.1039	0.1223	0.1398	0.2236	0.2901	0.0303
Skewness	-0.5209	-0.2387	-0.3420	-0.2346	-0.3830	0.4197
Kurtosis	5.1857	4.3330	3.7349	4.3659	4.2470	6.6848
<i>Characteristic</i>	0.2738	0.1384	0.0968	0.0780	0.0558	0.1648

Table 259: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.9008	0.7245	1.1572	1.0728	0.6687	-0.2322
t-stat	2.6309	2.0593	3.1302	2.5661	1.4708	-0.7212
p-value	0.0089	0.0403	0.0019	0.0107	0.1423	0.4713
Standard Deviation (%)	5.4976	5.6550	5.9290	6.7134	7.3134	5.1818
Return/Risk	0.1639	0.1281	0.1952	0.1598	0.0914	-0.0448
Skewness	-0.3183	-0.6591	-0.1983	-0.1272	-0.0484	-0.1840
Kurtosis	4.8506	4.4867	3.0978	7.1327	4.7556	5.2163
<i>Characteristic</i>	1.5113	0.5100	0.0850	-0.2576	-0.6007	0.4553

Table 261: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5464	0.8280	1.0822	1.0764	0.8311	0.2847
t-stat	1.0461	1.8689	3.1886	3.8766	3.3463	0.5807
p-value	0.2963	0.0625	0.0016	0.0001	0.0009	0.5619
Standard Deviation (%)	9.1219	7.7355	5.9218	4.8421	4.3333	8.5648
Return/Risk	0.0599	0.1070	0.1828	0.2223	0.1918	0.0332
Skewness	-0.3674	0.0290	0.0999	0.4133	-0.4575	0.2481
Kurtosis	5.2582	6.0448	4.5385	6.7288	4.3938	5.6810
<i>Characteristic</i>	2.2194	1.0171	0.7376	0.5171	0.0933	1.1564

Table 263: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4701	0.9166	1.0709	0.8513	1.2798	0.8097
t-stat	1.1328	2.6453	3.1443	2.4190	3.4578	2.3045
p-value	0.2581	0.0086	0.0018	0.0161	0.0006	0.0218
Standard Deviation (%)	7.3303	6.1183	6.0121	6.2144	6.5332	6.2044
Return/Risk	0.0641	0.1498	0.1781	0.1370	0.1959	0.1305
Skewness	-0.0311	0.0194	0.1830	0.0792	-0.1897	0.3989
Kurtosis	4.8547	5.2852	4.5182	7.8215	4.7084	6.3219
<i>Characteristic</i>	86.3335	24.5288	19.1485	15.0061	17.1100	51.7218

Table 265: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	1.0684	0.9783	0.8515	0.9851	1.2398	0.1713
t-stat	2.6870	2.7456	2.5927	2.6408	3.1479	0.4814
p-value	0.0076	0.0064	0.0100	0.0087	0.0018	0.6305
Standard Deviation (%)	7.0209	6.2913	5.7990	6.5862	6.9527	6.2865
Return/Risk	0.1522	0.1555	0.1468	0.1496	0.1783	0.0273
Skewness	0.0620	-0.2278	0.3061	0.1461	0.1031	0.1822
Kurtosis	3.5460	4.0380	6.7686	7.0498	5.9212	5.0580
<i>Characteristic</i>	0.0730	0.1023	0.1353	0.2129	0.3406	0.2068

Table 267: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7847	0.7240	0.8332	0.6523	0.8389	0.0542
t-stat	2.1606	1.9022	2.3709	1.8275	1.9901	0.1694
p-value	0.0315	0.0580	0.0183	0.0685	0.0474	0.8656
Standard Deviation (%)	6.4858	6.7974	6.2758	6.3752	7.5283	5.7173
Return/Risk	0.1210	0.1065	0.1328	0.1023	0.1114	0.0095
Skewness	-0.1639	-0.1075	-0.4276	-0.3884	0.2293	0.1517
Kurtosis	4.8697	6.2007	4.2098	4.2653	6.1895	3.9380
<i>Characteristic</i>	8.7085	7.5799	6.9214	6.4526	6.0139	7.3612

Table 258: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3687	0.7834	1.0409	0.7726	1.2445	0.8758
t-stat	0.7663	2.0786	2.9870	2.2220	3.5726	2.0814
p-value	0.4441	0.0384	0.0030	0.0270	0.0004	0.0382
Standard Deviation (%)	8.4302	6.6017	6.1013	6.0898	6.0970	7.3705
Return/Risk	0.0437	0.1187	0.1706	0.1269	0.2041	0.1188
Skewness	-0.0407	0.0051	0.1405	0.0082	-0.1655	0.3360
Kurtosis	6.3861	4.8987	5.7513	6.6011	3.6485	5.6850
<i>Characteristic</i>	-0.3720	-0.0580	0.0716	0.2123	0.6468	0.1374

Table 260: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5109	0.4716	0.9791	0.9057	0.8354	0.3245
t-stat	1.1495	1.2361	2.7632	2.6094	2.5799	1.0167
p-value	0.2512	0.2173	0.0061	0.0095	0.0103	0.3100
Standard Deviation (%)	7.9389	6.8138	6.3275	6.1979	5.7825	5.6999
Return/Risk	0.0644	0.0692	0.1547	0.1461	0.1445	0.0569
Skewness	0.0264	-0.1503	-0.5452	-0.0716	-0.3421	-0.2636
Kurtosis	5.0922	5.4523	4.5002	4.3263	5.2643	5.0492
<i>Characteristic</i>	3.9196	4.5860	4.9391	5.2583	5.7118	4.8157

Table 262: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5226	0.8021	1.0096	1.0204	1.2536	0.7310
t-stat	1.1554	2.1250	2.8823	3.0416	3.3845	1.8366
p-value	0.2488	0.0343	0.0042	0.0025	0.0008	0.0672
Standard Deviation (%)	7.9892	6.6653	6.1841	5.9225	6.5380	7.0294
Return/Risk	0.0654	0.1203	0.1633	0.1723	0.1917	0.1040
Skewness	-0.3094	-0.3039	0.4740	-0.0618	0.1279	0.2562
Kurtosis	3.7477	5.9294	6.1991	5.9022	5.7743	4.8178
<i>Characteristic</i>	0.4647	1.6564	2.5111	3.2977	4.6031	2.5339

Table 264: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	1.0239	0.7964	0.9098	0.7403	1.1415	0.1176
t-stat	2.7570	2.1874	2.5418	1.9105	2.8936	0.3381
p-value	0.0062	0.0294	0.0115	0.0570	0.0041	0.7355
Standard Deviation (%)	6.5571	6.4295	6.3203	6.8429	6.9647	6.1426
Return/Risk	0.1562	0.1239	0.1440	0.1082	0.1639	0.0191
Skewness	-0.2197	-0.0413	-0.0729	-0.1052	0.0654	-0.0829
Kurtosis	4.8408	4.9324	4.1552	6.7217	5.4984	5.1739
<i>Characteristic</i>	0.2463	0.4359	0.6597	0.9851	1.6131	0.9297

Table 266: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.9890	0.8893	1.0054	0.8269	1.1774	0.1884
t-stat	2.5040	2.6239	3.1074	2.2917	3.2087	0.5568
p-value	0.0128	0.0091	0.0021	0.0226	0.0015	0.5781
Standard Deviation (%)	6.9741	5.9845	5.7119	6.3721	6.4775	5.9763
Return/Risk	0.1418	0.1486	0.1760	0.1298	0.1818	0.0315
Skewness	-0.1120	0.0967	0.2996	-0.3014	-0.0929	0.0479
Kurtosis	4.0066	4.9030	6.0753	4.0391	5.9779	4.5222
<i>Characteristic</i>	0.6915	0.9775	1.2719	1.8118	2.8938	1.7926

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Table 268: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7151	0.6825	1.2415	0.5893	0.4320	-0.2831
t-stat	1.9054	1.7922	4.0045	1.9397	2.9164	-0.8704
p-value	0.0576	0.0740	0.0001	0.0533	0.0038	0.3847
Standard Deviation (%)	6.3771	6.4712	5.2550	5.1622	2.5144	5.5302
Return/Risk	0.1121	0.1055	0.2362	0.1142	0.1718	-0.0512
Skewness	-0.3904	-0.9067	-0.5916	-0.8645	-0.4015	0.0479
Kurtosis	3.6708	5.6774	5.2078	9.2252	4.9253	3.9732
<i>Characteristic</i>	0.3021	0.1420	0.0932	0.0639	0.0366	0.1694

Table 269: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
	0.2431	0.4350	0.6083	0.6649	1.0764	0.8333
	0.6818	1.3993	2.2276	2.4498	3.6607	2.7308
	0.4959	0.1627	0.0266	0.0148	0.0003	0.0067
	6.2487	5.4459	4.7829	4.7533	5.1465	5.3438
	0.0389	0.0799	0.1272	0.1399	0.2092	0.1559
	-0.1632	-0.5022	-1.0448	-0.5217	-0.7865	-0.4530
	4.9625	6.5292	7.0274	4.6660	4.5648	4.8156
	-0.3325	-0.0878	0.0370	0.1653	0.3975	0.0325

Table 270: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.7748	0.6900	0.8465	0.5258	0.7867	0.0119
t-stat	2.4413	2.1101	2.5190	1.4668	2.0801	0.0003
p-value	0.0152	0.0356	0.0122	0.1434	0.0383	0.9997
Standard Deviation (%)	5.0975	5.2557	5.3965	5.7663	6.0663	5.6859
Return/Risk	0.1520	0.1313	0.1569	0.0912	0.1297	0.0021
Skewness	-0.6279	-1.0413	-0.5223	-0.6916	0.0215	0.9247
Kurtosis	5.2147	6.1944	5.3550	6.0618	7.0427	11.1317
<i>Characteristic</i>	1.3578	0.4337	0.0169	-0.3120	-0.6342	0.3618

Table 271: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
	0.5527	0.1170	0.5936	0.5877	0.8860	0.3333
	1.5104	0.4090	2.0148	2.1527	3.8357	1.1997
	0.1319	0.6828	0.0448	0.0321	0.0002	0.2311
	6.5354	5.1104	5.2621	4.8753	4.1240	4.9620
	0.0846	0.0229	0.1128	0.1205	0.2148	0.0672
	-0.3133	-0.7152	-0.8405	-0.8661	-0.4674	-0.5009
	5.1905	4.6002	5.7783	4.8233	5.1481	6.0198
	4.2647	5.1813	5.7723	6.5354	7.8590	6.0618

Table 272: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5170	0.8844	0.6828	0.6063	0.7243	0.2073
t-stat	1.3122	2.3882	2.3803	2.9614	4.1255	0.5302
p-value	0.1904	0.0175	0.0179	0.0033	0.0000	0.5964
Standard Deviation (%)	6.8800	6.4639	5.0073	3.5728	3.0452	6.5183
Return/Risk	0.0751	0.1368	0.1364	0.1697	0.2378	0.0318
Skewness	-0.6349	-0.7205	-1.1277	-0.3084	-0.0265	0.5281
Kurtosis	3.9010	5.6446	6.4422	3.2450	4.9316	4.2331
<i>Characteristic</i>	2.3192	0.9828	0.6410	0.3733	0.0265	1.1728

Table 273: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
	0.2574	0.6083	0.8836	0.5873	0.9731	0.7157
	0.7240	1.8233	3.2323	2.0666	4.5284	2.2931
	0.4696	0.0692	0.0014	0.0396	0.0000	0.0225
	6.2794	5.8923	4.8258	5.0185	3.7510	5.5116
	0.0410	0.1032	0.1831	0.1170	0.2567	0.1299
	-0.8234	-0.9877	-0.6194	-0.6514	0.4024	0.5168
	5.3414	5.5460	4.9766	5.4070	5.3869	5.6481
	0.4026	1.2270	1.7412	2.3028	3.8155	2.1090

Table 274: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3235	0.4687	0.5346	0.9131	1.1834	0.8599
t-stat	0.8972	1.6178	1.7833	2.8924	3.7856	2.7085
p-value	0.3703	0.1067	0.0755	0.0041	0.0002	0.0071
Standard Deviation (%)	6.3685	5.1171	5.2944	5.5734	5.5169	5.6057
Return/Risk	0.0508	0.0916	0.1010	0.1638	0.2145	0.1534
Skewness	-1.1256	-0.9006	-1.5113	-0.5989	0.0196	0.7696
Kurtosis	8.0005	4.8955	8.9117	5.1671	5.0132	7.3150
<i>Characteristic</i>	35.8753	22.1111	18.6692	17.3150	14.2557	25.0655

Table 275: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
	0.0952	0.7593	0.6582	0.9838	0.6357	0.5405
	0.2409	2.7565	2.0687	3.1568	1.8373	1.7311
	0.8098	0.0062	0.0394	0.0017	0.0671	0.0844
	6.9822	4.8635	5.6193	5.5018	6.1107	5.5145
	0.0136	0.1561	0.1171	0.1788	0.1040	0.0980
	-1.3860	-0.5310	-0.6827	-0.9398	-0.4713	0.4108
	8.3819	5.3168	4.4669	7.3767	5.9333	5.1416
	0.2297	0.3406	0.4860	0.6609	1.3308	0.7803

Table 276: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1216	0.9409	0.3958	0.8868	1.1205	0.9989
t-stat	0.3585	3.1541	1.3140	2.7842	3.4582	3.3677
p-value	0.7202	0.0018	0.1898	0.0057	0.0006	0.0008
Standard Deviation (%)	5.9910	5.2661	5.3208	5.6234	5.7189	5.2356
Return/Risk	0.0203	0.1787	0.0744	0.1577	0.1959	0.1908
Skewness	-0.9763	-0.7706	-0.6194	-0.8780	-0.6545	0.3958
Kurtosis	5.9264	4.8474	7.2215	6.2943	5.7503	4.6144
<i>Characteristic</i>	0.0649	0.0908	0.1173	0.1571	0.3337	0.1993

Table 277: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
	0.3038	0.5441	0.7506	0.9166	1.0473	0.7435
	0.7614	1.8991	2.5243	2.8971	3.2135	2.3772
	0.4470	0.0584	0.0121	0.0040	0.0014	0.0180
	7.0475	5.0601	5.2505	5.5856	5.7529	5.5224
	0.0431	0.1075	0.1430	0.1641	0.1820	0.1346
	-0.8512	-0.8874	-0.4187	-0.4794	-0.9838	0.2645
	7.0146	5.4300	5.0302	7.5628	7.2473	5.5228
	0.0973	0.1340	0.1865	0.2246	0.4461	0.2717

Table 278: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.6253	0.5304	0.4072	0.7860	0.3421	-0.2832
t-stat	2.5923	1.7589	1.4512	2.5562	1.0291	-1.0871
p-value	0.0100	0.0795	0.1477	0.0110	0.3042	0.2778
Standard Deviation (%)	4.3073	5.3860	5.0116	5.4910	5.9375	4.6523
Return/Risk	0.1452	0.0985	0.0813	0.1431	0.0576	-0.0609
Skewness	-0.6715	-0.8280	-1.0552	-0.7284	-0.9636	-0.2137
Kurtosis	3.8120	5.4617	6.9722	7.6799	6.6421	7.0328
<i>Characteristic</i>	10.1256	8.4543	7.7880	7.3903	7.0235	8.5745

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Table 279: Low Volatility sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	-0.1915	0.3046	0.6832	0.8502	0.8484	1.0399
t-stat	-0.4546	0.8942	2.5821	4.2458	5.1862	2.7290
p-value	0.6497	0.3719	0.0103	0.0000	0.0000	0.0067
Standard Deviation (%)	7.1632	5.7903	4.4930	3.3931	2.7670	6.4696
Return/Risk	-0.0267	0.0526	0.1521	0.2506	0.3066	0.1607
Skewness	-0.4704	-0.6974	-0.7671	-0.6080	-0.6745	0.3180
Kurtosis	4.4518	4.9495	4.3501	3.5416	3.8925	4.6733
<i>Characteristic</i>	0.1937	0.1027	0.0825	0.0677	0.0497	0.1217

Table 281: Reversal sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5169	0.4728	0.4157	0.6203	0.3365	-0.1804
t-stat	1.9792	1.9115	1.7094	2.0907	0.8803	-0.6251
p-value	0.0486	0.0568	0.0883	0.0373	0.3793	0.5323
Standard Deviation (%)	4.1978	3.9764	3.9106	4.7682	6.1515	4.6448
Return/Risk	0.1231	0.1189	0.1063	0.1301	0.0547	-0.0388
Skewness	-0.9464	-0.7843	-0.9966	-0.4025	-0.0694	0.1836
Kurtosis	5.1848	4.1684	4.7042	3.9968	4.3300	4.0793
<i>Characteristic</i>	1.4860	0.5590	0.1968	-0.0975	-0.4716	0.5072

Table 283: Low Beta sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.1231	0.5822	0.6379	0.8164	0.5404	0.4174
t-stat	0.2740	1.8510	2.6460	4.4762	3.1580	0.9639
p-value	0.7843	0.0651	0.0085	0.0000	0.0017	0.3358
Standard Deviation (%)	7.8466	5.4918	4.2077	3.1791	2.9859	7.5621
Return/Risk	0.0157	0.1060	0.1516	0.2568	0.1810	0.0552
Skewness	-0.4872	-0.6562	-0.5855	-0.3466	-0.4840	0.4026
Kurtosis	4.3740	4.5692	3.9400	4.1979	4.8292	4.7855
<i>Characteristic</i>	2.0271	1.1431	0.8222	0.5206	-0.1104	0.9583

Table 285: P/E sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.2059	0.6073	0.6870	0.6551	0.7291	0.5233
t-stat	0.6880	2.6059	2.7724	2.4978	2.5402	2.1269
p-value	0.4919	0.0096	0.0059	0.0130	0.0115	0.0342
Standard Deviation (%)	5.2853	4.1149	4.3754	4.6307	5.0684	4.3448
Return/Risk	0.0390	0.1476	0.1570	0.1415	0.1439	0.1204
Skewness	-0.5523	-0.5472	-0.5732	-0.5525	-0.2608	0.4615
Kurtosis	3.8370	4.1404	4.2246	4.7209	4.1256	5.3236
<i>Characteristic</i>	34.4804	19.4900	16.2267	13.9496	10.8278	22.6541

Table 287: C/F sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3177	0.4650	0.5963	0.5602	0.9758	0.6581
t-stat	1.1461	1.9701	2.3718	2.1566	3.2411	2.7760
p-value	0.2526	0.0497	0.0183	0.0318	0.0013	0.0058
Standard Deviation (%)	4.8962	4.1686	4.4393	4.5873	5.3148	4.1856
Return/Risk	0.0649	0.1116	0.1343	0.1221	0.1836	0.1572
Skewness	-0.3506	-0.5752	-0.6203	-0.4305	-0.2632	0.4214
Kurtosis	3.4278	4.5157	4.4704	3.9666	4.5674	4.9134
<i>Characteristic</i>	0.0605	0.0855	0.1040	0.1330	0.1983	0.1294

Table 289: Size sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5872	0.4855	0.6155	0.4745	0.4634	-0.1237
t-stat	2.8243	2.0663	2.3068	1.6410	1.4843	-0.5594
p-value	0.0050	0.0396	0.0217	0.1018	0.1387	0.5763
Standard Deviation (%)	3.7124	4.1960	4.7649	5.1641	5.5762	3.9506
Return/Risk	0.1582	0.1157	0.1292	0.0919	0.0831	-0.0313
Skewness	-0.5898	-0.4726	-0.5156	-0.5827	-0.4890	-0.2559
Kurtosis	3.5442	3.9713	4.1166	4.4893	4.7270	4.1663
<i>Characteristic</i>	9.8603	8.5334	7.8978	7.4000	6.9606	8.4105

Table 280: Momentum sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.0237	0.3449	0.6144	0.7785	0.9821	0.9583
t-stat	0.0658	1.2270	2.6267	3.4107	3.6892	3.1123
p-value	0.9476	0.2207	0.0090	0.0007	0.0003	0.0020
Standard Deviation (%)	6.3252	4.9255	4.0961	3.9952	4.6589	5.3908
Return/Risk	0.0038	0.0700	0.1500	0.1948	0.2108	0.1778
Skewness	-0.3410	-0.4601	-0.4446	-0.5229	-1.0113	-0.1711
Kurtosis	4.6602	4.9112	3.9054	3.7023	6.3179	4.3733
<i>Characteristic</i>	-0.2845	-0.0654	0.0534	0.1752	0.4786	0.0970

Table 282: Nominal price sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4784	0.4623	0.4797	0.6509	0.5282	0.0498
t-stat	1.4133	1.6796	2.0000	2.8918	2.2461	0.2134
p-value	0.1585	0.0940	0.0463	0.0041	0.0254	0.8312
Standard Deviation (%)	6.0456	4.9157	4.2832	4.0193	4.1993	4.1650
Return/Risk	0.0791	0.0940	0.1120	0.1619	0.1258	0.0119
Skewness	-0.4226	-0.3438	-0.6545	-0.5123	-0.6979	-0.2022
Kurtosis	4.7494	3.6435	4.8760	3.9250	4.4194	4.8199
<i>Characteristic</i>	4.9822	5.7032	6.1518	6.5815	7.2137	6.0979

Table 284: Div Yield sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.3890	0.3842	0.6396	0.5963	0.8222	0.4331
t-stat	1.2927	1.4253	2.6122	2.2839	3.1471	1.8076
p-value	0.1970	0.1550	0.0094	0.0230	0.0018	0.0716
Standard Deviation (%)	5.3159	4.7614	4.3233	4.6103	4.6119	4.2319
Return/Risk	0.0732	0.0807	0.1479	0.1293	0.1783	0.1023
Skewness	-0.4267	-0.8244	-0.5461	-0.5006	-0.2132	0.1980
Kurtosis	4.0862	4.9483	3.7531	4.4945	4.3649	4.7778
<i>Characteristic</i>	1.1217	2.3915	3.2167	4.0636	5.7073	3.4145

Table 286: BE/ME sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.4447	0.5669	0.6873	0.3740	0.6014	0.1568
t-stat	1.8054	2.3921	2.7402	1.3539	1.9295	0.6704
p-value	0.0719	0.0173	0.0065	0.1767	0.0545	0.5031
Standard Deviation (%)	4.3500	4.1849	4.4287	4.8798	5.5048	4.1301
Return/Risk	0.1022	0.1355	0.1552	0.0767	0.1093	0.0380
Skewness	-0.4736	-0.7027	-0.4333	-0.5035	-0.4831	-0.1223
Kurtosis	3.9720	4.7475	4.4862	3.7292	4.5809	4.8080
<i>Characteristic</i>	0.1592	0.2950	0.4109	0.6133	1.0195	0.5894

Table 288: EBIT sorts

	P01	P02	P03	P04	P05	P hedge
Mean (%)	0.5052	0.5143	0.7249	0.6067	0.9544	0.4492
t-stat	1.8757	2.0823	2.9954	2.4096	3.3130	1.9397
p-value	0.0616	0.0381	0.0030	0.0165	0.0010	0.0533
Standard Deviation (%)	4.7563	4.3616	4.2723	4.4464	5.0850	4.0898
Return/Risk	0.1062	0.1179	0.1697	0.1365	0.1877	0.1098
Skewness	-0.4352	-0.6812	-0.6084	-0.5011	-0.3628	0.0218
Kurtosis	4.0722	4.4305	4.6917	3.7950	4.6026	5.8261
<i>Characteristic</i>	0.0468	0.0638	0.0765	0.0937	0.1431	0.0950

D.12 Jensen's Alpha Regressions: Countries

Table 290: Denmark

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.6706	-1.1052	1.3012	-0.3195	-0.1857	0.4377	-0.1027	-0.3028	-0.1756	-0.1991	-0.0476
t-stat	-1.8557	-2.4826	3.5105	-1.0517	-0.5013	1.1801	-0.3074	-0.8886	-0.4599	-0.6708	-0.1385
p-value	0.0644	0.0136	0.0005	0.2937	0.6165	0.2388	0.7588	0.3749	0.6459	0.5028	0.8899
adjusted R2 (%)	-0.3054	0.5503	-0.2902	-0.2048	0.2865	-0.3047	0.1088	-0.0085	-0.2610	-0.2876	0.7412
Durbin Watson	1.8060	1.7830	2.0589	1.9364	1.8700	1.7987	1.8660	1.9251	1.7933	1.8268	1.9932
Breusch Pagan	15.8150	7.4431	11.9489	0.0144	1.0200	3.2516	0.6050	6.8815	1.4065	0.1324	0.5623
Breusch Pagan p-value	0.0001	0.0064	0.0005	0.9046	0.3125	0.0714	0.4367	0.0087	0.2356	0.7160	0.4533
White	5.9724	3.1299	7.9132	1.6985	1.5630	1.6685	5.2438	2.8131	1.6081	1.9714	0.7502
White p-value	0.1130	0.3720	0.0478	0.6373	0.6678	0.6440	0.1548	0.4213	0.6576	0.5784	0.8613
Beta	-0.0070	-0.1241	-0.0155	-0.0295	0.0859	0.0077	0.0648	0.0560	0.0252	-0.0132	0.1061
t-stat beta	-0.1160	-1.6712	-0.2499	-0.5811	1.3896	0.1250	1.1632	0.9862	0.3955	-0.2659	1.8491
p-value beta	0.9077	0.0956	0.8028	0.5616	0.1656	0.9006	0.2456	0.3248	0.6927	0.7905	0.0653

Table 291: France

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.1998	-0.0651	0.4656	0.1767	-0.1621	-0.0245	0.2184	0.0514	0.1366	-0.6463	0.1666
t-stat	-0.6204	-0.1589	1.6936	0.6624	-0.6216	-0.1025	0.9923	0.2147	0.6294	-3.1269	0.7307
p-value	0.5354	0.8739	0.0913	0.5082	0.5346	0.9184	0.3218	0.8302	0.5296	0.0019	0.4655
adjusted R2 (%)	-0.1986	-0.3031	-0.1914	-0.2760	2.3828	1.0485	-0.2097	1.1728	1.6649	0.1329	3.2344
Durbin Watson	1.7702	1.8038	2.0432	2.0057	1.8545	1.9620	1.9999	2.0211	1.7933	1.9531	2.0068
Breusch Pagan	68.7703	64.3415	38.6345	112.3148	0.1401	0.0016	28.6057	0.2210	21.0023	19.6721	22.9113
Breusch Pagan p-value	0.0000	0.0000	0.0000	0.0000	0.7082	0.9683	0.0000	0.6383	0.0000	0.0000	0.0000
White	24.9147	27.7391	15.7196	40.8915	0.1424	0.2652	20.5098	1.2175	7.5347	11.1304	12.8567
White p-value	0.0000	0.0000	0.0013	0.0000	0.9863	0.9664	0.0001	0.7488	0.0567	0.0110	0.0050
Beta	-0.0337	-0.0104	-0.0297	0.0153	0.1362	0.0880	0.0218	0.0921	0.0967	-0.0433	0.1372
t-stat beta	-0.5983	-0.1446	-0.6172	0.3288	2.9847	2.1055	0.5674	2.2011	2.5467	-1.1964	3.4394
p-value beta	0.5501	0.8851	0.5375	0.7425	0.0031	0.0360	0.5708	0.0284	0.0113	0.2324	0.0007

Table 292: Germany

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.0477	-0.0489	0.4647	-0.1073	0.5346	0.3372	0.5729	0.4008	0.1073	-0.4536	-0.2921
t-stat	-0.1462	-0.1078	1.5050	-0.4190	2.1199	1.4762	2.3923	1.7749	0.4383	-2.1501	-1.2731
p-value	0.8838	0.9142	0.1333	0.6755	0.0348	0.1409	0.0173	0.0769	0.6615	0.0323	0.2039
adjusted R2 (%)	-0.2620	0.4133	0.1773	-0.1147	0.0631	0.5004	0.6385	0.5100	-0.2756	0.0314	0.2133
Durbin Watson	1.7446	1.9098	1.9110	1.9609	2.1016	2.1680	1.8613	1.8766	1.9923	2.0138	1.9557
Breusch Pagan	59.9912	24.0806	31.6510	22.1498	0.6588	9.6713	74.7928	2.6035	2.7958	1.1910	16.2382
Breusch Pagan p-value	0.0000	0.0000	0.0000	0.0000	0.4170	0.0019	0.0000	0.1066	0.0945	0.2751	0.0001
White	14.9076	10.8242	7.4962	9.7398	0.3431	2.7241	12.0397	7.9525	2.3987	0.8003	13.2727
White p-value	0.0019	0.0127	0.0577	0.0209	0.9517	0.4362	0.0072	0.0470	0.4939	0.8494	0.0041
Beta	-0.0230	-0.1246	-0.0695	-0.0365	0.0497	0.0665	-0.0754	0.0661	0.0145	0.0397	0.0536
t-stat beta	-0.3918	-1.5313	-1.2552	-0.7930	1.0975	1.6215	-1.7556	1.6312	0.3309	1.0496	1.3010
p-value beta	0.6955	0.1267	0.2103	0.4284	0.2733	0.1059	0.0801	0.1038	0.7409	0.2947	0.1942

Table 293: Greece

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.6125	-0.2448	1.1864	0.3730	-0.5406	0.3122	0.4809	0.5817	0.1546	-0.7097	-0.2529
t-stat	-1.1344	-0.3737	2.9144	0.9300	-1.4032	0.8948	1.5643	1.6713	0.4277	-1.8076	-0.6630
p-value	0.2575	0.7089	0.0038	0.3531	0.1615	0.3716	0.1187	0.0956	0.6692	0.0716	0.5078
adjusted R2 (%)	0.4608	-0.2720	1.5556	-0.2857	-0.2249	0.5137	-0.1562	-0.1933	0.0898	-0.2536	1.2437
Durbin Watson	1.9732	2.0178	2.0722	2.0024	1.9910	2.1849	1.9187	2.1526	1.7567	2.0847	1.9421
Breusch Pagan	16.4800	12.1500	8.8039	4.1990	0.3231	4.0450	3.5049	1.3700	0.9502	10.5310	16.5531
Breusch Pagan p-value	0.0000	0.0005	0.0030	0.0404	0.5697	0.0443	0.0612	0.2418	0.3297	0.0012	0.0000
White	15.9139	8.0652	6.3662	4.1566	4.8210	2.0459	2.7786	2.5540	0.8564	7.8381	13.9667
White p-value	0.0012	0.0447	0.0951	0.2450	0.1854	0.5629	0.4270	0.4656	0.8359	0.0495	0.0030
Beta	-0.0909	-0.0243	0.1073	0.0119	-0.0214	-0.0607	0.0230	0.0227	0.0438	-0.0178	0.0916
t-stat beta	-1.5811	-0.3478	2.4738	0.2775	-0.5225	-1.6349	0.7033	0.6122	1.1364	-0.4249	2.2540
p-value beta	0.1148	0.7282	0.0139	0.7816	0.6017	0.1030	0.4823	0.5408	0.2567	0.6712	0.0249

Table 294: Italy

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.4008	0.1855	0.2313	-0.5593	-0.4321	-0.4984	-0.0472	-0.4801	0.1034	-0.5653	-0.1804
t-stat	0.9392	0.3563	0.5599	-1.7663	-1.2788	-1.3612	-0.1425	-1.3912	0.3306	-1.5876	-0.6543
p-value	0.3484	0.7219	0.5760	0.0783	0.2019	0.1744	0.8868	0.1651	0.7412	0.1133	0.5134
adjusted R2 (%)	-0.1775	-0.2910	0.2008	-0.2632	-0.1751	-0.0386	-0.3003	-0.1619	-0.1855	-0.2818	0.7044
Durbin Watson	1.9126	1.9724	2.1352	1.9686	1.8564	1.6249	1.8109	1.8556	1.6869	1.7572	1.8415
Breusch Pagan	22.5556	34.3608	66.3130	3.6537	0.3010	0.3736	21.9075	0.1283	3.0428	0.4977	2.6885
Breusch Pagan p-value	0.0000	0.0000	0.0000	0.0559	0.5833	0.5410	0.0000	0.7202	0.0811	0.4805	0.1011
White	9.7896	8.9491	17.1991	1.8544	3.0643	1.2602	9.0410	0.0424	2.5948	0.8825	2.1552
White p-value	0.0204	0.0300	0.0006	0.6032	0.3818	0.7386	0.0288	0.9977	0.4584	0.8297	0.5408
Beta	-0.0420	0.0192	0.0800	-0.0185	0.0335	-0.0516	-0.0086	0.0359	-0.0298	0.0160	0.0754
t-stat beta	-0.6526	0.2450	1.2853	-0.3868	0.6586	-0.9355	-0.1727	0.6900	-0.6327	0.2991	1.8162
p-value beta	0.5145	0.8066	0.1996	0.6992	0.5106	0.3502	0.8630	0.4907	0.5274	0.7651	0.0703

Table 295: Netherlands

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.2664	-0.1702	-0.4612	-0.0860	0.0110	0.3970	0.2277	-0.2876	0.2957	0.0449	-0.4371
t-stat	0.5334	-0.3141	-1.1361	-0.2201	0.0354	1.1911	0.6272	-0.8211	0.8904	0.1414	-1.3489
p-value	0.5942	0.7536	0.2567	0.8259	0.9718	0.2345	0.5310	0.4122	0.3739	0.8877	0.1783
adjusted R2 (%)	-0.2352	-0.0038	0.3196	-0.3054	0.4943	-0.0622	-0.2556	-0.1968	0.0743	-0.2803	4.3451
Durbin Watson	1.8198	1.7984	1.9208	1.9754	2.0022	2.0518	1.8842	2.1334	2.1553	1.9180	2.0340
Breusch Pagan	35.5910	29.2798	4.1023	26.5356	0.6934	1.8034	6.6794	8.0719	4.3533	25.1007	2.3552
Breusch Pagan p-value	0.0000	0.0000	0.0428	0.0000	0.4050	0.1793	0.0098	0.0045	0.0369	0.0000	0.1249
White	12.7357	13.8193	1.7974	11.6460	1.7751	2.9746	4.6220	8.3745	5.7194	9.8119	1.8314
White p-value	0.0052	0.0032	0.6155	0.0087	0.6204	0.3956	0.2017	0.0389	0.1261	0.0202	0.6081
Beta	-0.0441	-0.0970	0.1045	0.0082	0.0903	0.0537	0.0273	-0.0381	0.0667	0.0176	0.2315
t-stat beta	-0.4897	-0.9938	1.4279	0.1163	1.6154	0.8937	0.4172	-0.6030	1.1140	0.3072	3.9645
p-value beta	0.6247	0.3211	0.1543	0.9075	0.1072	0.3722	0.6768	0.5469	0.2661	0.7589	0.0001

Table 296: Norway

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.4087	-0.0697	1.1303	0.3646	0.5530	-0.2068	0.1711	0.5391	0.4833	-1.1230	-0.2749
t-stat	-1.0174	-0.1255	2.6195	1.0169	1.3517	-0.5481	0.4721	1.4328	1.4031	-3.1070	-0.7914
p-value	0.3097	0.9002	0.0092	0.3100	0.1774	0.5840	0.6372	0.1529	0.1616	0.0021	0.4293
adjusted R2 (%)	0.9106	1.5016	-0.0275	1.4258	1.8511	0.1047	0.3479	-0.0644	0.4191	-0.3096	1.4885
Durbin Watson	1.9276	2.0240	1.9038	2.2718	1.8473	1.8869	2.1215	2.0040	1.9341	2.0459	2.0296
Breusch Pagan	0.1350	7.9444	1.3809	2.1837	2.0539	3.1384	13.9054	26.5157	0.4280	0.7751	5.9717
Breusch Pagan p-value	0.7133	0.0048	0.2399	0.1395	0.1518	0.0765	0.0002	0.0000	0.5130	0.3786	0.0145
White	0.7475	7.4643	0.7100	1.3343	1.5971	2.1368	16.3498	10.0652	0.6737	1.0825	3.2407
White p-value	0.8620	0.0585	0.8708	0.7210	0.6600	0.5445	0.0010	0.0180	0.8794	0.7813	0.3560
Beta	-0.1150	-0.1944	0.0591	-0.1227	0.1566	0.0627	-0.0759	0.0480	0.0760	0.0004	0.1211
t-stat beta	-1.9943	-2.4371	0.9545	-2.3846	2.6666	1.1575	-1.4598	0.8896	1.5374	0.0068	2.4281
p-value beta	0.0470	0.0153	0.3406	0.0177	0.0080	0.2479	0.1453	0.3743	0.1252	0.9946	0.0157

Table 297: Spain

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.4075	0.7940	0.4521	-0.1889	0.5064	0.8343	0.5193	0.7444	0.4186	-0.1167	-0.7273
t-stat	1.1791	1.6730	1.3470	-0.6265	1.6004	3.0300	1.4120	2.5087	1.3797	-0.4391	-2.2640
p-value	0.2392	0.0953	0.1789	0.5315	0.1105	0.0026	0.1589	0.0126	0.1686	0.6609	0.0242
adjusted R2 (%)	-0.3077	-0.1845	-0.2633	1.1288	0.3589	-0.1835	-0.2642	2.4785	-0.2987	-0.2427	0.3330
Durbin Watson	2.0549	2.0930	2.0337	1.9596	1.8758	1.9146	1.9358	2.0110	1.7804	2.0894	1.9007
Breusch Pagan	2.3905	15.4632	6.0254	2.8589	11.1546	0.7779	20.6549	0.0645	10.1334	4.5779	3.3235
Breusch Pagan p-value	0.1221	0.0001	0.0141	0.0909	0.0008	0.3778	0.0000	0.7995	0.0015	0.0324	0.0683
White	1.4527	8.0005	3.2174	1.5173	8.3723	1.0217	7.4336	0.5449	4.3899	3.7711	5.9541
White p-value	0.6932	0.0460	0.3593	0.6783	0.0389	0.7960	0.0593	0.9089	0.2223	0.2873	0.1139
Beta	0.0046	0.0508	0.0219	0.1103	0.0786	0.0296	-0.0237	0.1521	0.0096	-0.0208	0.0782
t-stat beta	0.0782	0.6350	0.3862	2.1677	1.4720	0.6375	-0.3823	3.0388	0.1871	-0.4641	1.4430
p-value beta	0.9377	0.5259	0.6996	0.0309	0.1420	0.5243	0.7025	0.0026	0.8517	0.6429	0.1500

Table 298: Sweden

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.0345	0.0027	0.6267	0.0207	-0.1730	-0.1000	0.3955	-0.1045	0.5342	-0.4718	-0.1081
t-stat	-0.0894	0.0058	1.5762	0.0658	-0.5137	-0.2892	1.0275	-0.3183	1.5734	-1.8274	-0.3458
p-value	0.9288	0.9954	0.1160	0.9476	0.6078	0.7726	0.3050	0.7505	0.1166	0.0686	0.7297
adjusted R2 (%)	-0.2994	-0.2749	0.7312	-0.2442	-0.3058	-0.2466	-0.2069	-0.3065	0.0168	-0.2977	3.3092
Durbin Watson	1.4940	1.7771	1.8531	1.9131	1.6457	1.7199	1.9196	1.8199	1.8455	2.2121	1.8858
Breusch Pagan	6.8801	21.5459	11.4824	25.8002	0.8205	0.0699	4.0021	0.1003	0.4136	0.4805	6.2710
Breusch Pagan p-value	0.0087	0.0000	0.0007	0.0000	0.3650	0.7915	0.0454	0.7515	0.5202	0.4882	0.0123
White	4.6230	11.9399	6.1197	17.2181	0.4110	0.1068	2.0973	0.4009	0.2448	0.2677	7.4793
White p-value	0.2016	0.0076	0.1059	0.0006	0.9380	0.9910	0.5525	0.9400	0.9700	0.9660	0.0581
Beta	-0.0104	0.0230	0.1090	-0.0215	-0.0056	0.0232	-0.0330	-0.0049	0.0519	-0.0075	0.1618
t-stat beta	-0.1816	0.3342	1.8402	-0.4590	-0.1111	0.4507	-0.5753	-0.1006	1.0269	-0.1954	3.4769
p-value beta	0.8560	0.7385	0.0667	0.6466	0.9116	0.6525	0.5655	0.9199	0.3052	0.8452	0.0006

Table 299: Switzerland

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	-0.6200	-0.2619	0.4757	-0.0574	0.1370	0.6344	0.2737	0.4390	0.3505	-0.1904	-0.4030
t-stat	-2.1128	-0.7462	1.6190	-0.2083	0.4523	2.1872	0.9030	1.4310	1.1525	-0.6677	-1.5619
p-value	0.0354	0.4561	0.1064	0.8351	0.6514	0.0294	0.3672	0.1534	0.2500	0.5048	0.1193
adjusted R2 (%)	0.4851	1.6843	-0.2152	0.9568	0.6868	-0.1091	1.3979	-0.3049	3.2760	0.6239	2.9708
Durbin Watson	1.9766	1.8990	1.7975	2.0043	1.8883	2.1857	1.9943	1.9115	1.9623	2.0837	2.2133
Breusch Pagan	0.5322	0.2460	0.7126	1.9646	13.2792	2.1172	9.2195	18.2484	26.4562	0.0095	40.5578
Breusch Pagan p-value	0.4657	0.6199	0.3986	0.1610	0.0003	0.1456	0.0024	0.0000	0.0000	0.9222	0.0000
White	0.8250	3.8001	1.5035	4.9558	22.0731	1.2222	14.9743	25.5218	27.5491	0.8635	24.8114
White p-value	0.8435	0.2839	0.6815	0.1751	0.0001	0.7477	0.0018	0.0000	0.0000	0.8342	0.0000
Beta	-0.0646	-0.1231	-0.0222	-0.0767	-0.0747	-0.0320	-0.0982	0.0052	-0.1442	0.0681	0.1169
t-stat beta	-1.6061	-2.5594	-0.5515	-2.0323	-1.8002	-0.8042	-2.3651	0.1233	-3.4603	1.7419	3.3045
p-value beta	0.1092	0.0109	0.5816	0.0429	0.0728	0.4218	0.0186	0.9019	0.0006	0.0825	0.0011

Table 300: UK

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Alpha (%)	0.6148	0.0487	0.6143	-0.2975	-0.1147	0.3699	0.1766	0.1812	0.2618	-0.4393	-0.3109
t-stat	1.8070	0.1201	2.1028	-1.3197	-0.5090	1.6217	0.7700	0.8139	1.1116	-1.8662	-1.4812
p-value	0.0717	0.9045	0.0363	0.1879	0.6111	0.1058	0.4418	0.4163	0.2671	0.0629	0.1395
adjusted R2 (%)	0.0317	0.8150	-0.2600	3.6247	-0.0431	0.0653	1.3754	0.6896	1.1945	0.9011	8.4824
Durbin Watson	1.6521	1.9430	1.6804	1.8495	1.8564	1.5989	1.6483	1.7584	1.6900	1.9447	2.0229
Breusch Pagan	25.6533	21.7476	0.1948	11.4321	0.2017	0.1650	1.8194	0.6363	1.0851	1.6842	0.5214
Breusch Pagan p-value	0.0000	0.0000	0.6590	0.0007	0.6533	0.6846	0.1774	0.4251	0.2976	0.1944	0.4703
White	14.2272	14.1746	0.2658	6.3581	4.3430	1.7422	1.8336	4.2110	1.0848	1.1633	0.3621
White p-value	0.0026	0.0027	0.9663	0.0954	0.2267	0.6276	0.6076	0.2396	0.7807	0.7618	0.9480
Beta	-0.0797	-0.1731	-0.0260	-0.1825	0.0466	0.0560	0.1201	0.0895	0.1164	0.1043	0.2607
t-stat beta	-1.0502	-1.9137	-0.3997	-3.6312	0.9276	1.1008	2.3491	1.8027	2.2174	1.9865	5.5705
p-value beta	0.2944	0.0565	0.6896	0.0003	0.3543	0.2718	0.0194	0.0724	0.0273	0.0478	0.0000

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Table 301: Denmark

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1419	-0.0112	-0.0037	-0.0048	0.0041	0.0269	0.0012	-0.0013	-0.0003	-0.0081	-0.0018
t-stat	-4.2018	-3.1293	-0.6220	-3.3035	0.9136	1.1221	0.9363	-0.4088	-2.1312	-2.4537	-1.2023

Table 302: France

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1444	-0.0108	-0.0041	-0.0064	0.0126	0.0620	0.0017	0.0667	-0.0001	-0.0012	-0.0021
t-stat	-4.4457	-3.2492	-0.8708	-3.6032	2.5384	3.6073	2.2073	3.8404	-1.1714	-0.5370	-1.9857

Table 303: Germany

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1183	-0.0057	0.0016	-0.0062	0.0142	0.0221	0.0017	0.0444	-0.0001	-0.0058	0.0004
t-stat	-4.7432	-2.7116	0.3271	-3.5330	2.0267	1.7547	1.9840	2.4330	-1.4807	-1.9875	0.3683

Table 304: Greece

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.0798	-0.0057	0.0002	-0.0098	0.0140	0.0936	0.0012	0.1142	-0.0002	-0.0004	-0.0019
t-stat	-3.6795	-1.8413	0.0380	-3.7963	2.3837	4.3261	1.7919	4.4168	-1.6470	-0.1192	-1.1134

Table 305: Italy

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1111	-0.0072	0.0076	-0.0078	0.0030	0.0060	0.0015	0.0149	0.0000	0.0003	0.0006
t-stat	-3.4106	-2.5323	1.3589	-4.1117	0.9616	0.6945	1.6917	1.6716	0.5132	0.1461	0.6001

Table 306: Netherlands

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1253	-0.0073	-0.0040	-0.0036	0.0181	0.0194	0.0007	0.0026	0.0001	-0.0042	-0.0003
t-stat	-3.5255	-2.6702	-0.5156	-1.4307	2.2727	0.7251	0.5116	0.0830	0.6636	-1.3077	-0.1895

Table 307: Norway

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.0846	-0.0082	0.0035	-0.0063	0.0043	0.0236	0.0010	0.0060	-0.0001	-0.0008	-0.0006
t-stat	-2.9203	-2.6879	0.4780	-2.3221	0.8948	1.5833	1.1562	3.4392	-0.5733	-0.2267	-0.5130

Table 308: Spain

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1524	-0.0089	0.0042	-0.0109	0.0176	0.0852	0.0031	0.0634	-0.0002	-0.0060	0.0006
t-stat	-3.6325	-2.9121	0.6572	-3.7309	2.9941	4.3251	3.0701	2.7750	-1.1900	-2.0492	0.3870

Table 309: Sweden

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1201	-0.0114	-0.0095	-0.0153	0.0033	0.0170	0.0015	0.0037	-0.0002	-0.0064	-0.0018
t-stat	-4.8224	-3.8330	-1.5755	-3.8820	1.0572	0.7926	1.2612	1.6548	-1.5930	-2.5620	-1.0359

Table 310: Switzerland

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.1216	-0.0132	0.0035	-0.0083	0.0035	0.0795	0.0007	0.0318	0.0001	-0.0071	-0.0017
t-stat	-4.4627	-3.0400	0.4005	-3.5597	0.5844	3.1304	0.4749	1.5665	0.2782	-1.4503	-0.8998

Table 311: UK

	Low Vol	Low Beta	Momentum	Nominal	BEME	CF	Div Yield	EBIT	PE	Reversal	Size
Coefficient	-0.0854	-0.0040	0.0107	-0.0035	0.0044	0.0633	0.0009	0.0952	-0.0001	-0.0002	0.0005
t-stat	-4.2563	-2.4480	2.6372	-2.5493	1.8231	4.3154	2.1586	4.9805	-1.8430	-0.1147	0.6993