Are Return Predictors of Industrial Equity Indexes Common across Regions?

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Abstract

We investigate the potential cross-sectional relationship between several equity index attributes and future returns on country-industry indexes in the regions of North America, Europe, Asia-Pacific, South America, MENA, and Japan. Index attributes include the recently documented predictors in the cross-section of stock or index returns such as return range, maximum and minimum returns in a month, idiosyncratic skewness as well as widely documented predictors at the stock level. Maximum and minimum effects are common for all regions. Return range significantly predicts returns in Europe, Asia-Pacific, and South America after controlling for other index attributes. Standard deviation and idiosyncratic volatility have strong predictive ability in Europe, Asia-Pacific, South America, MENA, and Japan. Intermediate term momentum forecasts returns on North American and European portfolios. Earnings-to-price ratio is cross-sectionally linked to returns in Europe. Portfolio sorts show that the predictive power of significant index attributes increases with decreasing index size.

Key Words: *Return predictability, International portfolio management, Industrial equity indexes, Cross-section of index returns.*

JEL Codes: *G11, G12, G17.*

1. Introduction

Global portfolio managers frequently invest in country and/or country-industry indexes to diversify their portfolios internationally. For such investors, determining cross-sectional patterns in international index returns is an important research question to be answered for constructing profitable trading strategies. Several studies investigate whether index-level counterparts of stock characteristics help explain the cross-section of index returns. For instance, Chan, Jegadeesh, and Lakonishok (1996), Chan, Hameed, and Tong (2000), Desrosiers, L'Her, and Plante (2004), Bhojraj and Swaminathan (2006), and Liu, Liu, and Ma (2011) examined momentum in index returns. Keppler and Encinosa (2011) and Li and Pritamani (2015) investigated the size effect at the index level while Keppler (1991), Kim (2012), and Asness, Moskowitz, & Pedersen (2013) focused on value premium. Idiosyncratic volatility, beta, and standard deviation are among other variables whose cross-sectional relationships with index returns were studied (Harvey, 1995; Bali & Cakici, 2010; Hueng, 2014; Zaremba, 2016). The common characteristics of these studies are that i) they are conducted at the global level rather than the regional level, ii) risk-adjusted returns are estimated relative to global asset-pricing models that implicitly assume full market integration, and iii) country indexes are used as the basic international indexes.

In this study, we investigate the potential cross-sectional relationship between several equity index attributes and future returns on country-industry indexes in the regions of North America, Europe, Asia-Pacific, South America, MENA (the Middle East and North Africa), and Japan. We analyze the predictive ability of nineteen index attributes including the recently documented new return predictors in the cross-section of stock or index returns such as return range, maximum and minimum returns in a month, idiosyncratic skewness as well as widely documented return predictors at the stock level. We conduct a regional analysis because regions may differ from each other in their stock market efficiency and integration. Local stock market conditions and regulations and also development stages of markets can affect market efficiency, which in turn give rise to different degrees of return predictability across regions. Moreover, some regions may become more integrated with the global market whereas others may progress only gradually towards full integration. The heterogeneity in the extent of market integration across regions has implications for the pricing of assets. Assets in segmented markets are priced differently than assets with similar properties in integrated markets. In segmented markets, local factors dominate global factors to explain asset returns. On the other hand, in integrated markets, global factors are the main

return drivers. As there is no risk-sharing with foreign investors in segmented markets, local assets are riskier as compared to their counterparts in integrated markets, and therefore, expected returns of local assets are higher (Chari & Henry, 2004; De Jong & De Roon, 2005). Thus, the difference in expected returns of assets with similar attributes in segmented and integrated markets has the potential to alter the relationship between expected returns and asset attributes in markets with different levels of integration. By conducting a regional analysis, we aim to account for such regional differences in pricing and return predictability of assets. Addressing this issue enables us to determine whether index attributes that are associated with future returns are the same across regions or not.

Different from the studies assuming full market integration and accordingly using the global versions of the asset-pricing models, this study accounts for differences in the degree of segmentation/integration of regions and employs regional factor models to estimate risk-adjusted returns. The regional asset-pricing models allow index returns to be adjusted for both global and regional risk factors that may change across regions. This issue is especially important when examining the cross-sectional relationship between future returns and index attributes by estimating a long-short attribute portfolio's alpha from a benchmark model. Including only global factors in a benchmark model will overestimate alphas on assets from segmented markets as global factors deliver lower expected returns for locally priced assets with high expected returns. In other words, in a segmented market, a trading strategy that goes long the indexes with the highest values of an index attribute and shorts the ones with the lowest values will misleadingly produce higher alphas from a benchmark model including merely global factors. This generates an apparently higher number of profitable trading strategies than the actual number and can induce a spurious relation between expected returns and the relevant index attribute. Interestingly, there are few studies employing regional benchmark models including both global and local factors to estimate alphas on country-industry portfolios.

In this study, we use industry indexes from several countries as the basic international assets. Industry indexes play an increasingly important role in the holdings of global investors. A growing body of literature documents that industry indexes are becoming more effective than country indexes to obtain a higher degree of international diversification (Baca, Garbe, & Weiss, 2000; Cavaglia, Brightman, & Aked, 2000; Flavin, 2004; Ferreira & Gama, 2005; Ratner & Leal, 2005; Phylaktis & Xia, 2006; Bessler et al., 2021). Various explanations are proposed for the increasing

importance of industry portfolios in international diversification. First, Roll (1992) argues that it is the industry structure of a country index that makes country returns move together or independently. Second, while country returns become more correlated during globalization (Goetzman, Li, & Rouwenhorst, 2005; Bali & Cakici, 2010), industry-return correlations stayed low because of idiosyncratic properties of industries (Bekaert et al., 2011). Third, Phlaktis and Xia (2009) showed that not all sectors react in the same way to global crises whereas country indexes respond more homogenously. Some industries may be even more profitable during crises and can be distinguished from other industries. All these factors can make industry portfolios more attractive than country portfolios for global investors seeking a more efficient international diversification.

Our main results can be summarized as follows. Although maximum and minimum effects are common return effects for all regions, there are also region-specific index attributes that are associated with returns. Return range is significantly related to future returns in Europe, Asia-Pacific, and South America after controlling for other index attributes in cross-sectional regressions. Standard deviation and idiosyncratic volatility have strong predictive ability for returns in Europe, Asia-Pacific, South America, MENA, and Japan. Intermediate-term momentum is cross-sectionally linked to returns on North American and European portfolios. Lastly, the earnings-to-price ratio drives returns in Europe. In addition, portfolio-level analyses show that the predictive power of significant index attributes increases with decreasing index size. Overall, our regional analyses provide new insights for global investors, who construct their trading strategies at the index level for each region separately.

This study has several contributions to the current literature. First, the predictive ability of return range for index returns is tested in a regional setting for the first time in the literature. Recently, Umutlu and Bengitöz (2021) proposed the return range as a return predictor for international portfolios in a global framework without referencing regional differences. Our study sheds light on whether this new index-level return predictor has a pervasive impact worldwide or its impact is limited to certain regions. Second, in accordance with a regional perspective, we use regional asset-pricing models to calculate the risk-adjusted performance of indexes sorted on several index attributes. Many studies implicitly assume full market integration and use global versions of asset-pricing models as benchmark models (Harvey, 1995, 2000; Hueng & Yau, 2013; Angelidis & Tessaromatis, 2018; Atilgan et al., 2019; Cooper, Mitrache, & Priestley, 2022;

Zaremba & Umutlu, 2018). Few studies at the index level account for the partially integrated state of markets by employing regional asset-pricing models that adjust index returns for both global and regional risk factors (Bekaert, Hodrick, & Zhang, 2009; Bekaert et al., 2014; Umutlu & Bengitöz, 2020). This way, the performance of trading strategies based on an index attribute is more accurately measured. However, these studies do not examine the significance of recently proposed return predictors at the index level such as return range, maximum and minimum daily returns within a month, standard deviation, and idiosyncratic skewness of returns. This study is the most comprehensive one in the number of return predictors examined in a regional study. Third, we use the highest number of geographical regions analyzed in a regional study. This issue is important for global investors who are willing to invest in a wide array of regions and aim to determine region-specific trading strategies. Fourth, the use of country-industry portfolios differentiates this study from the great majority of index-level studies, which are mostly concentrated on country indexes.[2] There is a growing literature that emphasizes the increasing importance of industry diversification against country diversification as mentioned previously. This makes the use of industry portfolios more interesting as a channel for international diversification for global investors.

The paper is organized as follows. Section 2 presents the data and variables. Section 3 describes the methodology. Section 4 documents the results for portfolio sorts and cross-sectional regressions. Section 5 concludes the paper.

2. Data and Variables

The data for the country-industry indexes are downloaded from Datastream (DS), which compiles DS Global Indexes representing different industries. Industry grouping is based on the supersector definitions in the Industry Classification Benchmark (ICB) of the FTSE. According to this classification, there are19 different supersectors bringing together the companies that share similar industrial themes.[3] 19 industries from 51 countries form our sample. Since some *supersector* indexes do not exist for some countries, we have 885 country-industry indexes rather than the full number of indexes 969 (19*51). The whole sample of country-industry indexes is

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[2] See Zaremba (2019) for an extensive survey on coutry level studies.
[3] *Supersectors*: Automobile & Parts, Banks, Basic Resources, Chemicals, Construction & Mat., Financial Services, Food & Beverages, Health Care, Ind. Goods & Svs., Insurance, Media, Oil & Gas, Pers. & H/H Goods, Real Estate, Retail, Technology, Telecom, Travel & Leisure, and Utilities.

divided into six different regions to examine the performance of the trading strategies for each index attribute in different regions. These regions are North America (the US and Canada), Europe (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherland, Norway, Portugal, Spain, Sweden, Switzerland, UK, Czech Republic, Hungary, Poland, and Turkey), Asia-Pacific (Australia, Hong Kong, New Zealand, Singapore, China, India, Indonesia, Korea, Malaysia, Pakistan, Philippine, Russia, South Africa, Taiwan, Thailand, Vietnam), South America (Argentina, Brazil, Chile, Mexico), the Middle East and North Africa (Bahrain, Egypt, Israel, Kuwait, Morocco, Oman, Qatar, and United Arab Emirates), and Japan.

The datasets include daily and monthly dollar returns for country-industry indexes. In addition to the return data, we collect monthly data for market value, price-to-earnings ratio, dividend yield, return on equity, price index, the 12-month forward earnings per share, and enterprise value over earnings before interest, taxes, depreciation, and amortization to construct some potential return predicting variables. Moreover, annual data such as earnings before interest and tax, total assets, shareholders' equity, and interest charge coverage are also downloaded to extend the list of return predictors. The return on the world market portfolio, which is used as one of the global factors in asset-pricing models, is represented by the return on the World Market Index of Datastream. Lastly, the daily and monthly risk-free rate is obtained by using the one-month US Treasury bill rate from Kenneth R. French's data library.[4] The earliest starting date for monthly index attributes is January 1973 while that for annual index attributes constructed from annual accounting data is June 1983. The end date is July 2017.

We examine the predictive ability of nineteen index attributes. The first group of variables captures risk measures, such as total, systematic, idiosyncratic, and tail risk. The traditional total volatility measure of standard deviation, *SD*, is the standard deviation of daily returns within a month. *RANGE* is recently offered as an alternative proxy for the total volatility by Umutlu and Bengitöz (2021) and is defined as the difference between the maximum and the minimum daily returns in a month. *IVOL* represents the idiosyncratic volatility, which is the standard deviation of the error terms obtained from the World CAPM shown in Eq. (1). Every month in the research period, the daily excess return on country-industry indexes is regressed on the daily excess return on the DS World Market Index.

$$R_{idt} - r_{fdt} = \alpha_{it} + \beta_{1i}(R_{mdt} - r_{fdt}) + \varepsilon_{idt} \tag{1}$$

where R_{idt} is the return on country-industry index i on day d in month t, R_{mdt} is the daily return on the world market index, and r_{fdt} is the risk-free rate represented by the one-month US Treasury Bill rate. The systematic risk, *BETA*, is the estimated regression coefficient $\hat{\beta}_{1i}$ from the World CAPM expressed in Eq. (1).

Tail risk is represented by two skewness measures as well as positive and negative extreme returns. Total skewness, *TSKEW*, is conditioned on the past one year of daily data, and in line with Bali, Cakici, and Whitelaw (2011), it is estimated as shown in Eq. (2)

$$TSKEW_{it} = \frac{1}{D_t} \sum_{d=1}^{D_t} \left(\frac{R_{id} - \mu_i}{\sigma_i} \right)^3 \tag{2}$$

where D_t shows the number of trading days extending from months t-12 to t-1, R_{id} indicates the return on index i on day d, μ_i is the mean of daily index returns from months t-12 to t-1, and σ_i shows the standard deviation of daily returns.

Idiosyncratic skewness, *ISKEW*, is the skewness of daily residuals, ε_{id}, from the model presented in Eq. (3) estimated using the daily data spanning the period from month t-12 to month t-1:

$$R_{id} - r_{fd} = \alpha_i + \beta_i(R_{md} - r_{fd}) + \gamma_i(R_{md} - r_{fd})^2 + \varepsilon_{id} \tag{3}$$

where R_{id} is the daily return on index i, R_{md} is the daily world market return, r_{fd} is the daily risk-free rate, and ε_{id} is the daily idiosyncratic return on day d. Finally, variables associated with extreme price movements are described as follows. *MAX* represents the maximum daily return within a month and is used as a proxy for upside risk (Bali et al., 2011). Similarly, *MIN* represents the negative of the minimum daily return within a month and is used as a proxy for downside risk.

Next, we proceed with constructing variables that aim to capture the widely documented size and value effects in asset returns. Monthly market capitalizations, *MV*, expressed in billion dollars are directly downloaded from Datastream as a measure of size. Moreover, *EP*, *DY*, and *EBITDA/EV* are used as the value measures. *EP* (earnings-to-price ratio) is the ratio of earnings per share to the share price; *DY* (dividend yield) is the dividend per share as a percentage of the share price; and

EBITDA/EV is the earnings before interest, taxes, depreciation, and amortization over enterprise value. The monthly values of *EP*, *DY*, and *EV/EBITDA* are directly obtained from Datastream.

Two variables are used to represent the momentum in returns over different time horizons. The intermediate-term momentum, *INTMOM*, is the cumulative monthly returns of the period covering months from *t*-12 to *t*-2. On the other hand, the short-term momentum, *STMOM*, is the cumulative monthly returns over the period covering months from *t*-6 to *t*-2.

We also account for profitability measures. In line with the study of Fama and French (2015), operating profitability, *OP*, is defined as the difference between the earnings before interest and taxes (*EBIT*) and interest over the book equity. For every June, *OP* is calculated by using the available data of the previous year's June. Each *OP* value calculated in June is kept constant until the next June when the new *OP* value is calculated with the release of new annual data. In other words, *OP* values are rebalanced annually every June. The return on equity, *ROE*, which is the net income divided by shareholders' equity, is also directly obtained from Datastream monthly. Earnings surprise, *ES*, is defined as the changes in analysts' estimates of earnings (Chan et al., 1996). Following Umutlu and Bengitöz (2020), monthly values of earnings surprise are computed by using 12-month forward earnings per share (*DIEP*) and price index (*PI*) values from Datastream as shown in Eq. (4). Datastream obtains *DIEP* values from the Institutional Brokers' Estimate System (I/B/E/S).

$$ES_t = \frac{\sum_{j=1}^{6}(DIEP_{t-j} - DIEP_{t-j-1})}{PI_{t-j-1}} \tag{4}$$

Finally, we construct two variables, namely investments (*INV*) and net share issuance (*NSI*), which were shown to affect stock returns negatively. Following the study of Fama and French (2015), investment is defined as the difference between the total assets from the June of year *t*-2 and the June of year *t*-1, which is divided by the total assets from the June of year *t*-2. Similar to *OP*, *INV* is also calculated in June of each year and kept constant until the next June. Fama and French (2008) define *NSI* as the change in the log of split-adjusted shares outstanding over a year as shown in Eq. (5).

$$ln(NSI_{t-k,t}) = ln\left(\frac{MV_t}{MV_{t-k}}\right) - ln\left(\frac{PI_t}{PI_{t-k}}\right) \tag{5}$$

where *MV* is the market value at month *t*, *PI* is the price index from Datastream. Since net share issuance is calculated over a year, *k* is taken as 12.

Table 1 shows the descriptive statistics of nineteen index attributes for six regions as well as the global market. The descriptive statistics are calculated by following a two-step procedure. In the first step, the monthly cross-sectional average of each index attribute across indexes is calculated. In the second step, the time-series averages of the cross-sectional means are calculated over the months in the whole sample period. More specifically, the standard deviation, maximum, and minimum values are calculated using the monthly time-series data of cross-sectional means.

< Table 1 here >

For each region, pairwise correlations between index attributes are presented in different panels of Table A.1 in the Online Appendix. The reported correlations are the time-series average of monthly cross-correlations between each variable pair. The results point out high correlations between the variables in combinations of *RANGE–SD–IVOL-MAX-MIN*, *EP-DY*, *INTMOM-STMOM*, and *OP-ROE* in all regions. Therefore, they are not included in the same regression specification simultaneously to avoid the potential multicollinearity problem in regression analyses.

3. Methodology

We use portfolio sorts and cross-sectional regressions to examine the predictive ability of index attributes for returns. In portfolio sorts, we rank the indexes in each region into quintile portfolios containing twenty percent of indexes for each month in the research period. The top quintile, quintile 5, contains the indexes with the highest values of the relevant index attribute and the bottom quintile includes the assets with the lowest values. Next, we calculate the equal- and value-weighted returns on quintiles in the subsequent month. Finally, we examine whether the average raw and risk-adjusted returns on the long-short portfolio that goes long the top and shorts the bottom portfolio are different from zero. Any nonzero raw or risk-adjusted return indicates a cross-sectional relation between the relevant index attribute and future returns.

Risk-adjusted returns, represented by Jensen alphas, are estimated from several asset-ricing models that account for the partially segmented/integrated nature of markets. Numerous aforementioned studies examining the cross-section of expected index returns implicitly assume

that markets are fully integrated and use the global versions of asset pricing models to estimate alphas. Different from those studies, we use regional asset pricing models to adjust returns for risk. The degree of integration of regions into the global market changes depending on region-specific properties such as stock market conditions, market regulations, and trade links among countries in a region. In regions that exhibit a higher degree of segmentation, regional factors play a more important role in the explanation of index returns whereas, in integrated regions, effects of global factors can dominate those of regional factors. In partially segmented/integrated regions, it is expected that both regional and global factors jointly affect returns. To address the partial segmentation/integration, some studies employ regional benchmark models that include both global and regional factors jointly in explaining index returns (Bekaert et al., 2009; Bekaert et al., 2014; Umutlu & Bengitöz, 2020). In line with these studies, we use regional versions of the CAPM, the Fama-French three-factor model (FF3), and the Fama-French-Carhart four-factor model (FFC4) to estimate whether there is a risk-adjusted return difference between top and bottom attribute portfolios. The regional version of the CAPM is formulated as in Eq. (6):

$$R_{5-1t} = \alpha_{CAPM} + \beta_W R_{Wt} + \beta_R R_{Rt} + \varepsilon_t \qquad (6)$$

where R_{5-1t} is the return difference between quintiles 5 and 1 in month t; R_{Wt} shows the excess return for the world market portfolio, represented by the Datastream World Market Index; R_{Rt} shows the regional return that is orthogonalized with respect to the world market return; ε_t shows the error term. The intercept coefficient (α_{CAPM}) indicates the abnormal return that is isolated from the effects of both global and regional risk factors. To obtain R_{Rt} that is orthogonal to R_{wt}, monthly excess returns on a regional index are regressed on the monthly returns on the world market portfolio using the data from the full sample period. The time-series residuals of this regression form the orthogonal regional returns and are denoted as R_{Rt} in Eq. (6). Monthly regional excess returns are the value-weighted averages of the country-industry indexes in the relevant region. Weights are based on market capitalizations from the previous month.

The next model used in risk adjustment is the regional version of the FF3 model as shown in Eq. (7):

$$R_{5-1t} = \alpha_{FF3} + \beta_W R_{Wt} + \beta_{WSMB} R_{WSMBt} + \beta_{WHML} R_{WHMLt} + \beta_R R_{Rt} + \beta_{RSMB} R_{RSMBt} + \beta_{RSMB} R_{RHMLt} + \varepsilon_t \qquad (7)$$

where R_{WSMBt} shows the world small-minus-big factor, defined as the return difference between the bottom and top market cap portfolios of country-industry indexes in all regions in month t; R_{WHMLt} shows the world high-minus-low factor, defined as the return difference between the top and bottom value portfolios formed based on earnings-to-price ratios of all country-industry indexes; R_{RSMBt} is the regional size factor that is orthogonal to R_{WSMBt}; R_{RHMLt} is the regional value factor that is orthogonal to R_{WHMLt}. To obtain regional factors that are orthogonal to their global counterparts, the regional *SMB* factor, which is constructed from country-industry indexes in a region, is regressed on the world *SMB* factor while the regional *HML* factor is regressed on the world *HML* factor over the months of the full research period. The residuals from these regressions are used as the regional orthogonal *SMB* and *HML* factors in Eq. (7).

Lastly, we augment the regional FF3 model with Carhart's (1997) momentum factor to form the regional FFC4 model shown in Eq. (8):

$$R_{5-1t} = \alpha_{FFC4} + \beta_W R_{Gt} + \beta_{WSMB} R_{WSMBt} + \beta_{WHML} R_{WHMLt} + \beta_{WWML} R_{WWMLt} + \beta_R R_{Rt} +$$
$$\beta_{RSMB} R_{RSMBt} + \beta_{RSMB} R_{RHMLt} + \beta_{RWML} R_{RWMLt} + \varepsilon_t \qquad (8)$$

where R_{WWMLt} is the world winner-minus-loser factor, which is the difference between the returns on quintile portfolios with the highest and lowest values of intermediate-term momentum; R_{RWMLt} is the regional orthogonalized momentum factor. Similarly, R_{RWMLt} is constructed using country-industry indexes in a region and is the residuals from the time-series regression of the regional *WML* factor on the world *WML* factor. The other variables of the regression equation are as previously defined.

Jensen's alphas obtained from the regional models are used to examine whether the long-short portfolio for the relevant index attribute provides significant abnormal risk-adjusted returns. Any nonzero alpha indicates that the relevant index attribute significantly affects future index returns after isolating the effects of systematic risk factors.

To examine a relationship between an index attribute and future returns, we also perform index-level cross-sectional regressions in the sense of Fama and MacBeth (1973), which allows controlling for several variables simultaneously. Different regression specifications including different combinations of variables are estimated. The general form of the regression model including all variables is represented by Eq. (9).

$$R_{it+1} = \beta_{0t} + \beta_{1t}RANGE_{it} + \beta_{2t}MAX_{it} + \beta_{3t}MIN_{it} + \beta_{4t}SD_{it}$$
$$+ \beta_{5t}IVOL_{it} + \beta_{6t}BETA_{it} + \beta_{7t}TSKEW_{it} + \beta_{8t}ISKEW_{it}$$
$$+ \beta_{9t}MV_{it} + \beta_{10} EP_{it} + \beta_{11} DY_{it} + \beta_{12t} EBITDA/EV_{it} \qquad (9)$$
$$+ \beta_{13} NTMOM_{it} + \beta_{14t}STMOM_{it} + \beta_{15t}OP_{it} + \beta_{16} ES_{it}$$
$$+ \beta_{17t}ROE_{it} + \beta_{18t}INV_{it} + \beta_{19t}NSI_{it} + \varepsilon_{it}$$

where R_{it+1} indicates the realized return on index i in month $t+1$ and all index attributes are from month t. Lastly, ε_{it} shows the error term. Index-level cross-sectional regressions are estimated for each month in the full sample period and each region separately and coefficient estimates are recorded. Then, we test whether the time-series averages of the coefficient estimates over the months are zero or not. Any significantly nonzero alpha indicates that the relevant index attribute has the predictive ability for returns.

4. Results

4.1. Equal-weighted portfolio sorts

Panels A to F in Table 2 show average raw returns as well as Jensen alphas from three regional models on equal-weighted long-short attribute portfolios for six different regions. The last panel, Panel G, presents the results for the global market portfolio. All t-statistics are adjusted for heteroscedasticity and autocorrelation in the sense of Newey and West (1987).

< Table 2 here >

The results for North America presented in Panel A show that the null hypothesis of mean returns on top (5) and bottom (1) portfolios are equal to each other is rejected for *MAX* and *MIN*. Long-short portfolios based on *MAX* and *MIN* generate significant raw excess returns of 0.0304 and -0.0305 with the corresponding t-statistics of 12.40 and -13.04, respectively. Jensen alphas from three models on these portfolios are also significantly different from zero at the 1% significance level, indicating that return differences between top and bottom portfolios remain significant even after controlling for risk factors. So, *MAX* and *MIN* effects in returns of North American portfolios are strong and persistent. Other index attributes that significantly and consistently predict equal-weighted portfolio returns are *MV*, *EP*, *INTMOM*, and *NSI*. 5-1 portfolios based on these index attributes yield not only significant raw returns but also Jensen alphas. We do not have significant or consistently significant results for the remaining index

attributes. Long-short portfolios based on the remaining attributes either produce no significant returns at all or provide some significant alphas that do not stay persistently significant across alternative risk models. (i.e., only α_{CAPM} is significant for *IVOL* while α_{FFC4} is the mere significant alpha for *ES*).

The results for European portfolios in Panel B provide evidence in favor of the existence of more return effects. First, all volatility measures (*RANGE, MAX, MIN, SD, IVOL*) provide highly significant raw and risk-adjusted returns indicating that they have predictive power for index returns. In addition to these variables, long-short portfolios based on *MV, EP, DY, INTMOM, STMOM, ISKEW, TSKEW, EBITDA/EV, NSI,* and *ROE* earn not only significant raw returns but also risk-adjusted returns, regardless of the model used to estimate Jensen alphas. Therefore, these variables also have the potential to influence the cross-section of European index returns. For the other variables, we do not find results that are significant for both raw and risk-adjusted returns.

The results for Asia-Pacific portfolios shown in Panel C are similar to those of European portfolios in the sense that *RANGE, MAX, MIN, SD, IVOL, MV, EP, DY, EBITDA/EV* are linked to index returns. Unlike Europe, *BETA* has predictive power for returns in Asia-Pacific. For the remaining index attributes not all raw and risk-adjusted returns are significantly different than zero.

As can be seen in Panels D and F, *RANGE, MAX, MIN, SD, IVOL, MV* are the common index attributes that consistently predict equal-weighted portfolio returns in South America and Japan, respectively. Additionally, *DY, EBITDA/EV, INV* are other return predictors in South America. Finally, Panel E indicates that *MAX, MIN, ISKEW, MV, EP, DY, EBITDA/EV,* and *STMOM* are significantly related to equal-weighted index returns in MENA.

To compare and contrast regional results to those of global results, we also apply portfolio sorting at the global level. Using all available country-industry portfolios across regions, we sort indexes on the attributes and form quintile portfolios. Different from regional analyses, we use global versions of asset-pricing models including global factors only to estimate alphas. Global analyses serve for two purposes. First, we want to compare the recent global-level results obtained in this study to the global results documented in Umutlu and Bengitöz (2021). Second, we want to figure out whether global results are representative for regional results. If this is the case, then there will be no need for regional analyses and global analyses will allow to make inferences for regions.

The recent global results reported in Panel G of Table 2 are very similar to the equal-weighted results in Umutlu and Bengitöz (2021) where an older research period is used. Both sets of results indicate that almost the same attributes are cross-sectionally related to equal-weighted portfolio returns. Another important point is that global results do not fully represent the results of any regions.

4.2. Value-weighted portfolio sorts

Table 3 presents the results from value-weighted portfolio sorts. The results for value-weighted North American portfolios presented in Panel A of Table 3 are similar to those of equal-weighted portfolios presented in Panel A of Table 2 in some respects. *MAX*, *MIN*, *MV*, and *INTMOM* are the common index attributes for both weighting schemes that are significantly associated with returns. However, there are some differences between the results of equal- and value-weighted portfolios as well. For instance, *RANGE* and *SD* are negatively related to value-weighted returns whereas they have no impact on equal-weighted portfolios. In addition, although *EP* and *NSI* are significant predictors of equal-weighted returns, they lose their predictive ability for value-weighted returns.

< Table 3 here >

The most striking result in Panel B of Table 3 showing the results for value-weighted portfolios is that the number of index attributes that are significantly linked to returns is remarkably lower for value-weighted portfolios as compared to equal-weighted portfolios. Only *MAX*, *MIN*, *BETA*, *MV*, *DY*, and *INTMOM* stay significant in predicting value-weighted returns while the number of significant return predictors goes up to sixteen for equal-weighted portfolios.

In Asia-Pacific, we detect a considerably lower number of significant return predictors for value-weighted portfolios again as can be seen in Panel C of Table 3. *MAX*, *MIN*, *BETA*, *MV*, *EP*, and *DY* predict both value- and equal-weighted returns jointly. However, *RANGE*, *SD*, *IVOL*, and *EBITDA/EV* that were shown to forecast equal-weighted returns in Panel C of Table 2 no longer predict returns when a value-weighting scheme is used.

Similarly, we report a fewer number of return predictors for value-weighted portfolios in the remaining regions. In South America *MAX*, *MIN*, *MV*, and *DY*; in MENA *RANGE*, *MAX*, *MIN*, and *MV*; in Japan *RANGE*, *MAX*, *MIN*, *SD*, *IVOL*, *MV*, and *EBITDA/EV* are the variables that significantly explain returns.

At the global level, as compared to equal-weighted portfolios, the list of return-signaling attributes is shorter for value-weighted portfolios. *MAX, MIN, BETA, MV, INTMOM, ES*, and *ROE*, consistently predict returns. This supports the global level results of Umutlu and Bengitöz (2021) showing that fewer attributes are cross-sectionally related to returns on value-weighted global portfolios whereas more attributes matter for equal-weighted returns. Similar to the results of equal-weighted portfolios in subsection 4.1, index-return predictors for value-weighted portfolios are not representative for regions. This verifies the importance of and the need for regional analyses. Region-specific results can be of interest to global investors who customize their trading strategy across regions.

In summary, in line with the results for equal-weighted portfolios, *MAX, MIN,* and *MV* effects in returns of value-weighted portfolios continue to exist for all regions as well as the global portfolio. So, these variables are strong index-return predictors that are common worldwide. Apart from these commonalities, there are remarkable differences in return predictors across regions as outlined above. The last point that is worth mentioning in the results of portfolio sorts is that fewer anomalous return patterns are observed for value-weighted portfolios. This indicates that exploitable abnormal return opportunities are more concentrated in equal-weighted portfolios, which are overrepresented by small indexes. Thus, in addition to geographic origin, size is another important factor that determines which index attributes affect returns.

4.3. Regional Cross-Sectional Regression Analysis

In portfolio-level analyses of the previous section, we examined the relationship between a certain index attribute and returns without controlling for the effects of other index attributes. In this section, we perform index-level cross-sectional regressions, which allow us to accommodate many control variables at the same time. As reported in Table A.1 of the Online Appendix, there are high correlations among the variables within the variable groups of volatility (*RANGE, MAX, MIN, SD,* and *IVOL)*, value (*EP* and *DY*), momentum (*INTMOM* and *STMOM*), skewness (*ISKEW* and *TSKEW*), and profitability (*OP* and *ROE*). Therefore, the variables in these groups are not included in the same regression specification simultaneously. In the base-case regression specifications, *EP, INTMOM, TSKEW,* and *OP* are used as the main indicators of value, momentum, skewness, and profitability, respectively. In robustness tests, the main variables are

replaced with their alternative counterparts, which are *DY*, *STMOM*, *ISKEW*, and *ROE*, to investigate whether the use of alternative variable definitions alters the results.

Table 4 presents the time-series averages of the slope coefficients from Fama and MacBeth's (1973) cross-sectional regressions and the corresponding adjusted t-statistics based on Newey and West (1987). In every panel of the table, the first five rows present the results for the regression specifications with fewer variables while the last five rows present the results for the specifications that also include *EBITDA/EV*, *ES*, *NSI*, *ROE*, *OP*, and *INV*. For the first five regression specifications, the longest research period starts from March 1974 and extends to July 2017. Although we have data from January 1973 for the variables in the first five regression specifications, *INTMOM* can be first measured in February 1974 by using the previous 12 months of monthly data. Therefore, the first predictive cross-sectional regressions can be estimated in March 1974. For the last five regressions specifications, the earliest start date is September 1985 because of the limited data availability of the added variables.

< Table 4 here >

In Panel A where the results of North America are presented, only *MAX*, *MIN*, and *INTMOM* have statistically significant slope coefficients in all regressions specifications. *BETA*, *MV*, *EP*, and *INV* have significant slopes in some of the specifications but they do not persistently carry nonzero slopes in all specifications and thus are not robust return predictors.

The results for Europe in Panel B demonstrate a similar situation observed in Panel A. The number of significant return predictors drops remarkably in regressions as compared to that in portfolio sorts. For Europe, *RANGE*, *SD*, *IVOL*, *MAX*, *MIN*, *EP*, and *INTMOM* are the robust return predictors with significant slopes in all regression specifications. Note that the number of significant return predictors was sixteen for equal-weighted indexes in portfolio sorts. The differences in results between regression analyses and portfolio sorts point out the important role of control variables in analyses.

The results for Asia-Pacific in Panel C indicate that all volatility measures (*RANGE*, *SD*, *IVOL*, *MAX*, and *MIN*) are significantly associated with returns. In addition, *EP* and *BETA* have significant slope estimates for almost all specifications. For the rest of the variables, there is not a notable significant effect that persistently survives across different specifications. For South American portfolios, *RANGE*, *SD*, *IVOL*, and *MAX* are the only variables with significant slopes

in all specifications as shown in Panel D. The results for MENA and Japan, shown in panels E and F respectively, are similar in the sense that all volatility measures except *RANGE* consistently predict returns.

Finally, global results in Panel G sketch a general picture about the average results across regions. All volatility measures including *RANGE*, as well as *EP*, *EBITDA/EV*, and *INTMOM* are the variables that have predictive ability in all the regression specifications they are included. It is not surprising to see that *SD*, *IVOL*, *MAX*, and *MIN* predict returns on global portfolios as these attributes signal returns for almost all regions. Other global return predictors such as *RANGE*, *EP*, *EBITDA/EV*, and *INTMOM* are likely to be the manifestation of the results of Europe and Asia-Pacific where the highest number of countries exist among all regions. As noted previously, reported coefficient estimates in Table 4 are the averages of cross-sectional regressions. The regions with the highest number countries will provide more country-industry observations in cross-sectional regressions. As a result, the estimates of global cross-sectional regressions will be more alike to the results of Europe and Asia-Pacific regions, which overwhelmingly provide more input data.

In short, the number of significant return predictors falls sharply in every region when control variables are included in regression analyses. Besides, return predictors are not common across all regions. Although some variables jointly predict returns in a few regions, the only variable that has a significant impact on returns in all regions is *MAX*. *SD* and *IVOL* effects are prevalent in all regions except North America. The *MIN* effect exists in all regions but South America. In addition, *RANGE* explains returns in Europe, Asia Pacific, and South America. Apart from these common predictors, there are also region-specific predictors. For instance, *INTMOM* is specific to North America and Europe while *EP* is specific to Europe. With *MAX*, *MIN*, and *INTMOM* anomalies, North America has the least number of anomalies. This suggests that North America is the most efficient region among all regions.

4.4. Further Tests

In this subsection, we not only perform robustness tests that account for different control variables but also conduct additional portfolio-level tests that consider potential restrictions on short selling and thus the applicability of long-short strategies.

4.4.1. Robustness Tests

As a robustness test, we use alternative definitions of some of the variables. For the value variable, we now use *DY* instead of *EP*. Intermediate momentum (*INTMOM*) is replaced with short-term momentum (*STMOM*). Total skewness (*TSKEW*) is substituted for idiosyncratic skewness (*ISKEW*). Finally, we use *ROE* rather than using *OP* as the profitability measure. Cross-sectional regressions are re-run with these alternative variables and results are presented in Table 5.

The results for North America shown in Panel A indicate that *MAX* and *MIN* remain significant after using alternative variables. The only difference between the results for North America in Table 4 and Table 5 is that the momentum variable used in Table 5 is no longer significant. So, intermediate-term momentum is a more powerful return predictor than short-term momentum in North America. The results for Europe in Tables 4 and 5 are almost the same. In both tables, *RANGE*, *SD*, *IVOL*, *MAX*, and *MIN* have significant slopes. Moreover, alternative variables of *DY* and *STMOM* stay significant like their counterparts in Table 4. A notable difference in Table 5 is that *ROE* positively affects returns whereas its counterpart (*OP*) in Table 4 is not associated with returns. Thus, among the two profitability measures, ROE carries more information about returns than *OP* for European portfolios. For Asia-Pacific, the results in Table 5 and Table 4 are qualitatively the same. More specifically, *RANGE*, *SD*, *IVOL*, *MAX*, and *MIN* are important return predictors for Asia-Pacific portfolios. We obtain very similar results for South America as well. *RANGE*, *SD*, *IVOL*, and *MAX* preserve their significant impact on returns. In addition, *MIN* starts to have a persistently significant effect after the inclusion of alternative variables. For Japan, we observe a few slight differences in the persistence of slope significance. Finally, we have exactly the same qualitative results for MENA and Global.

Overall, the results estimated with alternative variables are very similar to the ones obtained with the base-case variables and stay intact. Therefore, the main results are not sensitive to the alternative definitions of variables.

<Table 5 here>

4.4.2. Long-only Portfolios

A potential concern with the trading strategies on country-industry indexes that are used up to this point might be about their applicability. If country-industry indexes are investable, then the reported index performances in this study can be tracked by portfolio managers. As noted

previously, we use DS sector indexes as the basic international assets. DS equity indexes are market capitalization weighted, free float adjusted and constructed as broadly diversified and liquid tools to be used by portfolio managers and analysts for benchmarking and investing purposes at local, regional, and global levels (Thomson Reuters, 2015). A security must meet certain data requirements, including the availability of security IDs, enough price, volume, and shares outstanding information, as well as total and free float market capitalizations, in order to be included in an index. After this initial screening, remaining securities are then put through a liquidity test, which adds additional restrictions on free float market size, average daily traded value, daily trading frequency, and etc. The liquidity test aims to exclude illiquid, rarely traded, and micro sized securities from indexes. The assured liquidity of DS indexes makes them investable and convenient for implementable trading strategies.

Nevertheless, using a long-short trading method may still have certain shortcomings when there are limitations on short selling. It may be practically hard to find investable indexes on the short leg of the long-short strategies due to probable short selling limitations. Therefore, we also examine the performance of long-only portfolios. This exercise can have the additional advantage of reducing transaction costs and increasing the profitability of trading strategies as far as the long leg plays the major role in producing profits. This is indeed what we found in long-only portfolios whose results are presented in Tables A2 and A3 of the Online Appendix. Generally, we detect a higher number of profitable strategies. Moreover, both the economical and statistical significance of the profits increase. The largest increases in the number of profitable strategies are observed for North America, Japan, and South America. The results for Europe, Asia-Pacific, and MENA are not very sensitive to the use of long-only or long-short portfolios. This is also true at the global context where global rather than regional portfolios and asset-pricing models are used. Hence, even if long-only strategies are used, the main results either become stronger for some regions or remain intact for the rest.

5. Conclusion

In this study, we examine the cross-sectional relation between future index returns and nineteen index attributes across six regions. This study is the most comprehensive regional study in terms of the number of regions covered. Moreover, the predictive power of the return range is first tested in this study across several regions. In the estimation of risk-adjusted returns on long-short

portfolios, we use benchmark models that contain both global and regional factors to account for the partially segmented/integrated state of regions and the heterogeneity in the degree of segmentation across regions. Given that markets are not fully integrated yet, the results of this study can be an improvement over global studies that implicitly assume perfect integration and use global benchmark models.

The results are overviewed as follows. First, both geographic region and size of portfolios play a significant role in the relationship between a certain index attribute and returns. *MAX* and *MIN* are common return predictors in the cross-section of indexes from all regions. Apart from these two variables, there are region-specific return predictors. Standard deviation and idiosyncratic volatility forecast returns in Europe, Asia-Pacific, South America, MENA, and Japan, while the range is a return signal in Europe, Asia-Pacific, and South America after controlling for other return predictors. Intermediate-term momentum significantly relates to returns on North American and European portfolios. Finally, the earnings-to-price ratio is an index attribute that drives returns in Europe. Portfolio sorts indicate that these index attributes are more strongly linked to returns for small indexes.

The findings reported in this study provide valuable implications for global investors aiming to diversify their portfolios across industry indexes from several regions. Although there are a few common return predictors across geographical regions, the majority of return predictors differ in each region. These differences are likely to be driven by the heterogeneous degrees of market segmentation and market efficiency as well as structural differences among markets. Therefore, investors should customize their trading strategy on a regional basis for better exploitation of profit opportunities. The results of this study can help investors determine their asset allocation decision along two dimensions: regional and industrial origins. Investors can benefit from investing in industries with certain characteristics in certain regions. This can be practically achieved by trading ETFs and mutual funds that track regional industries. Alternatively, futures contracts that are written on such indexes can facilitate betting on the performance of underlying indexes. After improving their asset allocation decisions by identifying well-performing regional industries with certain attributes, portfolio managers can proceed with individual security selection in these regional industries.

6. References

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Table 1. Basic Statistics for Regions

This table shows the descriptive statistics of the nineteen index attributes for 19 industry indexes from 51 countries from six regions. The statistics are calculated by performing a two-step procedure. In the first step, cross-sectional averages of index attributes are calculated for each month. In the second step, the time-series averages of cross-sectional means are calculated over the months. Using the time-series data, the standard deviation, maximum, and minimum of the cross-sectional means are calculated for each index attribute. Panels A to F report the descriptive statistics for the regions of North America, Europe, Asia-Pacific, South America, MENA, and Japan, respectively. Panel G presents the results for the global portfolio. *RANGE* is the daily return range within a month. *MAX* is the maximum daily return within a month. *MIN* is the negative of the minimum daily return. *SD* is the standard deviation of returns. *IVOL* is the idiosyncratic volatility. *BETA* is the market beta from the ICAPM. *TSKEW* is the total skewness. *ISKEW* is the idiosyncratic skewness. *MV* is the market value in $US billions. *EP* is the earnings-to-price ratio. *DY* is the dividend yield. *EBITDA/EV* is the earnings before interest, taxes, depreciation, and amortization over enterprise value. *INTMOM* shows the intermediate-term momentum. *STMOM* is the short-term momentum. *OP* is the operating profitability. *ES* is the earnings surprise. *ROE* is the return on equity. *INV* is the investment. *NSI* is the net share issuance. The longest research period extends from January 1973 to July 2017, however, the start date changes across regions due to limited data availability.

	Panel A: North America				Panel B: Europe				Panel C: Asia-Pacific			
	Mean	Std. Dev.	Max	Min	Mean	Std. Dev.	Max	Min	Mean	Std. Dev.	Max	Min
RANGE	0.0007	0.0028	0.0493	0.0001	0.0010	0.0039	0.0770	0.0001	0.0016	0.0084	0.1691	0.0002
MAX	0.0004	0.0014	0.0228	0.00003	0.0005	0.0025	0.0508	0.0001	0.0009	0.0056	0.1204	0.0001
MIN	0.0003	0.0014	0.0265	0.00002	0.0004	0.0015	0.0262	0.0001	0.0007	0.0030	0.0487	0.0001
SD	0.0008	0.0031	0.0533	0.0001	0.0010	0.0039	0.0743	0.0001	0.0016	0.0083	0.1645	0.0002
IVOL	0.0006	0.0025	0.0449	0.0001	0.0010	0.0036	0.0693	0.0001	0.0016	0.0080	0.1565	0.0002
BETA	0.0122	0.0456	0.6699	-0.0007	0.0068	0.0282	0.6270	-0.0910	0.0059	0.0416	0.9405	-0.1080
TSKEW	0.0009	0.0070	0.1201	-0.0143	0.0013	0.0162	0.3202	-0.0507	0.0018	0.0282	0.5634	-0.0275
ISKEW	0.0011	0.0064	0.1027	-0.0203	0.0011	0.0102	0.1846	-0.0492	0.0019	0.0230	0.4567	-0.0300

Table 1. Basic Statistics for Regions (cont.)

	Panel A: North America				Panel B: Europe				Panel C: Asia-Pacific			
	Mean	Std. Dev.	Max	Min	Mean	Std. Dev.	Max	Min	Mean	Std. Dev.	Max	Min
MV	729.8432	900.2020	16686.0789	161.3723	43.6189	36.0451	464.7749	5.8354	25.1110	24.2985	153.5821	1.8564
EP	0.0009	0.0026	0.0443	0.0001	0.0011	0.0030	0.0533	0.0002	0.0010	0.0023	0.0401	0.0002
DY	0.0004	0.0013	0.0216	0.00004	0.0005	0.0014	0.0251	0.0001	0.0005	0.0013	0.0221	0.0001
EBITDA/EV	0.0027	0.0116	0.1955	-0.0002	0.0066	0.0341	0.5491	-0.0805	0.0030	0.0043	0.0356	-0.0001
INTMOM	0.0005	0.0018	0.0103	-0.0131	0.0004	0.0008	0.0030	-0.0049	0.0003	0.0007	0.0028	-0.0029
STMOM	0.0003	0.0015	0.0107	-0.0114	0.0002	0.0010	0.0119	-0.0048	0.0002	0.0005	0.0022	-0.0032
OP	0.0044	0.0202	0.3349	0.0003	0.0036	0.0120	0.1995	0.0002	0.0043	0.0163	0.2692	-0.0078
ES	0.0000	0.000001	0.000001	-0.00002	-0.0001	0.0026	0.0134	-0.0131	-0.0001	0.0010	0.0023	-0.0055
ROE	0.2215	0.9225	15.5907	0.0183	0.2748	1.0446	15.5500	-0.7867	0.4422	2.0150	32.2467	0.0310
INV	0.0082	0.0305	0.3459	-0.0001	0.0038	0.0051	0.0252	-0.0001	0.0054	0.0107	0.1734	0.0003
NSI	0.0018	0.0076	0.0971	-0.0008	0.0007	0.0024	0.0447	-0.0001	0.0011	0.0043	0.0829	-0.00005

Table 1. Basic Statistics for Regions (cont.)

	Panel D: South America				Panel E: MENA				Panel F: Japan			
	Mean	Std. Dev.	Max	Min	Mean	Std. Dev.	Max	Min	Mean	Std. Dev.	Max	Min
RANGE	0.0033	0.0152	0.2510	0.0002	0.0021	0.0066	0.0867	0.0002	0.0010	0.0063	0.1322	0.0001
MAX	0.0017	0.0072	0.1056	0.0001	0.0011	0.0034	0.0479	0.0001	0.0005	0.0040	0.0892	0.00003
MIN	0.0016	0.0082	0.1454	0.0001	0.0010	0.0032	0.0388	0.0001	0.0004	0.0023	0.0431	0.00002
SD	0.0034	0.0151	0.2454	0.0002	0.0023	0.0076	0.1033	0.0002	0.0011	0.0065	0.1361	0.0001
IVOL	0.0033	0.0147	0.2375	0.0002	0.0023	0.0074	0.0996	0.0002	0.0009	0.0051	0.1015	0.0001
BETA	0.0073	0.0591	0.3670	-0.8134	0.0130	0.0801	1.1726	-0.1990	0.0121	0.1111	2.4597	-0.0586
TSKEW	0.0046	0.0294	0.2423	-0.2623	-0.0001	0.0231	0.2205	-0.1134	0.0026	0.0204	0.4387	-0.0862
ISKEW	0.0072	0.0310	0.3578	-0.1308	0.0005	0.0261	0.3122	-0.1147	0.0029	0.0090	0.1929	-0.0191
MV	82.7960	36.1613	209.0000	19.5515	59.3342	92.3070	1241.7500	12.7057	480.9292	399.0396	6908.9474	125.8156
EP	0.0037	0.0118	0.1121	0.0002	0.0020	0.0038	0.0507	0.0004	0.0006	0.0028	0.0504	0.00005
DY	0.0021	0.0134	0.2135	0.0001	0.0007	0.0011	0.0159	0.0002	0.0002	0.0010	0.0181	0.00002
EBITDA/EV	0.0098	0.0358	0.4505	-0.0003	0.0034	0.0034	0.0454	-0.0002	0.0035	0.0170	0.2870	-0.00003
INTMOM	0.0003	0.0007	0.0030	-0.0011	0.0001	0.0003	0.0015	-0.0009	0.0007	0.0025	0.0088	-0.0161
STMOM	0.0002	0.0004	0.0023	-0.0011	0.0001	0.0002	0.0010	-0.0009	0.0004	0.0023	0.0157	-0.0169
OP	0.0047	0.0163	0.2328	-0.0009	0.0061	0.0126	0.1641	0.0009	0.0029	0.0156	0.2592	-0.0041
ES	0.3433	2.1082	19.2936	-0.0033	-0.00001	0.0001	0.0005	-0.0003	0.00003	0.0002	0.0022	-0.0002
ROE	0.3291	0.8142	6.6800	-0.3995	0.3685	0.5662	7.4100	0.0058	0.1210	0.5940	10.0641	-0.1828
INV	0.0059	0.0199	0.1495	-0.1050	0.0115	0.0173	0.2132	0.0002	0.0018	0.0039	0.0534	-0.0004
NSI	0.0005	0.0064	0.0101	-0.0853	0.0034	0.0245	0.3838	-0.0005	0.0004	0.0019	0.0342	-0.0001

Table 1. Basic Statistics for Regions (cont.)

	Panel G: Global			
	Mean	Std. Dev.	Max	Min
RANGE	0.0011	0.0048	0.0953	0.0001
MAX	0.0006	0.0030	0.0632	0.0001
MIN	0.0005	0.0018	0.0321	0.0001
SD	0.0011	0.0048	0.0940	0.0002
IVOL	0.0011	0.0044	0.0849	0.0001
BETA	0.0082	0.0393	0.8774	-0.0123
TSKEW	0.0015	0.0167	0.3466	-0.0334
ISKEW	0.0015	0.0111	0.2241	-0.0341
MV	70.2730	66.1069	1130.0199	13.3134
EP	0.0011	0.0028	0.0485	0.0002
DY	0.0005	0.0013	0.0234	0.0001
EBITDA/EV	0.0047	0.0108	0.1320	0.0003
INTMOM	0.0003	0.0006	0.0023	-0.0037
STMOM	0.0002	0.0006	0.0055	-0.0031
OP	0.0039	0.0150	0.2489	-0.0010
ES	0.0162	0.1146	1.1948	-0.0065
ROE	0.2537	0.7473	10.3689	-0.3304
INV	0.0052	0.0088	0.1123	0.0002
NSI	0.0010	0.0031	0.0520	0.0000

Table 2. Equal-Weighted Returns on Long-short Attribute Portfolios

For every month in the sample period, quintile portfolios are formed by sorting the country-industry indexes based on nineteen index attributes over the past month. Quintile 1 (5) includes the indexes with the lowest (highest) values for the relevant index attribute. The table reports the equal-weighted average raw (R_{Raw}) and risk-adjusted returns (alphas) for the long-short attribute portfolios, which go long the quintile 5 and short the quintile 1. The Jensen alphas for the regional long-short portfolios are estimated using the regional versions of the CAPM, the Fama-French 3-Factor Model, and the Fama-French-Carhart 4-Factor Model, which are denoted as α_{CAPM}, α_{FF3}, and α_{FFC4}, respectively. The alphas for the global portfolio presented in Panel G are obtained using the global versions of the above-mentioned asset-pricing models. The Newey-West (1987) adjusted t-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5% and 10% levels, respectively.

	Panel A: North America				Panel B: Europe			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0016	0.0016	0.0003	0.0006	0.0161***	0.0135***	0.0045*	0.0047**
	(0.63)	(0.94)	(0.18)	(0.31)	(4.39)	(5.06)	(1.93)	(2.06)
MAX	0.0304***	0.0300***	0.0287***	0.0292***	0.0629***	0.0605***	0.0524***	0.0522***
	(12.40)	(16.23)	(15.49)	(15.25)	(17.26)	(22.27)	(20.76)	(21.22)
MIN	-0.0305***	-0.0309***	-0.0321***	-0.0319***	-0.0422***	-0.0440***	-0.0508***	-0.0503***
	(-13.04)	(-17.87)	(-18.39)	(-17.20)	(-14.56)	(-19.58)	(-24.67)	(-24.00)
SD	0.0019	0.0019	0.0005	0.0007	0.0188***	0.0159***	0.0064***	0.0067***
	(0.69)	(1.06)	(0.28)	(0.36)	(4.83)	(5.68)	(2.64)	(2.85)
IVOL	0.0029	0.0034*	0.0009	0.0012	0.0184***	0.0161***	0.0062***	0.0065***
	(1.17)	(1.80)	(0.49)	(0.62)	(4.96)	(5.84)	(2.68)	(2.89)
BETA	-0.0001	-0.0015	-0.0006	-0.0004	-0.0032	-0.0068***	-0.0055**	-0.0051**
	(-0.05)	(-0.81)	(-0.36)	(-0.22)	(-1.28)	(-3.06)	(-2.42)	(-2.14)
TSKEW	-0.00001	-0.0005	-0.0007	-0.0002	0.0032**	0.0034**	0.0026*	0.0024*
	(-0.01)	(-0.34)	(-0.43)	(-0.15)	(2.28)	(2.47)	(1.90)	(1.77)
ISKEW	0.0012	0.0012	0.0015	0.0017	0.0036**	0.0037***	0.0030**	0.0025**
	(0.92)	(0.84)	(0.95)	(1.08)	(2.53)	(2.77)	(2.32)	(1.96)
MV	-0.0033*	-0.0050***	-0.0053***	-0.0049**	-0.0069***	-0.0087***	-0.0089***	-0.0090***
	(-1.76)	(-2.67)	(-2.80)	(-2.53)	(-3.76)	(-5.45)	(-5.28)	(-5.19)
EP	0.0038**	0.0043**	0.0040**	0.0040**	0.0077***	0.0071***	0.0052***	0.0058***
	(2.19)	(2.46)	(2.20)	(2.23)	(4.17)	(3.69)	(2.89)	(3.61)
DY	0.0012	0.0014	0.0016	0.0016	0.0072***	0.0072***	0.0065***	0.0074***
	(0.63)	(0.80)	(0.95)	(0.95)	(3.61)	(3.68)	(4.20)	(5.06)
EBITDA /EV	0.0007	0.0007	0.0005	0.0002	0.0079***	0.0082***	0.0058***	0.0055***
	(0.39)	(0.44)	(0.33)	(0.15)	(7.19)	(7.01)	(5.11)	(4.80)
INTMOM	0.0047**	0.0057***	0.0066***	0.0066***	0.0093***	0.0106***	0.0109***	0.0109***
	(2.18)	(2.71)	(3.31)	(3.31)	(3.45)	(4.19)	(4.42)	(4.42)
STMOM	-0.0003	0.0006	0.0007	-0.0019	0.0081***	0.0096***	0.0103***	0.0071***
	(-0.13)	(0.29)	(0.34)	(-1.00)	(3.34)	(4.09)	(4.29)	(3.15)
OP	-0.0010	-0.0011	-0.000001	-0.0003	0.0007	0.0002	0.0004	0.0003
	(-0.69)	(-0.76)	(-0.0004)	(-0.18)	(0.50)	(0.17)	(0.28)	(0.20)
ES	-0.0020	-0.0019	-0.0022	-0.0031*	0.0027*	0.0030**	0.0023*	0.0020
	(-1.18)	(-1.06)	(-1.03)	(-1.65)	(1.85)	(2.24)	(1.73)	(1.56)
ROE	-0.0009	-0.0010	0.0008	0.0003	0.0059***	0.0061***	0.0057***	0.0050***
	(-0.57)	(-0.56)	(0.40)	(0.19)	(3.79)	(4.03)	(3.37)	(3.18)
INV	-0.0005	-0.0004	0.0009	0.0011	-0.0023	-0.0025*	-0.0017	-0.0015
	(-0.30)	(-0.24)	(0.48)	(0.59)	(-1.58)	(-1.79)	(-1.32)	(-1.17)
NSI	-0.0035**	-0.0037***	-0.0036**	-0.0036**	-0.0024**	-0.0028***	-0.0023**	-0.0021*
	(-2.50)	(-2.68)	(-2.39)	(-2.42)	(-2.09)	(-2.59)	(-2.10)	(-1.81)

Table 2. Equal-Weighted Returns on Long-short Attribute Portfolios (cont.)

	Panel C: Asia-Pacific				Panel D: South America			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0206***	0.0176***	0.0107***	0.0114***	0.0384***	0.0326***	0.0163**	0.0158**
	(5.08)	(4.78)	(3.14)	(3.29)	(3.00)	(3.07)	(2.45)	(2.47)
MAX	0.0755***	0.0728***	0.0652***	0.0665***	0.0854***	0.0814***	0.0654***	0.0654***
	(18.19)	(19.60)	(20.13)	(19.58)	(8.13)	(9.21)	(11.38)	(11.54)
MIN	-0.0465***	-0.0486***	-0.0514***	-0.0516***	-0.0432***	-0.0474***	-0.0565***	-0.0567***
	(-12.16)	(-14.74)	(-17.36)	(-17.58)	(-3.72)	(-4.45)	(-8.40)	(-8.79)
SD	0.0237***	0.0202***	0.0126***	0.0134***	0.0439***	0.0381***	0.0210***	0.0207***
	(5.39)	(5.09)	(3.44)	(3.59)	(3.49)	(3.63)	(2.98)	(3.06)
IVOL	0.0233***	0.0202***	0.0126***	0.0134***	0.0439***	0.0384***	0.0215***	0.0211***
	(5.51)	(5.23)	(3.65)	(3.81)	(3.46)	(3.65)	(3.06)	(3.12)
BETA	-0.0040	-0.0063*	-0.0089***	-0.0080**	0.0022	-0.0004	-0.0039	-0.0028
	(-1.13)	(-1.92)	(-2.65)	(-2.34)	(0.20)	(-0.04)	(-0.61)	(-0.45)
TSKEW	0.0022	0.0022	0.0016	0.0014	-0.0015	-0.0016	-0.0018	-0.0012
	(0.98)	(0.99)	(0.62)	(0.48)	(-0.31)	(-0.31)	(-0.45)	(-0.31)
ISKEW	0.0027	0.0025	0.0019	0.0017	-0.0001	-0.0001	0.0011	0.0011
	(1.17)	(1.07)	(0.70)	(0.58)	(-0.01)	(-0.02)	(0.27)	(0.28)
MV	-0.0136***	-0.0144***	-0.0141***	-0.0147***	-0.0319**	-0.0329***	-0.0234**	-0.0227**
	(-6.04)	(-6.08)	(-6.01)	(-6.73)	(-2.53)	(-2.92)	(-2.36)	(-2.36)
EP	0.0083***	0.0091***	0.0105***	0.0097***	-0.0002	0.0009	0.0046	0.0049
	(2.89)	(3.09)	(3.51)	(3.25)	(-0.02)	(0.11)	(0.83)	(0.93)
DY	0.0081***	0.0090***	0.0096***	0.0106***	0.0096**	0.0100**	0.0109***	0.0110***
	(3.02)	(3.39)	(4.46)	(5.19)	(2.24)	(2.52)	(2.82)	(2.91)
EBITDA/EV	0.0081***	0.0081***	0.0081***	0.0082***	0.0165*	0.0146*	0.0128**	0.0121**
	(3.14)	(2.94)	(3.27)	(3.24)	(1.75)	(1.78)	(2.35)	(2.26)
INTMOM	-0.0003	0.0001	0.0030***	0.0030	-0.0070	-0.0066	0.0002	0.0002
	(-0.09)	(0.02)	(0.75)	(0.75)	(-0.65)	(-0.68)	(0.03)	(0.03)
STMOM	-0.0010	-0.0004	-0.0004	-0.0042	-0.0028	-0.0023	0.0068	0.0050
	(-0.28)	(-0.11)	(-0.11)	(-1.48)	(-0.31)	(-0.29)	(1.46)	(1.17)
OP	0.0019	0.0031	0.0037	0.0031	-0.0123	-0.0121	-0.0052	-0.0045
	(0.61)	(0.97)	(1.05)	(0.87)	(-1.17)	(-1.28)	(-0.69)	(-0.62)
ES	0.0045**	0.0046**	0.0029	0.0022	-0.0010	-0.0016	-0.0003	0.0005
	(2.11)	(2.22)	(1.18)	(0.80)	(-0.28)	(-0.46)	(-0.07)	(0.12)
ROE	0.0026	0.0035	0.0046***	0.0035	0.0006	0.0002	0.0035	0.0027
	(1.12)	(1.47)	(1.79)	(1.38)	(0.09)	(0.03)	(0.64)	(0.51)
INV	-0.0026	-0.0028	-0.0045*	-0.0043*	-0.0190*	-0.0190**	-0.0152**	-0.0144**
	(-1.21)	(-1.23)	(-1.92)	(-1.84)	(-1.78)	(-2.02)	(-2.23)	(-2.17)
NSI	-0.0020	-0.0029	-0.0032*	-0.0033*	0.0008	0.0005	-0.0005	0.0003
	(-1.14)	(-1.69)	(-1.73)	(-1.77)	(0.19)	(0.10)	(-0.11)	(0.08)

Table 2. Equal-Weighted Returns on Long-short Attribute Portfolios (cont.)

	Panel E: MENA				Panel F: Japan			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0047	-0.0013	-0.0051	-0.0030	0.0111***	0.0110***	0.0113***	0.0105***
	(0.74)	(-0.26)	(-0.97)	(-0.63)	(3.63)	(4.65)	(4.50)	(4.24)
MAX	0.0628***	0.0567***	0.0512***	0.0525***	0.0315***	0.0314***	0.0309***	0.0294***
	(10.78)	(12.23)	(11.05)	(11.55)	(10.38)	(12.45)	(11.66)	(11.82)
MIN	-0.0628***	-0.0673***	-0.0691***	-0.0670***	-0.0199***	-0.0203***	-0.0194***	-0.0196***
	(-9.53)	(-13.87)	(-14.32)	(-14.19)	(-7.17)	(-8.38)	(-7.32)	(-6.93)
SD	0.0107*	0.0037	0.0002	0.0025	0.0137***	0.0135***	0.0137***	0.0123***
	(1.69)	(0.78)	(0.05)	(0.53)	(4.28)	(5.39)	(5.42)	(4.90)
IVOL	0.0108*	0.0040	-0.0002	0.0019	0.0143***	0.0141***	0.0140***	0.0126***
	(1.67)	(0.82)	(-0.04)	(0.42)	(4.64)	(5.80)	(5.78)	(5.17)
BETA	-0.0015	-0.0043	-0.0042	-0.0036	0.0013	0.0005	0.0014	0.0002
	(-0.33)	(-1.00)	(-0.89)	(-0.80)	(0.47)	(0.21)	(0.60)	(0.06)
TSKEW	0.0076**	0.0072**	0.0059	0.0073*	-0.0013	-0.0013	-0.0016	-0.0013
	(1.98)	(2.03)	(1.51)	(1.93)	(-0.58)	(-0.59)	(-0.76)	(-0.62)
ISKEW	0.0074*	0.0069*	0.0064*	0.0080**	0.0001	0.0002	0.0001	0.0002
	(1.85)	(1.91)	(1.67)	(2.16)	(0.06)	(0.07)	(0.06)	(0.11)
MV	-0.0127***	-0.0152***	-0.0155***	-0.0160***	-0.0057***	-0.0063***	-0.0060***	-0.0068***
	(-3.60)	(-4.35)	(-4.29)	(-4.44)	(-2.56)	(-2.97)	(-2.82)	(-3.18)
EP	0.0082***	0.0088***	0.0065**	0.0072**	0.0028	0.0023	0.0019	0.0029
	(2.68)	(2.63)	(2.04)	(2.40)	(1.24)	(1.09)	(0.90)	(1.39)
DY	0.0140***	0.0153***	0.0147***	0.0147***	0.0038	0.0040	0.0038*	0.0044*
	(4.06)	(4.30)	(4.49)	(4.67)	(1.32)	(1.43)	(1.65)	(1.95)
EBITDA/EV	0.0091**	0.0104***	0.0099***	0.0096***	0.0015	0.0008	0.0007	0.0006
	(2.20)	(2.65)	(2.79)	(2.72)	(0.67)	(0.38)	(0.34)	(0.26)
INTMOM	0.0086*	0.0089**	0.0064	0.0064	-0.0003	0.0002	-0.0003	-0.0003
	(1.82)	(1.99)	(1.49)	(1.49)	(-0.12)	(0.05)	(-0.10)	(-0.10)
STMOM	0.0110**	0.0117***	0.0103***	0.0100***	0.0011	0.0015	0.0009	-0.0012
	(2.52)	(3.02)	(2.90)	(2.99)	(0.45)	(0.59)	(0.34)	(-0.53)
OP	0.0040	0.0030	0.0007	0.0007	0.0001	-0.0007	-0.0009	-0.0007
	(1.15)	(0.77)	(0.17)	(0.16)	(0.06)	(-0.34)	(-0.49)	(-0.38)
ES	-0.0031	-0.0032	-0.0012	-0.0012	0.0002	-0.0004	-0.0005	-0.0011
	(-0.72)	(-0.79)	(-0.30)	(-0.31)	(0.08)	(-0.16)	(-0.22)	(-0.47)
ROE	0.0047	0.0059	0.0079**	0.0075**	-0.0008	-0.0009	-0.0004	-0.0004
	(1.28)	(1.57)	(2.14)	(1.99)	(-0.39)	(-0.41)	(-0.22)	(-0.24)
INV	-0.0051	-0.0052	-0.0073	-0.0066	0.0024	0.0008	-0.0008	-0.0010
	(-1.14)	(-1.10)	(-1.48)	(-1.32)	(1.00)	(0.36)	(-0.39)	(-0.50)
NSI	-0.0061*	-0.0070**	-0.0047*	-0.0046	0.0011	0.0013	0.0006	-0.0001
	(-1.78)	(-2.28)	(-1.67)	(-1.64)	(0.62)	(0.66)	(0.30)	(-0.03)

Table 2. Equal-Weighted Returns on Long-short Attribute Portfolios (cont.)

	Panel G: Global			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0169***	0.0129***	0.0038**	0.0039**
	(5.05)	(5.04)	(2.01)	(2.01)
MAX	0.0676***	0.0640***	0.0558***	0.0560***
	(20.04)	(24.86)	(28.03)	(24.66)
MIN	-0.0455***	-0.0486***	-0.0554***	-0.0553***
	(-16.08)	(-21.99)	(-30.61)	(-30.43)
SD	0.0195***	0.0151***	0.0054***	0.0056***
	(5.39)	(5.62)	(2.77)	(2.75)
IVOL	0.0200***	0.0164***	0.0062***	0.0064***
	(5.83)	(6.11)	(3.42)	(3.39)
BETA	-0.0044**	-0.0083***	-0.0075***	-0.0076***
	(-2.00)	(-4.46)	(-4.10)	(-4.08)
TSKEW	0.0042***	0.0040***	0.0033***	0.0031**
	(3.92)	(3.44)	(2.83)	(2.51)
ISKEW	0.0045***	0.0043***	0.0041***	0.0038***
	(4.15)	(3.87)	(3.70)	(3.29)
MV	-0.0107***	-0.0117***	-0.0105***	-0.0108***
	(-6.79)	(-7.91)	(-7.51)	(-7.33)
EP	0.0075***	0.0078***	0.0053***	0.0056***
	(4.50)	(4.81)	(3.69)	(4.19)
DY	0.0067***	0.0074***	0.0061***	0.0068***
	(4.14)	(4.75)	(4.51)	(5.49)
EBITDA/EV	0.0089***	0.0092***	0.0069***	0.0067***
	(7.34)	(7.17)	(5.45)	(5.48)
INTMOM	0.0076***	0.0086***	0.0092***	0.0092***
	(2.91)	(3.50)	(3.71)	(3.71)
STMOM	0.0072***	0.0084***	0.0083***	0.0052***
	(3.01)	(3.62)	(3.69)	(2.71)
OP	-0.0002	-0.0002	0.0005	0.0004
	(-0.15)	(-0.16)	(0.50)	(0.33)
ES	0.0004	0.0007	0.0009	0.0003
	(0.30)	(0.52)	(0.60)	(0.20)
ROE	0.0043***	0.0049***	0.0047***	0.0039***
	(2.96)	(3.41)	(3.31)	(2.91)
INV	-0.0026*	-0.0030**	-0.0027	-0.0025
	(-1.67)	(-1.97)	(-1.64)	(-1.52)
NSI	-0.0019*	-0.0023**	-0.0022**	-0.0024***
	(-1.86)	(-2.52)	(-2.48)	(-2.77)

Table 3. Value-Weighted Returns on Long-short Attribute Portfolios

For every month in the sample period, quintile portfolios are formed by sorting the country-industry indexes based on nineteen index attributes over the past month. Quintile 1 (5) includes the indexes with the lowest (highest) values for the relevant index attribute. The table reports the value-weighted average raw (R_{Raw}) and risk-adjusted returns (alphas) for the long-short attribute portfolios, which go long the quintile 5 and short the quintile 1. The Jensen alphas for the regional long-short portfolios are estimated using the regional versions of the CAPM, the Fama-French 3-Factor Model, and the Fama-French-Carhart 4-Factor Model, which are denoted as α_{CAPM}, α_{FF3}, and α_{FFC4}, respectively. The alphas for the global portfolio presented in Panel G are obtained using the global versions of the above-mentioned asset-pricing models. The Newey-West (1987) adjusted t-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5% and 10% levels, respectively.

	Panel A: North America				Panel B: Europe			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	-0.0051**	-0.0054**	-0.0056**	-0.0058**	0.0077**	0.0048	-0.0004	-0.0004
	(-1.98)	(-2.54)	(-2.41)	(-2.46)	(1.99)	(1.53)	(-0.13)	(-0.14)
MAX	0.0223***	0.0214***	0.0209***	0.0211***	0.0490***	0.0460***	0.0409***	0.0408***
	(8.33)	(9.68)	(8.91)	(8.68)	(12.75)	(14.89)	(13.08)	(13.60)
MIN	-0.0314***	-0.0321***	-0.0321***	-0.0321***	-0.0447***	-0.0469***	-0.0509***	-0.0505***
	(-12.92)	(-15.62)	(-14.79)	(-14.00)	(-14.03)	(-17.73)	(-20.03)	(-19.61)
SD	-0.0046*	-0.0045**	-0.0048**	-0.0045**	0.0092**	0.0061*	0.0008	0.0009
	(-1.68)	(-2.11)	(-2.07)	(-1.93)	(2.20)	(1.91)	(0.25)	(0.29)
IVOL	-0.0006	-0.0004	-0.0019	-0.0012	0.0088**	0.0063*	0.0006	0.0006
	(-0.22)	(-0.21)	(-0.82)	(-0.50)	(2.17)	(1.94)	(0.19)	(0.19)
BETA	-0.0023	-0.0040*	-0.0035	-0.0031	-0.0033	-0.0061***	-0.0051**	-0.0049**
	(-0.91)	(-1.85)	(-1.58)	(-1.37)	(-1.34)	(-2.79)	(-2.25)	(-2.10)
TSKEW	-0.0007	-0.0015	-0.0002	0.0008	0.0001	-0.00002	0.0006	0.0009
	(-0.42)	(-0.82)	(-0.13)	(0.48)	(0.08)	(-0.01)	(0.34)	(0.46)
ISKEW	-0.0021	-0.0023	-0.0006	-0.0001	0.0002	0.0002	0.0015	0.0008
	(-1.14)	(-1.16)	(-0.27)	(-0.04)	(0.12)	(0.12)	(0.82)	(0.47)
MV	-0.0031*	-0.0046**	-0.0048***	-0.0044**	-0.0063***	-0.0078***	-0.0080***	-0.0082***
	(-1.65)	(-2.55)	(-2.59)	(-2.39)	(-3.05)	(-4.71)	(-4.64)	(-4.70)
EP	0.0026	0.0032***	0.0028	0.0031	0.0051**	0.0045**	0.0030	0.0040**
	(1.35)	(1.65)	(1.36)	(1.50)	(2.25)	(1.96)	(1.41)	(2.11)
DY	0.0005	0.00004	-0.0017	-0.0015	0.0062**	0.0059**	0.0058***	0.0072***
	(0.20)	(0.002)	(-0.83)	(-0.70)	(2.51)	(2.44)	(3.27)	(4.24)
EBITDA/EV	0.0017	0.0021	0.0005	-0.000004	0.0035**	0.0043***	0.0030**	0.0025*
	(0.84)	(0.99)	(0.24)	(-0.002)	(2.28)	(2.96)	(2.07)	(1.75)
INTMOM	0.0035	0.0042*	0.0046**	0.0046**	0.0068***	0.0083***	0.0093***	0.0093***
	(1.45)	(1.73)	(1.97)	(1.97)	(2.58)	(3.49)	(3.81)	(3.81)
STMOM	-0.0001	0.0010	0.0014	-0.0015	0.0027	0.0045**	0.0058**	0.0019
	(-0.06)	(0.43)	(0.57)	(-0.75)	(1.12)	(1.97)	(2.25)	(0.85)
OP	0.0022	0.0024	0.0029	0.0022	-0.0005	-0.0003	0.0005	0.0003
	(1.32)	(1.46)	(1.50)	(1.26)	(-0.34)	(-0.19)	(0.32)	(0.21)
ES	-0.0004	0.0003	0.0010	-0.0004	0.0027	0.0033**	0.0024	0.0017
	(-0.20)	(0.16)	(0.42)	(-0.19)	(1.56)	(2.02)	(1.37)	(1.02)
ROE	0.0001	-0.0001	0.0015	0.0010	0.0038**	0.0045***	0.0055***	0.0044***
	(0.03)	(-0.05)	(0.63)	(0.44)	(2.02)	(2.64)	(3.03)	(2.61)
INV	0.00002	0.0001	0.0012	0.0012	-0.0019	-0.0022	-0.0009	-0.0007
	(0.01)	(0.07)	(0.65)	(0.63)	(-1.17)	(-1.30)	(-0.57)	(-0.44)
NSI	-0.0041**	-0.0041**	-0.0031	-0.0036*	-0.0035**	-0.0045***	-0.0048***	-0.0043***
	(-2.03)	(-2.11)	(-1.47)	(-1.68)	(-2.36)	(-3.10)	(-3.05)	(-2.69)

Table 3. Value-Weighted Returns on Long-short Attribute Portfolios (cont.)

	Panel C: Asia-Pacific				Panel D: South America			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0079*	0.0051	0.0009	0.0025	0.0124	0.0077	0.0001	0.0004
	(1.85)	(1.16)	(0.19)	(0.54)	(1.37)	(1.03)	(0.02)	(0.08)
MAX	0.0564***	0.0535***	0.0481***	0.0497***	0.0669***	0.0632***	0.0509***	0.0509***
	(12.56)	(12.12)	(10.79)	(10.90)	(7.24)	(7.92)	(9.01)	(9.06)
MIN	-0.0522***	-0.0547***	-0.0561***	-0.0562***	-0.0463***	-0.0499***	-0.0515***	-0.0512***
	(-13.41)	(-15.63)	(-15.77)	(-15.81)	(-5.87)	(-6.86)	(-9.49)	(-9.73)
SD	0.0101**	0.0066	0.0011	0.0027	0.0196**	0.0146*	0.0061	0.0064
	(2.18)	(1.42)	(0.23)	(0.56)	(2.02)	(1.84)	(0.99)	(1.06)
IVOL	0.0108**	0.0076	0.0018	0.0035	0.0207**	0.0162*	0.0095	0.0096
	(2.37)	(1.63)	(0.38)	(0.72)	(2.06)	(1.95)	(1.40)	(1.43)
BETA	-0.0076*	-0.0100**	-0.0113**	-0.0107**	0.0052	0.0014	-0.0040	-0.0036
	(-1.83)	(-2.48)	(-2.51)	(-2.26)	(0.79)	(0.21)	(-0.67)	(-0.61)
TSKEW	-0.0006	-0.0005	-0.0011	-0.0008	-0.0036	-0.0039	-0.0014	-0.0014
	(-0.19)	(-0.16)	(-0.34)	(-0.24)	(-0.62)	(-0.61)	(-0.32)	(-0.31)
ISKEW	-0.0015	-0.0017	-0.0032	-0.0032	-0.0017	-0.0019	0.0008	0.0008
	(-0.50)	(-0.56)	(-0.95)	(-0.87)	(-0.31)	(-0.31)	(0.18)	(0.18)
MV	-0.0131***	-0.0138***	-0.0134***	-0.0143***	-0.0207**	-0.0225***	-0.0118***	-0.0119***
	(-5.55)	(-5.54)	(-5.37)	(-6.24)	(-2.20)	(-2.56)	(-2.75)	(-2.78)
EP	0.0082**	0.0088**	0.0115***	0.0109***	0.0033	0.0020	0.0011	0.0018
	(2.19)	(2.29)	(2.92)	(2.70)	(0.83)	(0.50)	(0.24)	(0.40)
DY	0.0093***	0.0101***	0.0096***	0.0113***	0.0087**	0.0084**	0.0071*	0.0074**
	(2.76)	(2.82)	(3.35)	(3.92)	(2.35)	(2.31)	(1.95)	(2.01)
EBITDA/EV	0.0063*	0.0055	0.0048	0.0052	0.0050	0.0041	0.0057	0.0057
	(1.83)	(1.58)	(1.29)	(1.36)	(1.63)	(1.20)	(1.51)	(1.49)
INTMOM	-0.0013	-0.0006	0.0012	0.0012	0.0038	0.0031	0.0072	0.0072
	(-0.34)	(-0.15)	(0.26)	(0.26)	(0.58)	(0.43)	(1.21)	(1.21)
STMOM	-0.0038	-0.0034	-0.0033	-0.0082**	-0.0056	-0.0051	0.0061	0.0034
	(-1.03)	(-0.90)	(-0.77)	(-2.40)	(-0.59)	(-0.60)	(1.19)	(0.72)
OP	0.0003	0.0012	0.0027	0.0025	0.0025	0.0019	0.0030	0.0029
	(0.07)	(0.33)	(0.73)	(0.65)	(0.56)	(0.39)	(0.55)	(0.58)
ES	0.0035	0.0038*	0.0023	0.0007	-0.0019	-0.0024	-0.0001	0.0006
	(1.59)	(1.68)	(0.81)	(0.24)	(-0.49)	(-0.61)	(-0.01)	(0.14)
ROE	0.0015	0.0016	0.0015	0.0009	-0.0004	-0.0003	0.0020	0.0010
	(0.61)	(0.62)	(0.51)	(0.32)	(-0.07)	(-0.05)	(0.46)	(0.24)
INV	-0.0008	-0.0014	-0.0025	-0.0024	-0.0028	-0.0034	-0.0044	-0.0044
	(-0.36)	(-0.56)	(-0.96)	(-0.90)	(-0.48)	(-0.61)	(-0.74)	(-0.77)
NSI	-0.0026	-0.0035	-0.0024	-0.0023	0.0017	0.0015	0.0026	0.0034
	(-1.27)	(-1.57)	(-1.05)	(-0.96)	(0.43)	(0.36)	(0.59)	(0.81)

Table 3. Value-Weighted Returns on Long-short Attribute Portfolios (cont.)

	Panel E: MENA				Panel F: Japan			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	-0.0031	-0.0099*	-0.0113**	-0.0095*	0.0097***	0.0095***	0.0097***	0.0092***
	(-0.43)	(-1.72)	(-2.02)	(-1.79)	(2.87)	(3.64)	(3.82)	(3.58)
MAX	0.0597***	0.0528***	0.0486***	0.0505***	0.0288***	0.0286***	0.0282***	0.0268***
	(8.56)	(9.82)	(8.23)	(9.08)	(8.76)	(10.98)	(10.34)	(10.06)
MIN	-0.0681***	-0.0723***	-0.0730***	-0.0712***	-0.0191***	-0.0195***	-0.0189***	-0.0193***
	(-10.93)	(-14.11)	(-14.16)	(-14.01)	(-7.02)	(-7.93)	(-7.76)	(-7.64)
SD	0.0062	-0.0013	-0.0021	0.0005	0.0127***	0.0123***	0.0129***	0.0120***
	(0.80)	(-0.22)	(-0.38)	(0.09)	(3.55)	(4.82)	(5.00)	(4.56)
IVOL	0.0052	-0.0025	-0.0044	-0.0018	0.0122***	0.0118***	0.0121***	0.0111***
	(0.63)	(-0.41)	(-0.76)	(-0.34)	(3.44)	(4.61)	(4.58)	(4.10)
BETA	0.0012	-0.0014	-0.0007	0.00005	0.0021	0.0011	0.0024	0.0010
	(0.24)	(-0.30)	(-0.16)	(0.01)	(0.68)	(0.39)	(0.89)	(0.36)
TSKEW	0.0076	0.0067	0.0039	0.0049	-0.0021	-0.0022	-0.0019	-0.0016
	(1.48)	(1.44)	(0.81)	(1.10)	(-0.89)	(-0.91)	(-0.81)	(-0.69)
ISKEW	0.0063	0.0055	0.0035	0.0047	0.0003	0.0002	0.0004	0.0004
	(1.24)	(1.22)	(0.73)	(1.08)	(0.11)	(0.06)	(0.15)	(0.16)
MV	-0.0072*	-0.0094**	-0.0091**	-0.0093**	-0.0048**	-0.0054***	-0.0051***	-0.0059***
	(-1.93)	(-2.53)	(-2.35)	(-2.41)	(-2.34)	(-2.70)	(-2.57)	(-2.97)
EP	0.0033	0.0030	0.0006	0.0007	0.0023	0.0019	0.0016	0.0030
	(0.87)	(0.84)	(0.16)	(0.18)	(0.94)	(0.80)	(0.61)	(1.21)
DY	0.0081*	0.0084*	0.0068*	0.0054	0.0043	0.0047*	0.0028	0.0033
	(1.70)	(1.93)	(1.82)	(1.48)	(1.47)	(1.65)	(1.26)	(1.47)
EBITDA/EV	0.0023	0.0021	0.0015	0.0009	0.0040*	0.0037*	0.0044*	0.0040*
	(0.53)	(0.57)	(0.42)	(0.25)	(1.77)	(1.68)	(1.91)	(1.75)
INTMOM	0.0087	0.0079	0.0051	0.0051	-0.0002	0.0001	-0.0005	-0.0005
	(1.52)	(1.51)	(0.99)	(0.99)	(-0.06)	(0.02)	(-0.15)	(-0.15)
STMOM	0.0088**	0.0086**	0.0061	0.0061*	0.0010	0.0011	0.0010	-0.0008
	(2.18)	(2.16)	(1.59)	(1.67)	(0.35)	(0.39)	(0.33)	(-0.30)
OP	0.0020	0.0008	-0.0015	-0.0013	0.0002	-0.0007	-0.0009	-0.0007
	(0.50)	(0.19)	(-0.32)	(-0.28)	(0.10)	(-0.30)	(-0.45)	(-0.34)
ES	-0.0017	-0.0010	0.0004	0.0004	0.00004	-0.0008	-0.0009	-0.0016
	(-0.36)	(-0.22)	(0.09)	(0.10)	(0.01)	(-0.29)	(-0.34)	(-0.65)
ROE	0.0056	0.0050	0.0072*	0.0076*	-0.0006	-0.0012	-0.0004	-0.0005
	(1.31)	(1.25)	(1.77)	(1.84)	(-0.28)	(-0.51)	(-0.19)	(-0.28)
INV	-0.0070*	-0.0061	-0.0072	-0.0066	0.0011	-0.0005	-0.0009	-0.0011
	(-1.69)	(-1.42)	(-1.47)	(-1.35)	(0.45)	(-0.19)	(-0.35)	(-0.42)
NSI	-0.0057*	-0.0060*	-0.0045	-0.0044	0.0014	0.0013	0.0002	-0.0005
	(-1.65)	(-1.81)	(-1.35)	(-1.29)	(0.61)	(0.59)	(0.07)	(-0.21)

Table 3. Value-Weighted Returns on Long-short Attribute Portfolios (cont.)

	Panel G: Global			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0037	-0.0010	-0.0058**	-0.0055*
	(0.91)	(-0.32)	(-2.09)	(-1.88)
MAX	0.0434***	0.0393***	0.0360***	0.0362***
	(11.43)	(13.66)	(13.53)	(12.68)
MIN	-0.0460***	-0.0493***	-0.0529***	-0.0528***
	(-15.89)	(-21.59)	(-23.25)	(-23.02)
SD	0.0057	0.0006	-0.0045	-0.0045
	(1.32)	(0.18)	(-1.57)	(-1.46)
IVOL	0.0068*	0.0034	-0.0048	-0.0051*
	(1.71)	(1.02)	(-1.63)	(-1.71)
BETA	-0.0053**	-0.0090***	-0.0057***	-0.0057***
	(-2.25)	(-4.18)	(-2.80)	(-2.67)
TSKEW	0.0002	-0.0009	0.0016	0.0021
	(0.09)	(-0.49)	(0.85)	(1.18)
ISKEW	0.0018	0.0009	0.0040**	0.0039**
	(1.05)	(0.50)	(2.33)	(2.31)
MV	-0.0094***	-0.0101***	-0.0083***	-0.0084***
	(-5.30)	(-5.77)	(-5.54)	(-5.31)
EP	0.0051**	0.0054**	-0.0001	0.0005
	(2.18)	(2.26)	(-0.06)	(0.24)
DY	0.0040*	0.0052**	0.0012	0.0016
	(1.82)	(2.41)	(1.02)	(1.29)
EBITDA/EV	0.0044**	0.0049***	0.0005	0.0000
	(2.48)	(2.77)	(0.33)	(-0.02)
INTMOM	0.0053*	0.0062**	0.0068**	0.0068**
	(1.79)	(2.17)	(2.34)	(2.34)
STMOM	0.0046*	0.0058**	0.0052*	0.0008
	(1.68)	(2.20)	(1.83)	(0.35)
OP	0.0034**	0.0039**	0.0034**	0.0028*
	(1.98)	(2.18)	(1.96)	(1.76)
ES	-0.0043**	-0.0042**	-0.0048**	-0.0054***
	(-2.36)	(-2.26)	(-2.32)	(-2.69)
ROE	0.0046**	0.0058***	0.0051***	0.0038**
	(2.04)	(2.61)	(2.63)	(2.21)
INV	-0.0009	-0.0020	0.0006	0.0004
	(-0.47)	(-1.08)	(0.33)	(0.24)
NSI	-0.0014	-0.0026*	-0.0033*	-0.0038**
	(-0.89)	(-1.69)	(-1.88)	(-2.10)

Table 4. Cross-Sectional Regressions for Regional and Global Portfolios

For each month in the sample period, the return on country-industry indexes is regressed on the previous month's return range (*RANGE*), standard deviation (*SD*), idiosyncratic volatility (*IVOL*), maximum daily return (*MAX*), the negative of minimum daily return (*MIN*), market beta (*BETA*), the natural logarithm of the market capitalization value in $US billions (*MV*), earnings-to-price ratio (*EP*), intermediate-term momentum (*INTMOM*), total skewness (*TSKEW*), the earnings before interest, taxes, depreciation, and amortization over enterprise value (*EBITDA/EV*), earnings surprise (*ES*), net share issuance (*NSI*), operating profitability (*OP*), and investments (*INV*). For the first five regression specifications, the longest research period starts from March 1974. For regression specifications presented in the last five rows, the longest research period starts from September 1985 as the data for *EBITDA/EV, ES, NSI, OP,* and *INV* are available from this date and on. Panels A to F show the results for specific regions. Panel G presents the results for the global portfolio. The time-series averages of the slope coefficients and R-square values are reported in the table. The Newey-West (1987) t-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively.

Panel A: North America

RANGE	SD	IVOL	MAX	MIN	BETA	TSKEW	MV	EP	INTMOM	EBITDA/EV	OP	ES	INV	NSI	R^2
-0.0185 (-0.41)					0.0034* (1.67)	-0.0007 (-0.64)	-0.0009** (-2.23)	0.0255 (1.45)	0.0147*** (3.67)						0.4171
	0.0138 (0.27)				0.0034 (1.51)	-0.0004 (-0.33)	-0.0007* (-1.74)	0.0262 (1.48)	0.0146*** (3.60)						0.4208
		0.0211 (0.48)			0.0013 (0.77)	-0.0006 (-0.62)	-0.0007* (-1.85)	0.0260 (1.51)	0.0142*** (3.53)						0.4177
			1.3197*** (20.02)		-0.0142*** (-6.59)	-0.0013 (-1.06)	0.0019*** (4.98)	0.0624*** (3.68)	0.0184*** (4.88)						0.4494
				-1.5533*** (-25.19)	0.0180*** (9.61)	-0.0003 (-0.29)	-0.0031*** (-7.58)	-0.0114 (-0.60)	0.0098** (2.25)						0.4658
0.0142 (0.25)					0.0002 (0.07)	-0.0004 (-0.29)	0.0003 (0.63)	0.0391 (1.26)	0.0172*** (3.49)	-0.0034 (-0.31)	-0.0037 (-0.80)	-10.4090 (-1.12)	-0.0016 (-0.63)	0.0025 (0.39)	0.5772
	0.0354 (0.58)				0.0005 (0.16)	-0.0005 (-0.35)	0.0004 (0.85)	0.0325 (1.06)	0.0172*** (3.51)	-0.0021 (-0.18)	-0.0041 (-0.92)	-11.2886 (-1.20)	-0.0027 (-1.07)	0.0032 (0.50)	0.5790
		0.0370 (0.70)			-0.0007 (-0.30)	-0.0004 (-0.28)	0.0004 (0.83)	0.0332 (1.08)	0.0170*** (3.46)	-0.0021 (-0.19)	-0.0043 (-0.96)	-12.7421 (-1.35)	-0.0029 (-1.12)	0.0035 (0.55)	0.5780
			1.3201*** (16.97)		-0.0176*** (-6.49)	-0.0003 (-0.23)	0.0019*** (4.36)	0.0914*** (3.24)	0.0203*** (4.19)	-0.0020 (-0.17)	0.0018 (0.37)	-12.8853 (-1.34)	-0.0054* (-2.20)	0.0087 (1.34)	0.5994
				-1.5753*** (-19.44)	0.0181*** (7.19)	-0.0005 (-0.39)	-0.0014*** (-2.79)	-0.0220 (-0.73)	0.0129*** (2.61)	0.0035 (0.37)	-0.0071 (-1.48)	-8.3448 (-0.90)	0.0030 (1.09)	-0.0094 (-1.62)	0.6146

Table 4. Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel B: Europe

RANGE	SD	IVOL	MAX	MIN	BETA	TSKEW	MV	EP	INTMOM	EBITDA /EV	OP	ES	INV	NSI	R^2
0.1678*** (5.26)					-0.0015 (-1.02)	-0.0006 (-1.34)	0.0002 (0.80)	0.0314*** (4.03)	0.0143*** (6.22)						0.2041
	0.2296*** (5.98)				-0.0020 (-1.31)	-0.0007 (-1.49)	0.0006** (2.00)	0.0287*** (3.66)	0.0146*** (6.61)						0.2164
		0.2294*** (6.08)			-0.0016 (-1.15)	-0.0007 (-1.47)	0.0006** (2.02)	0.0282*** (3.61)	0.0146*** (6.67)						0.2161
			1.1928*** (23.41)		-0.0104*** (-6.59)	-0.0018*** (-3.78)	0.0036*** (12.68)	0.0190*** (2.19)	0.0148*** (5.57)						0.2757
				-1.0201*** (-24.81)	0.0076*** (5.07)	0.0002 (0.44)	-0.0042*** (-12.83)	0.0525*** (6.15)	0.0118*** (4.32)						0.2444
0.1184*** (3.37)					-0.0016 (-0.90)	-0.0006 (-1.01)	-0.0003 (-0.68)	0.0380*** (3.16)	0.0137*** (5.41)	0.0107** (2.25)	0.0001 (0.02)	0.3479 (0.77)	-0.0003 (-0.35)	-0.0010 (-0.47)	0.2300
	0.1519*** (3.56)				-0.0020 (-1.05)	-0.0008 (-1.33)	0.00005 (0.12)	0.0402*** (3.47)	0.0137*** (5.58)	0.0097** (2.02)	-0.0008 (-0.35)	0.3916 (0.84)	-0.0003 (-0.34)	-0.0009 (-0.42)	0.2398
		0.1547*** (3.78)			-0.0026 (-1.55)	-0.0008 (-1.29)	0.0001 (0.19)	0.0408*** (3.53)	0.0137*** (5.62)	0.0098** (2.02)	-0.0008 (-0.35)	0.3783 (0.79)	-0.0004 (-0.38)	-0.0008 (-0.37)	0.2390
			1.2888*** (23.35)		-0.0152*** (-7.71)	-0.0020*** (-2.93)	0.0036*** (9.45)	0.0367*** (2.68)	0.0140*** (4.90)	0.0042 (0.88)	-0.0039* (-1.95)	0.2346 (0.46)	0.0006 (0.64)	-0.0022 (-1.31)	0.2992
				-1.2283*** (-24.49)	0.0120*** (6.34)	0.0001 (0.11)	-0.0045*** (-11.23)	0.0290** (2.14)	0.0119*** (4.47)	0.0195*** (4.20)	0.0056** (1.98)	0.4465 (1.00)	-0.0009 (-0.86)	0.0004 (0.18)	0.2812

Table 4. Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel C: Asia-Pacific

RANGE	SD	IVOL	MAX	MIN	BETA	TSKEW	MV	EP	INTMOM	EBITDA/EV	OP	ES	INV	NSI	R^2
0.1784*** (5.46)					-0.0024 (-1.56)	-0.0003 (-0.31)	-0.0009** (-2.01)	0.0649*** (3.46)	0.0034 (0.84)						0.2748
	0.2413*** (6.36)				-0.0029* (-1.92)	-0.0006 (-0.73)	-0.0006 (-1.35)	0.0654*** (3.53)	0.0038 (0.96)						0.2833
		0.2387*** (6.37)			-0.0024 (-1.60)	-0.0006 (-0.69)	-0.0006 (-1.35)	0.0655*** (3.56)	0.0039 (0.99)						0.2832
			0.9846*** (17.38)		-0.0084*** (-5.34)	-0.0021** (-2.41)	0.0011*** (2.63)	0.0510*** (2.79)	0.0042 (1.16)						0.3160
				-0.7556*** (-16.70)	0.0057*** (3.77)	0.0019** (2.08)	-0.0036*** (-8.73)	0.0713*** (4.00)	0.0047 (1.12)						0.2909
0.1143*** (3.44)					-0.0041** (-2.24)	-0.0002 (-0.23)	-0.0002 (-0.30)	0.0500** (2.12)	0.0111*** (3.16)	-0.0004 (-0.04)	-0.0035 (-0.73)	14.8144 (1.00)	-0.0005 (-0.20)	0.0017 (0.31)	0.3322
	0.1364*** (3.68)				-0.0043** (-2.37)	-0.0003 (-0.31)	0.00002 (0.04)	0.0518** (2.28)	0.0119*** (3.54)	-0.0043 (-0.41)	-0.0035 (-0.73)	12.5235 (0.80)	0.0005 (0.25)	0.0027 (0.51)	0.3366
		0.1375*** (3.73)			-0.0048*** (-2.78)	-0.0002 (-0.21)	-0.00001 (-0.01)	0.0499** (2.18)	0.0117*** (3.52)	-0.0045 (-0.44)	-0.0036 (-0.76)	12.9455 (0.82)	0.0006 (0.31)	0.0027 (0.50)	0.3362
			0.9764*** (17.45)		-0.0126*** (-6.82)	-0.0028*** (-2.80)	0.0019*** (3.71)	0.0399 (1.59)	0.0124*** (3.60)	0.0003 (0.03)	-0.0011 (-0.27)	18.6313 (1.39)	-0.0019 (-1.06)	-0.0017 (-0.32)	0.3712
				-0.8756*** (-13.58)	0.0047** (2.33)	0.0021** (2.06)	-0.0027*** (-4.77)	0.0500* (1.84)	0.0096*** (2.67)	0.0048 (0.39)	-0.0053 (-1.14)	7.5070 (0.63)	0.0007 (0.30)	0.0065 (1.22)	0.3614

Table 4. Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel D: South America

RANGE	SD	IVOL	MAX	MIN	BETA	TSKEW	MV	EP	INTMOM	EBITDA/EV	OP	ES	INV	NSI	R^2
0.4181*** (2.99)					0.0045 (0.71)	-0.0091 (-1.26)	-0.0041 (-1.03)	0.0086 (0.14)	0.0004 (0.06)						0.3593
	0.5215*** (2.97)				0.0041 (0.64)	-0.0105 (-1.29)	-0.0039 (-0.97)	-0.0021 (-0.03)	0.0009 (0.11)						0.3736
		0.5348*** (2.70)			0.0078 (1.06)	-0.0104 (-1.28)	-0.0036 (-0.95)	0.0019 (0.03)	0.0010 (0.13)						0.3731
			1.3395*** (12.76)		-0.0106*** (-2.94)	-0.0088* (-1.73)	-0.0012 (-0.27)	-0.0079 (-0.12)	-0.0005 (-0.05)						0.4185
				-0.5658 (-1.36)	0.0177*** (2.58)	-0.0131 (-1.15)	-0.0072** (-2.39)	0.0273 (0.69)	0.0047 (1.03)						0.3758
0.2216*** (2.94)					-0.0036 (-1.05)	-0.0023 (-1.47)	-0.0006 (-0.56)	0.0345 (1.45)	0.0032 (0.57)	0.0355 (1.56)	-0.0014 (-0.15)	-0.1198 (-0.28)	0.0021 (0.55)	0.0117* (1.70)	0.5327
	0.3129*** (3.30)				-0.0068* (-1.76)	-0.0027* (-1.77)	-0.0001 (-0.09)	0.0336 (1.34)	0.0045 (0.82)	0.0249 (1.20)	0.0026 (0.25)	-0.2940 (-0.57)	0.0032 (0.82)	0.0057 (0.85)	0.5405
		0.2846*** (3.25)			-0.0024 (-0.76)	-0.0027* (-1.83)	0.0001 (0.05)	0.0311 (1.25)	0.0042 (0.77)	0.0221 (1.08)	0.0032 (0.30)	-0.2094 (-0.44)	0.0030 (0.78)	0.0068 (1.01)	0.5399
			1.5627*** (13.19)		-0.0164*** (-4.62)	-0.0054*** (-3.16)	0.0022*** (2.57)	0.0068 (0.31)	0.0056 (0.98)	0.0123 (0.79)	-0.0069 (-0.86)	0.2439 (0.65)	0.0005 (0.13)	0.0127 (1.64)	0.5707
				-1.3550*** (-13.84)	0.0176*** (5.45)	-0.0014 (-0.89)	-0.0037*** (-3.44)	0.0513** (2.11)	0.0031 (0.48)	0.0649** (2.43)	-0.0038 (-0.46)	-0.2594 (-0.67)	0.0008 (0.19)	-0.0050 (-0.68)	0.5575

Table 4. Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel E: MENA

RANGE	SD	IVOL	MAX	MIN	BETA	TSKEW	MV	EP	INTMOM	EBITDA/EV	OP	ES	INV	NSI	R^2
0.1368** (2.32)					0.0012 (0.42)	0.0001 (0.10)	-0.0012 (-1.53)	0.0795*** (4.32)	0.0114*** (2.71)						0.3045
	0.1906*** (3.15)				0.0010 (0.32)	0.0004 (0.36)	-0.0011 (-1.50)	0.0806*** (4.33)	0.0126*** (3.12)						0.3159
		0.1867*** (3.05)			0.0012 (0.38)	0.0004 (0.41)	-0.0011 (-1.46)	0.0820*** (4.41)	0.0125*** (3.11)						0.3159
			1.2507*** (13.44)		-0.0071*** (-2.66)	-0.0006 (-0.64)	0.0010 (1.29)	0.0745*** (3.18)	0.0137*** (3.27)						0.3612
				-1.0375*** (-10.57)	0.0067** (2.18)	0.0006 (0.66)	-0.0040*** (-5.45)	0.0742*** (4.49)	0.0066 (1.30)						0.3458
0.0455 (0.35)					0.0030 (0.65)	-0.0016 (-0.47)	-0.0004 (-0.38)	0.0781** (2.37)	0.0083 (1.25)	0.0059 (0.35)	-0.0019 (-0.24)	-0.0560 (-0.10)	0.0084 (1.45)	-0.0002 (-0.02)	0.4652
	0.3144** (1.97)				0.0001 (0.02)	-0.0014 (-0.46)	0.0007 (0.56)	0.0663** (2.06)	0.0065 (0.91)	-0.0031 (-0.19)	-0.0005 (-0.06)	0.0330 (0.06)	0.0086 (1.38)	-0.0062 (-0.81)	0.4760
		0.2154** (2.06)			0.0026 (0.62)	-0.0017 (-0.56)	0.0003 (0.32)	0.0691** (2.14)	0.0070 (0.99)	0.0021 (0.13)	-0.0021 (-0.27)	0.0356 (0.07)	0.0087 (1.40)	-0.0043 (-0.54)	0.4737
			1.5243*** (9.50)		-0.0079** (-2.08)	-0.0057 (-1.71)	0.0016** (2.49)	0.0827** (2.35)	0.0043 (0.61)	-0.0100 (-0.68)	-0.0006 (-0.09)	0.2563 (0.56)	0.0072 (1.32)	-0.0038 (-0.49)	0.5076
				-1.1633*** (-9.31)	0.0086** (2.05)	-0.0003 (-0.09)	-0.0026** (-2.31)	0.0468 (1.53)	0.0051 (0.69)	0.0166 (1.01)	0.0013 (0.17)	0.2808 (0.54)	0.0054 (0.97)	0.0043 (0.47)	0.4895

Table 4. Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel F: Japan

RANGE	SD	IVOL	MAX	MIN	BETA	TSKEW	MV	EP	INTMOM	EBITDA/EV	OP	ES	INV	NSI	R^2
0.2532***					-0.0010	-0.0107***	-0.0010	0.1977**	0.0032						0.5592
(3.88)					(-0.42)	(-5.00)	(-1.40)	(2.49)	(0.54)						
	0.4128***				-0.0026	-0.0120***	0.0002	0.2682***	0.0032						0.5607
	(5.28)				(-0.94)	(-5.19)	(0.25)	(3.13)	(0.56)						
		0.3506***			0.0015	-0.0119***	0.0002	0.2664***	0.0033						0.5593
		(5.23)			(0.67)	(-5.12)	(0.27)	(3.08)	(0.58)						
			1.1069***		-0.0098***	-0.0146***	0.0007	0.2062***	0.0040						0.5775
			(13.15)		(-3.47)	(-6.46)	(1.09)	(2.61)	(0.65)						
				-1.3049***	0.0141***	-0.0034	-0.0039***	0.0817	0.0030						0.5675
				(-11.82)	(5.67)	(-1.58)	(-5.35)	(1.24)	(0.49)						
0.0649					-0.0028	-0.0120***	-0.0014	0.0304	-0.0096	0.0275	0.0318	0.6686*	0.0200	-0.0544	0.8148
(0.55)					(-0.59)	(-2.72)	(-1.07)	(0.15)	(-0.92)	(0.79)	(1.31)	(1.90)	(1.05)	(-1.61)	
	0.2910**				-0.0049	-0.0137***	-0.0004	0.0643	-0.0088	0.0244	0.0279	0.7159**	0.0155	-0.0427	0.8169
	(2.10)				(-0.86)	(-3.21)	(-0.33)	(0.31)	(-0.78)	(0.75)	(1.26)	(2.35)	(0.76)	(-1.35)	
		0.2122*			-0.0004	-0.0139***	-0.0004	0.0841	-0.0087	0.0218	0.0235	0.7173**	0.0129	-0.0437	0.8168
		(1.81)			(-0.08)	(-3.27)	(-0.36)	(0.39)	(-0.78)	(0.67)	(1.04)	(2.39)	(0.63)	(-1.39)	
			0.8315***		-0.0085*	-0.0113***	0.0008	0.0609	-0.0056	0.0196	0.0078	0.8926*	0.0034	-0.0607*	0.8198
			(5.29)		(-1.76)	(-2.68)	(0.81)	(0.35)	(-0.57)	(0.50)	(0.37)	(1.77)	(0.22)	(-1.73)	
				-1.4720***	0.0130***	-0.0052	-0.0039***	-0.0356	-0.0116	0.0404	0.0253	1.0665***	0.0181	-0.0358	0.8222
				(-8.59)	(3.00)	(-1.24)	(-3.26)	(-0.22)	(-0.96)	(1.28)	(1.00)	(2.57)	(1.02)	(-0.84)	

Table 4. Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel G: Global

RANGE	SD	IVOL	MAX	MIN	BETA	TSKEW	MV	EP	INTMOM	EBITDA/EV	OP	ES	INV	NSI	R^2
0.1682***					-0.0023**	-0.0001	-0.0002	0.0394***	0.0080***						0.1462
(6.68)					(-2.18)	(-0.49)	(-0.71)	(4.75)	(3.89)						
	0.2325***				-0.0030***	-0.0002	0.0002	0.0377***	0.0081***						0.1559
	(7.87)				(-2.91)	(-0.76)	(0.76)	(4.64)	(4.17)						
		0.2295***			-0.0021*	-0.0002	0.0002	0.0376***	0.0080***						0.1557
		(7.91)			(-1.91)	(-0.64)	(0.98)	(4.64)	(4.15)						
			1.0921***		-0.0098***	-0.0013***	0.0025***	0.0304***	0.0080***						0.2148
			(24.19)		(-8.18)	(-4.21)	(10.69)	(3.62)	(3.68)						
				-0.9015***	0.0061***	0.0009***	-0.0037***	0.0505***	0.0078***						0.1824
				(-22.75)	(5.74)	(2.76)	(-15.69)	(6.09)	(3.06)						
0.0978***					-0.0018	0.0005	-0.0002	0.0439***	0.0098***	0.0100***	-0.0150	-0.0020	-0.0004	-0.0015*	0.2064
(2.98)					(-1.33)	(1.00)	(-0.74)	(3.38)	(3.30)	(2.88)	(-0.01)	(-0.94)	(-0.18)	(-1.72)	
	0.1302***				-0.0019	0.0004	0.0000	0.0428***	0.0100***	0.0095***	0.1044	-0.0021	-0.0002	-0.0015**	0.2120
	(3.50)				(-1.31)	(0.76)	(0.01)	(3.73)	(3.47)	(2.79)	(0.06)	(-1.03)	(-0.09)	(-2.00)	
		0.1341***			-0.0020	0.0004	0.0000	0.0425***	0.0100***	0.0093***	0.2724	-0.0020	-0.0002	-0.0016**	0.2118
		(3.74)			(-1.28)	(0.78)	(0.15)	(3.66)	(3.46)	(2.75)	(0.15)	(-0.97)	(-0.13)	(-2.00)	
			1.1400***		-0.0125***	-0.0009	0.0025***	0.0472***	0.0104***	0.0084**	0.7825	-0.0021	-0.0015	-0.0015*	0.2636
			(20.46)		(-7.96)	(-1.60)	(8.46)	(3.96)	(3.26)	(2.38)	(0.36)	(-0.94)	(-0.85)	(-1.80)	
				-1.1208***	0.0089***	0.0014***	-0.0034***	0.0403***	0.0085***	0.0122***	0.4698	-0.0015	0.0011	-0.0005	0.2564
				(-19.04)	(6.59)	(2.87)	(-10.40)	(2.76)	(3.06)	(3.52)	(0.30)	(-0.64)	(0.53)	(-0.62)	

Table 5. Alternative Cross-Sectional Regressions for Regional and Global Portfolios

For each month in the sample period, the return of the country-industry indexes is regressed on the previous month's return range within a month (*Range*), the standard deviation (*SD*), the idiosyncratic volatility (*IVOL*), the maximum daily return (*MAX*), the negative of the minimum daily return (*MIN*), the market beta (*BETA*), the natural logarithm of the market capitalization value in $US billions (*MV*), the dividend yield (*DY*), the short-term momentum (*STMOM*), the idiosyncratic skewness (*ISKEW*), the earnings before interest, taxes, depreciation, and depreciation over enterprise value (*EBITDA/EV*), the earnings surprise (*ES*), the net share issuance (*NSI*), the return on equity (*ROE*), and the investments (*INV*). All variables are as explained before. In the calculation of the variables of *EBITDA/EV, ES, NSI, ROE,* and *INV*, the start date of data changes depending on the availability. For the first five regression specifications, the longest research period starts from February 1974 and for the last five regression specifications, the longest research period starts from September 1985. Panels A to F show the results for specific regions. Panel G presents the results for the global portfolio. The time-series averages of the slope coefficients and R-square values are reported in the table. The Newey-West (1987) t-statistics are reported in the parentheses. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively.

Panel A: North America

RANGE	SD	IVOL	MAX	MIN	BETA	ISKEW	MV	DY	STMOM	EBITDA /EV	ES	ROE	INV	NSI	R^2
0.0066 (0.15)					0.0019 (0.92)	-0.0015* (-1.89)	-0.0009** (-2.31)	0.0286 (0.87)	0.0069 (1.15)						0.3988
	0.0324 (0.65)				0.0017 (0.77)	-0.0017** (-2.07)	-0.0007* (-1.79)	0.0350 (1.05)	0.0060 (1.01)						0.4015
		0.0287 (0.66)			0.0010 (0.55)	-0.0017** (-2.13)	-0.0007* (-1.93)	0.0349 (1.06)	0.0057 (0.95)						0.3997
			1.3406*** (21.88)		-0.0128*** (-5.48)	-0.0016** (-1.96)	0.0014*** (3.81)	0.1486*** (4.62)	0.0118* (1.78)						0.4370
				-1.5634*** (-25.57)	0.0169*** (9.47)	-0.0013 (-1.49)	-0.0029*** (-8.00)	-0.0958*** (-2.93)	0.0009 (0.14)						0.4506
-0.0372 (-0.64)					0.0012 (0.40)	-0.0007 (-0.75)	-0.0002 (-0.39)	-0.0349 (-0.79)	0.0054 (0.65)	0.0018 (0.18)	-2.9866 (-0.40)	0.0001 (1.42)	0.0010 (0.36)	0.0057 (1.01)	0.5688
	-0.0255 (-0.40)				0.0012 (0.39)	-0.0008 (-0.87)	-0.0001 (-0.23)	-0.0349 (-0.78)	0.0045 (0.55)	0.0041 (0.41)	-4.1507 (-0.57)	0.0001 (1.28)	-0.0002 (-0.06)	0.0072 (1.32)	0.5705
		-0.0137 (-0.26)			-0.0002 (-0.07)	-0.0008 (-0.80)	-0.0001 (-0.26)	-0.0323 (-0.72)	0.0037 (0.46)	0.0032 (0.32)	-4.5634 (-0.62)	0.0001 (1.37)	-0.0001 (-0.03)	0.0075 (1.36)	0.5697
			1.3931*** (18.07)		-0.0161*** (-5.47)	-0.0008 (-0.75)	0.0015*** (3.02)	0.1225*** (2.91)	0.0121 (1.38)	0.0031 (0.33)	-4.4361 (-0.58)	0.0002** (2.25)	-0.0022 (-0.89)	0.0077 (1.32)	0.5982
				-1.7041*** (-21.55)	0.0183*** (7.20)	-0.0008 (-0.77)	-0.0015*** (-3.00)	-0.1743*** (-3.92)	0.0019 (0.24)	0.0123 (1.18)	-3.9570 (-0.54)	0.00002 (0.27)	0.0026 (0.92)	0.0019 (0.32)	0.6137

Table 5. Alternative Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel B: Europe

RANGE	SD	IVOL	MAX	MIN	BETA	ISKEW	MV	DY	STMOM	EBITDA/EV	ES	ROE	INV	NSI	R^2
0.1645*** (5.15)					-0.0012 (-0.83)	0.00002 (0.06)	0.0001 (0.38)	0.0923*** (4.87)	0.0172*** (4.86)						0.2045
	0.2280*** (5.99)				-0.0017 (-1.12)	-0.0001 (-0.16)	0.0005* (1.67)	0.0892*** (4.84)	0.0171*** (5.12)						0.2167
		0.2281*** (6.13)			-0.0014 (-0.99)	-0.0001 (-0.17)	0.0005* (1.67)	0.0896*** (4.86)	0.0172*** (5.14)						0.2160
			1.2497*** (26.96)		-0.0109*** (-6.38)	-0.0009*** (-2.57)	0.0035*** (13.02)	0.0713*** (3.79)	0.0173*** (4.80)						0.2786
				-1.0777*** (-27.58)	0.0083*** (5.82)	0.0007* (1.80)	-0.0042*** (-13.18)	0.1421*** (6.61)	0.0170*** (4.20)						0.2475
0.1167*** (3.05)					-0.0011 (-0.57)	-0.0008 (-1.41)	-0.0004 (-1.00)	0.0506* (1.86)	0.0145*** (3.91)	0.0121*** (2.92)	0.0174 (0.03)	0.0001** (2.20)	0.0003 (0.40)	-0.0001 (-0.07)	0.2295
	0.1691*** (3.82)				-0.0020 (-1.11)	-0.0008 (-1.42)	-0.0001 (-0.24)	0.0596** (2.23)	0.0146*** (4.18)	0.0102** (2.28)	0.1290 (0.27)	0.0001** (2.29)	-0.0006 (-0.63)	0.0008 (0.37)	0.2380
		0.1701*** (4.05)			-0.0026* (-1.65)	-0.0008 (-1.43)	-0.0001 (-0.19)	0.0589** (2.21)	0.0146*** (4.20)	0.0104** (2.38)	0.1113 (0.24)	0.0001** (2.24)	-0.0005 (-0.54)	0.0007 (0.35)	0.2375
			1.3345*** (23.82)		-0.0158*** (-8.00)	-0.0015*** (-2.62)	0.0034*** (9.87)	0.0645** (2.14)	0.0151*** (4.15)	0.0052 (1.22)	0.2658 (0.51)	0.0001** (2.13)	0.00003 (0.03)	0.0002 (0.09)	0.3026
				-1.2698*** (-23.70)	0.0128*** (6.81)	-0.0003 (-0.69)	-0.0045*** (-12.05)	0.0630*** (2.71)	0.0134*** (3.19)	0.0203*** (5.16)	0.0058 (0.01)	0.0001** (2.36)	0.0006 (0.55)	-0.0000 (-0.02)	0.2803

Table 5. Alternative Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel C: Asia-Pacific

RANGE	SD	IVOL	MAX	MIN	BETA	ISKEW	MV	DY	STMOM	EBITDA/EV	ES	ROE	INV	NSI	R^2
0.1860*** (6.78)					-0.0018 (-1.17)	0.0002 (0.26)	-0.0007 (-1.61)	0.0843** (2.01)	0.0070 (1.21)						0.2697
	0.2524*** (7.90)				-0.0024 (-1.57)	-0.00002 (-0.04)	-0.0004 (-0.87)	0.1038*** (2.71)	0.0063 (1.12)						0.2784
		0.2515*** (7.91)			-0.0016 (-1.02)	-0.00001 (-0.02)	-0.0004 (-0.86)	0.1038*** (2.71)	0.0065 (1.15)						0.2785
			1.0142*** (20.00)		-0.0074*** (-4.46)	-0.0011* (-1.65)	0.0014*** (2.98)	0.1498*** (3.72)	0.0056 (1.11)						0.3154
				-0.7519*** (-17.21)	0.0062*** (3.89)	0.0015** (2.24)	-0.0037*** (-8.35)	0.0179 (0.43)	0.0129** (2.01)						0.2864
0.1758*** (4.25)					-0.0046** (-2.04)	-0.0002 (-0.23)	-0.0001 (-0.32)	0.0206 (0.24)	0.0037 (0.61)	0.0042 (0.50)	3.1144 (0.32)	0.0001 (1.10)	0.0014 (0.72)	-0.0004 (-0.06)	0.3298
	0.1923*** (4.79)				-0.0043* (-1.74)	-0.0004 (-0.47)	-0.0001 (-0.12)	0.0375 (0.48)	0.0034 (0.55)	0.0011 (0.13)	4.5201 (0.43)	0.0001 (1.36)	0.0018 (0.95)	-0.0010 (-0.18)	0.3334
		0.1849*** (4.75)			-0.0040* (-1.90)	-0.0004 (-0.42)	-0.0001 (-0.18)	0.0415 (0.55)	0.0033 (0.53)	0.0012 (0.14)	4.5583 (0.44)	0.0001 (1.37)	0.0017 (0.88)	-0.0006 (-0.11)	0.3334
			1.0606*** (16.11)		-0.0128*** (-7.04)	-0.0022** (-2.43)	0.0025*** (4.10)	0.1002 (1.21)	0.0078 (1.46)	-0.0036 (-0.41)	1.5520 (0.18)	0.00003 (0.36)	-0.0014 (-0.85)	0.0015 (0.35)	0.3732
				-0.9310*** (-10.07)	0.0056** (2.11)	0.0015* (1.65)	-0.0028*** (-5.30)	0.0448 (0.63)	0.0055 (1.02)	0.0193** (2.33)	-0.2755 (-0.04)	-0.00001 (-0.18)	0.0043*** (2.56)	0.0025 (0.43)	0.3562

Table 5. Alternative Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel D: South America

RANGE	SD	IVOL	MAX	MIN	BETA	ISKEW	MV	DY	STMOM	EBITDA/EV	ES	ROE	INV	NSI	R^2
0.3115*** (4.93)					-0.0022 (-0.86)	-0.0015 (-1.31)	0.0003 (0.37)	0.1260** (2.12)	0.0156*** (3.00)						0.3694
	0.4135*** (6.01)				-0.0036 (-1.40)	-0.0012 (-1.07)	0.0006 (0.76)	0.1297** (2.17)	0.0181*** (3.40)						0.3832
		0.4004*** (5.96)			-0.00006 (-0.003)	-0.0012 (-1.09)	0.0007 (0.80)	0.1292** (2.16)	0.0185*** (3.47)						0.3817
			1.4353*** (16.44)		-0.0134*** (-5.17)	-0.0021** (-2.16)	0.0033*** (3.45)	0.1275** (2.15)	0.0184*** (3.45)						0.4270
				-0.9536*** (-10.20)	0.0121*** (4.40)	-0.0017 (-1.37)	-0.0039*** (-6.90)	0.1141* (1.91)	0.0109* (1.82)						0.3842
0.1145*** (1.41)					0.0028 (0.67)	-0.0013 (-0.78)	-0.0022** (-1.91)	0.0247 (0.56)	0.0084 (1.17)	0.0358* (1.82)	-0.2774 (-0.55)	0.0002 (1.28)	0.0075 (1.54)	0.0054 (0.43)	0.5481
	0.1962** (2.05)				0.0015 (0.34)	-0.0008 (-0.49)	-0.0022* (-1.93)	0.0249 (0.57)	0.0079 (1.19)	0.0315* (1.67)	-0.2936 (-0.57)	0.0003 (1.53)	0.0089* (1.72)	-0.0003 (-0.03)	0.5547
		0.1866*** (2.14)			0.0044 (1.13)	-0.0008 (-0.50)	-0.0021* (-1.82)	0.0219 (0.49)	0.0084 (1.27)	0.0302* (1.66)	-0.2400 (-0.50)	0.0003 (1.52)	0.0084 (1.61)	0.0009 (0.07)	0.5539
			1.4262*** (11.13)		-0.0116** (-2.40)	-0.0032* (-1.67)	0.0007 (0.61)	0.0087 (0.17)	0.0111* (1.68)	0.0009 (0.08)	0.2031 (0.41)	0.0001 (0.60)	0.0066 (1.19)	-0.0074 (-0.48)	0.5806
				-1.1872*** (-7.07)	0.0198*** (5.51)	-0.0015 (-0.82)	-0.0035*** (-2.94)	0.1997 (1.56)	0.0110 (1.24)	0.0516** (2.51)	0.9097 (0.85)	0.0001 (0.77)	0.00001 (0.002)	0.0154 (1.09)	0.5769

Table 5. Alternative Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel E: MENA

RANGE	SD	IVOL	MAX	MIN	BETA	ISKEW	MV	DY	STMOM	EBITDA/EV	ES	ROE	INV	NSI	R^2
0.1112** (2.31)					-0.0001 (-0.05)	0.0007 (0.80)	-0.0005 (-0.57)	0.1516*** (3.31)	0.0221*** (3.22)						0.3189
	0.2036*** (3.86)				-0.0007 (-0.25)	0.0009 (0.99)	-0.0001 (-0.12)	0.1728*** (3.59)	0.0222*** (3.26)						0.3308
		0.1991*** (3.72)			-0.0003 (-0.09)	0.0009 (1.02)	-0.0001 (-0.07)	0.1744*** (3.63)	0.0224*** (3.24)						0.3307
			1.2130*** (17.15)		-0.0080*** (-2.93)	0.0004 (0.46)	0.0013 (1.55)	0.1739*** (3.45)	0.0263*** (3.97)						0.3759
				-1.0464*** (-12.07)	0.0054** (2.04)	0.0010 (1.03)	-0.0033*** (-4.30)	0.0977** (2.44)	0.0176** (2.35)						0.3537
0.0999 (1.23)					0.0015 (0.40)	-0.0031 (-1.11)	-0.0006 (-0.86)	0.0516 (1.08)	0.0261* (1.78)	-0.0057 (-0.40)	0.2703 (0.48)	0.0001 (1.00)	-0.0012 (-0.22)	-0.0004 (-0.05)	0.4593
	0.2059** (2.15)				-0.0072 (-0.90)	-0.0001 (-0.03)	0.0002 (0.28)	0.0680 (1.38)	0.0413*** (3.41)	-0.0041 (-0.29)	0.2535 (0.44)	0.0001 (0.48)	-0.0004 (-0.07)	-0.0041 (-0.56)	0.4688
		0.2088** (2.21)			-0.0075 (-1.00)	-0.00003 (-0.01)	0.0003 (0.41)	0.0701 (1.43)	0.0416*** (3.42)	-0.0038 (-0.28)	0.2989 (0.51)	0.0001 (0.47)	-0.0004 (-0.06)	-0.0040 (-0.54)	0.4674
			1.4599*** (12.82)		-0.0072** (-2.04)	-0.0044 (-1.55)	0.0015* (1.88)	0.1021*** (2.63)	0.0251* (1.94)	-0.0233** (-1.97)	-0.0247 (-0.04)	0.0002 (1.71)	0.0007 (0.12)	-0.0046 (-0.67)	0.5066
				-1.1545*** (-9.43)	0.0096* (1.88)	-0.0013 (-0.45)	-0.0029*** (-4.33)	-0.0039 (-0.07)	0.0212 (1.37)	0.0076 (0.49)	0.3432 (0.60)	0.0001 (0.55)	-0.0022 (-0.43)	-0.0047 (-0.55)	0.4844

Table 5. Alternative Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel F: Japan

RANGE	SD	IVOL	MAX	MIN	BETA	ISKEW	MV	DY	STMOM	EBITDA/EV	ES	ROE	INV	NSI	R^2
0.2012*** (3.22)					-0.0024 (-0.90)	-0.0088*** (-4.22)	-0.0008 (-1.18)	0.3359** (2.19)	0.0023 (0.25)						0.5581
	0.3524*** (4.73)				-0.0042 (-1.42)	-0.0089*** (-4.35)	0.0002 (0.36)	0.3009** (2.03)	0.0032 (0.36)						0.5636
		0.2904*** (4.54)			0.0002 (0.07)	-0.0088*** (-4.28)	0.0002 (0.33)	0.2935* (1.95)	0.0039 (0.44)						0.5624
			1.0233*** (12.73)		-0.0112*** (-3.86)	-0.0119*** (-5.60)	0.0003 (0.54)	0.3905*** (2.68)	0.0027 (0.32)						0.5738
				-1.2440*** (-10.70)	0.0130*** (4.75)	-0.0022 (-0.89)	-0.0035*** (-4.72)	0.1170 (0.72)	0.0045 (0.51)						0.5730
-0.0101 (-0.11)					0.0013 (0.32)	-0.0105** (-2.27)	-0.0021** (-2.22)	0.1983 (0.49)	-0.0098 (-0.63)	-0.0273 (-0.80)	0.6218* (1.82)	0.00004 (0.10)	-0.0024 (-0.16)	-0.0357 (-0.91)	0.8138
	0.1349 (1.08)				-0.0030 (-0.53)	-0.0107** (-2.23)	-0.0009 (-0.84)	0.2259 (0.57)	-0.0102 (-0.64)	-0.0381 (-1.08)	0.5295* (1.69)	0.0001 (0.36)	0.0004 (0.03)	-0.0358 (-0.89)	0.8122
		0.1133 (1.18)			-0.0006 (-0.15)	-0.0111** (-2.33)	-0.0007 (-0.63)	0.2733 (0.67)	-0.0082 (-0.51)	-0.0413 (-1.15)	0.5899* (1.85)	0.0002 (0.46)	0.0014 (0.09)	-0.0332 (-0.82)	0.8125
			0.9025*** (6.69)		-0.0106** (-2.48)	-0.0106** (-2.25)	0.0008 (0.91)	-0.0606 (-0.18)	-0.0067 (-0.49)	-0.0378 (-1.03)	0.2705 (0.99)	0.0001 (0.21)	-0.0078 (-0.62)	-0.0250 (-0.70)	0.8189
				-1.5063*** (-8.16)	0.0128*** (2.71)	-0.0056 (-1.30)	-0.0045*** (-3.94)	0.2801 (0.60)	0.0078 (0.46)	-0.0039 (-0.12)	0.6695* (1.86)	-0.0001 (-0.41)	0.0190 (1.29)	-0.0135 (-0.33)	0.8261

Table 5. Alternative Cross-Sectional Regressions for Regional and Global Portfolios (cont.)

Panel G: Global

RANGE	SD	IVOL	MAX	MIN	BETA	ISKEW	MV	DY	STMOM	EBITDA/EV	ES	ROE	INV	NSI	R^2
0.1580*** (6.52)					-0.0021** (-2.15)	0.0002 (0.79)	-0.0002 (-0.79)	0.1007*** (5.61)	0.0137*** (4.85)						0.1461
	0.2205*** (7.83)				-0.0028*** (-2.94)	0.0002 (0.67)	0.0002 (0.82)	0.1069*** (6.08)	0.0137*** (5.06)						0.1556
		0.2186*** (7.89)			-0.0020* (-1.89)	0.0002 (0.78)	0.0002 (1.05)	0.1074*** (6.13)	0.0136*** (4.99)						0.1552
			1.1079*** (26.82)		-0.0096*** (-8.15)	-0.0006** (-2.28)	0.0025 (12.57)	0.1171*** (7.02)	0.0130*** (4.64)						0.2155
				-0.9392*** (-28.60)	0.0061*** (6.15)	0.0010*** (3.48)	-0.0037*** (-14.67)	0.0913*** (4.99)	0.0144*** (4.06)						0.1846
0.0831** (2.52)					-0.0013 (-0.88)	0.0004 (0.94)	-0.0004 (-1.36)	0.0817*** (3.90)	0.0155*** (3.92)	0.0093*** (3.12)	-1.9048 (-1.09)	0.0001* (1.79)	-0.0010* (-1.82)	-0.0006 (-0.32)	0.2052
	0.1129*** (2.84)				-0.0015 (-0.91)	0.0003 (0.61)	-0.0002 (-0.65)	0.0850*** (4.03)	0.0161*** (4.13)	0.0089*** (3.04)	-1.7740 (-1.00)	0.0001* (1.69)	-0.0014** (-2.16)	-0.0005 (-0.28)	0.2110
		0.1202*** (3.21)			-0.0018 (-1.12)	0.0003 (0.62)	-0.0002 (-0.54)	0.0849*** (3.98)	0.0160*** (4.12)	0.0087*** (3.00)	-1.5022 (-0.84)	0.0001* (1.80)	-0.0014** (-2.15)	-0.0004 (-0.24)	0.2109
			1.1762*** (21.53)		-0.0129*** (-8.70)	-0.0005 (-0.93)	0.0024*** (8.64)	0.1202*** (5.30)	0.0175*** (3.96)	0.0060* (1.79)	-0.4429 (-0.23)	0.0001** (2.42)	-0.0009 (-1.60)	-0.0006 (-0.25)	0.2654
				-1.1932*** (-21.90)	0.0094*** (6.57)	0.0010** (2.30)	-0.0035*** (-10.93)	0.0429** (1.96)	0.0123*** (3.33)	0.0127*** (4.32)	-1.1005 (-0.71)	0.0001 (1.64)	-0.0011* (-1.77)	0.0001 (0.04)	0.2582

Online Appendix

Table A.1. Correlation Matrices

This table presents the correlation analyses between the nineteen index attributes for North America, Europe, Asia-Pacific, South America, MENA, and Japan as well as the global market, respectively. Correlation analyses are calculated by performing a two-steps procedure. In the first step, every month in the research period cross-correlations among the index attributes are calculated. Then, the time-series average of cross-correlations are calculated over the months.

Panel A: North America

	RANGE	MAX	MIN	SD	IVOL	BETA	TSKEW	ISKEW	MV	EP	DY	EBITDA/EV	INTMOM	STMOM	OP	ES	ROE	INV	NSI
RANGE	1																		
MAX	0.8560	1																	
MIN	0.8348	0.4636	1																
SD	0.9546	0.8229	0.7954	1															
IVOL	0.8851	0.7690	0.7289	0.9213	1														
BETA	0.5215	0.4505	0.4575	0.5589	0.2856	1													
TSKEW	0.0578	0.0561	0.0391	0.0632	0.0673	0.0110	1												
ISKEW	0.0439	0.0428	0.0285	0.0503	0.0446	0.0311	0.8313	1											
MV	-0.1528	-0.1501	-0.1153	-0.1499	-0.2546	0.1529	-0.0339	-0.0140	1										
EP	-0.1021	-0.0843	-0.0858	-0.1154	-0.0959	-0.0817	-0.0931	-0.0872	-0.0851	1									
DY	-0.2632	-0.2247	-0.2244	-0.2894	-0.2390	-0.2286	-0.0690	-0.0832	-0.0470	0.3699	1								
EBITDA/EV	-0.0167	-0.0250	-0.0028	-0.0187	0.0085	-0.0638	-0.0582	-0.0403	-0.1648	0.2847	0.1208	1							
INTMOM	0.0341	0.0195	0.0201	0.0401	0.0108	0.0967	0.0696	0.1082	0.0695	-0.1042	-0.1533	-0.0618	1						
STMOM	0.0058	-0.0159	0.0109	0.0112	-0.0159	0.0678	0.0892	0.1218	0.0536	-0.1439	-0.1324	-0.0377	0.6168	1					
OP	-0.0961	-0.0985	-0.0699	-0.0979	-0.1139	0.0024	-0.0684	-0.0645	0.2176	0.1005	0.0048	0.0567	-0.0087	0.0012	1				
ES	0.0172	0.0058	0.0194	0.0173	0.0071	0.0193	-0.0032	-0.0100	0.0209	0.0195	-0.0698	0.0084	0.2230	0.1531	-0.0659	1			
ROE	-0.0915	-0.0941	-0.0696	-0.0977	-0.1177	0.0075	-0.0658	-0.0551	0.2276	0.2532	-0.0681	0.1653	0.1329	0.0666	0.4099	0.0402	1		
INV	0.0868	0.0767	0.0697	0.0854	0.0892	0.0289	0.0410	0.0605	-0.1356	-0.0478	-0.0500	-0.0719	-0.0073	-0.0032	-0.0245	-0.0582	-0.0727	1	
NSI	0.0300	0.0228	0.0330	0.0294	0.0285	0.0119	-0.0263	-0.0172	-0.1318	-0.0503	0.0339	0.0007	0.0566	-0.0022	-0.1072	0.0544	-0.0932	0.0187	1

Table A.1. Correlation Matrices (cont.)

Panel B: Europe

	RANGE	MAX	MIN	SD	IVOL	BETA	TSKEW	ISKEW	MV	EP	DY	EBITDA /EV	INTMOM	STMOM	OP	ES	ROE	INV	NSI
RANGE	1																		
MAX	0.8712	1																	
MIN	0.8373	0.4752	1																
SD	0.9596	0.8402	0.8003	1															
IVOL	0.9190	0.8076	0.7643	0.9491	1														
BETA	0.3272	0.2803	0.2834	0.3690	0.1478	1													
TSKEW	0.0605	0.0611	0.0433	0.0620	0.0709	-0.0220	1												
ISKEW	0.0416	0.0434	0.0291	0.0429	0.0483	-0.0166	0.8848	1											
MV	-0.2821	-0.2547	-0.2320	-0.2736	-0.3708	0.2078	-0.0824	-0.0619	1										
EP	0.0416	0.0361	0.0357	0.0432	0.0451	0.0001	-0.0426	-0.0501	-0.0537	1									
DY	-0.0054	-0.0119	0.0026	-0.0100	-0.0029	-0.0320	-0.0922	-0.1101	0.0390	0.3281	1								
EBITDA /EV	0.0582	0.0529	0.0479	0.0617	0.0743	-0.0347	-0.0251	-0.0297	-0.0976	0.1844	0.0981	1							
INTMOM	0.0085	0.0136	0.0031	0.0114	0.0135	-0.0077	0.1586	0.1787	0.0089	-0.1228	-0.1470	-0.0089	1						
STMOM	-0.0045	0.0009	-0.0087	-0.0044	-0.0017	-0.0176	0.1489	0.1669	0.0154	-0.1301	-0.1329	-0.0014	0.6257	1					
OP	0.0358	0.0317	0.0332	0.0373	0.0387	0.0103	0.0102	0.0027	0.0784	0.0685	0.0720	0.0390	0.0102	0.0144	1				
ES	0.0041	0.0039	0.0028	0.0005	-0.0006	-0.0064	0.0047	0.0085	-0.0139	-0.0166	-0.0169	-0.0223	0.0832	0.0635	-0.0004	1			
ROE	-0.0095	-0.0074	-0.0073	-0.0123	-0.0030	-0.0261	-0.0193	-0.0220	0.0355	0.1247	0.0615	0.0832	0.1151	0.0698	0.3572	0.0182	1		
INV	-0.0024	-0.0056	0.0027	-0.0017	0.0051	-0.0012	-0.0069	-0.0068	-0.0131	-0.0050	-0.0349	-0.0451	-0.0010	0.0034	0.0803	-0.0180	0.0145	1	
NSI	0.0109	0.0072	0.0119	0.0143	0.0093	0.0264	-0.0105	-0.0142	0.0114	-0.0069	-0.0591	-0.0527	-0.0138	-0.0126	-0.0203	-0.0049	-0.0540	0.0142	1

Table A.1. Correlation Matrices (cont.)

Panel C: Asia-Pacific

	RANGE	MAX	MIN	SD	IVOL	BETA	TSKEW	ISKEW	MV	EP	DY	EBITDA /EV	INTMOM	STMOM	OP	ES	ROE	INV	NSI
RANGE	1																		
MAX	0.9044	1																	
MIN	0.8743	0.6020	1																
SD	0.9541	0.8652	0.8357	1															
IVOL	0.9374	0.8558	0.8161	0.9803	1														
BETA	0.2588	0.2138	0.2534	0.2838	0.1601	1													
TSKEW	0.1364	0.1394	0.1017	0.1328	0.1425	-0.0168	1												
ISKEW	0.1098	0.1148	0.0799	0.1046	0.1111	-0.0112	0.9434	1											
MV	-0.1703	-0.1708	-0.1272	-0.1601	-0.1901	0.1474	-0.1310	-0.1048	1										
EP	0.0221	0.0259	0.0194	0.0246	0.0237	-0.0220	-0.0807	-0.0769	-0.0313	1									
DY	-0.1187	-0.1112	-0.1016	-0.1287	-0.1258	-0.0666	-0.1571	-0.1677	-0.1175	0.3718	1								
EBITDA /EV	0.0591	0.0490	0.0615	0.0675	0.0676	-0.0089	-0.0108	0.0010	-0.0772	0.3034	0.1441	1							
INTMOM	0.0149	0.0153	0.0054	0.0207	0.0223	-0.0018	0.1390	0.1550	-0.0140	-0.1115	-0.1429	-0.0393	1						
STMOM	0.0186	0.0098	0.0199	0.0241	0.0263	-0.0047	0.1411	0.1530	-0.0048	-0.1203	-0.1266	-0.0062	0.6205	1					
OP	-0.0282	-0.0262	-0.0324	-0.0363	-0.0349	-0.0299	0.0147	0.0126	-0.0329	0.0336	0.0857	0.1172	-0.0016	-0.0027	1				
ES	0.0121	0.0095	0.0127	0.0249	0.0259	0.0123	0.0023	0.0083	0.0209	0.0166	-0.0294	0.0183	0.1025	0.0923	-0.0104	1			
ROE	-0.0365	-0.0298	-0.0430	-0.0439	-0.0438	-0.0230	0.0097	0.0171	-0.0289	0.0988	0.0816	0.1027	0.1004	0.0593	0.5550	0.0202	1		
INV	0.0446	0.0379	0.0423	0.0475	0.0473	0.0182	0.0190	0.0090	0.0112	-0.0210	-0.0731	-0.0598	-0.0397	-0.0264	0.0019	0.0250	-0.0100	1	
NSI	0.0365	0.0292	0.0361	0.0413	0.0439	0.0067	-0.0174	-0.0128	0.0365	-0.0149	-0.0402	-0.0340	0.0338	0.0099	-0.0163	-0.0143	-0.0280	0.0239	1

Table A.1. Correlation Matrices (cont.)

Panel D: South America

	RANGE	MAX	MIN	SD	IVOL	BETA	TSKEW	ISKEW	MV	EP	DY	EBITDA /EV	INTMOM	STMOM	OP	ES	ROE	INV	NSI
RANGE	1																		
MAX	0.8412	1																	
MIN	0.8139	0.4161	1																
SD	0.9415	0.8097	0.7592	1															
IVOL	0.8969	0.7796	0.7158	0.9438	1														
BETA	0.4073	0.3596	0.3405	0.4668	0.2478	1													
TSKEW	0.0402	0.0458	0.0057	0.0424	0.0415	0.0257	1												
ISKEW	0.0444	0.0504	0.0077	0.0483	0.0431	0.0370	0.9137	1											
MV	-0.0617	-0.0641	-0.0413	-0.0325	-0.1437	0.3129	-0.0516	-0.0327	1										
EP	0.1033	0.0856	0.1005	0.1221	0.1204	0.0309	-0.0301	-0.0314	0.0011	1									
DY	0.0397	0.0207	0.0493	0.0380	0.0612	-0.0578	-0.1181	-0.1128	-0.0086	0.3208	1								
EBITDA /EV	0.1325	0.1190	0.1040	0.1521	0.1525	0.0596	0.0142	0.0279	-0.0219	0.3463	0.0458	1							
INTMOM	0.0435	0.0299	0.0336	0.0376	0.0258	0.0684	0.1024	0.1265	0.0461	-0.0609	-0.1241	0.0135	1						
STMOM	0.0346	0.0341	0.0174	0.0294	0.0127	0.0682	0.0963	0.1163	0.0511	-0.0779	-0.1263	0.0397	0.6032	1					
OP	0.0353	0.0333	0.0339	0.0310	-0.0030	0.0813	-0.0220	-0.0274	0.1706	0.0584	0.0528	0.1630	0.0257	0.0289	1				
ES	-0.0100	-0.0123	-0.0197	-0.0123	-0.0038	-0.0149	0.0296	0.0175	-0.0121	-0.0095	0.0184	-0.0439	0.0688	0.0403	-0.0383	1			
ROE	0.0170	0.0169	0.0135	0.0126	-0.0084	0.0649	-0.0324	-0.0347	0.1644	0.1890	0.0712	0.2034	0.1410	0.0927	0.4483	0.0112	1		
INV	0.0243	0.0095	0.0363	0.0344	0.0219	0.0415	-0.0334	-0.0457	0.0450	0.0264	0.0583	-0.0774	-0.0092	-0.0077	0.0147	-0.0001	-0.0049	1	
NSI	-0.0194	-0.0137	-0.0183	-0.0149	-0.0289	0.0336	-0.0253	-0.0302	0.0390	-0.0195	-0.0907	-0.0575	0.0323	0.0207	-0.0719	-0.0158	-0.0669	0.0561	1

Panel E: MENA

	RANGE	MAX	MIN	SD	IVOL	BETA	TSKEW	ISKEW	MV	EP	DY	EBITDA/EV	INTMOM	STMOM	OP	ES	ROE	INV	NSI
RANGE	1																		
MAX	0.7423	1																	
MIN	0.7289	0.3775	1																
SD	0.8387	0.7238	0.6679	1															
IVOL	0.8203	0.7065	0.6537	0.8683	1														
BETA	0.1952	0.1849	0.1568	0.2361	0.1356	1													
TSKEW	0.1163	0.1174	0.0817	0.1170	0.1210	0.0346	1												
ISKEW	0.1163	0.1166	0.0813	0.1189	0.1202	0.0433	0.8699	1											
MV	-0.0794	-0.0615	-0.0599	-0.0541	-0.0789	0.1214	-0.0071	0.0037	1										
EP	-0.0315	-0.0144	-0.0314	-0.0323	-0.0425	0.0279	-0.0986	-0.0895	0.0353	1									
DY	-0.0859	-0.0857	-0.0648	-0.0978	-0.1013	-0.0144	-0.1697	-0.1688	-0.1519	0.4361	1								
EBITDA/EV	-0.0106	-0.0069	-0.0153	-0.0246	-0.0199	-0.0646	-0.0797	-0.0687	-0.1473	0.2707	0.2974	1							
INTMOM	0.0593	0.0810	0.0310	0.0670	0.0576	0.0035	0.2205	0.2168	0.0598	-0.1094	-0.1337	-0.0525	1						
STMOM	0.0646	0.0815	0.0402	0.0625	0.0557	-0.0101	0.1671	0.1562	0.0333	-0.1026	-0.1019	-0.0380	0.5612	1					
OP	0.0235	0.0109	0.0285	0.0186	0.0142	0.0225	0.0078	0.0235	0.0097	-0.0148	0.1169	0.0231	0.0642	0.0509	1				
ES	0.0502	0.0410	0.0418	0.0554	0.0528	0.0302	-0.0054	-0.0138	0.0000	0.0452	0.0152	0.0448	0.0594	0.0158	-0.1066	1			
ROE	-0.0020	0.0054	-0.0108	-0.0221	-0.0079	-0.0441	0.0629	0.0708	-0.0076	0.1010	0.1342	0.1387	0.1120	0.0924	0.3444	0.0044	1		
INV	-0.0538	-0.0548	-0.0334	-0.0433	-0.0418	-0.0416	-0.0486	-0.0439	0.0761	0.0326	-0.0424	-0.0189	-0.0330	-0.0174	0.0257	-0.0668	-0.0354	1	
NSI	0.0211	0.0036	0.0290	0.0260	0.0386	-0.0004	-0.0218	-0.0409	-0.0259	-0.0987	-0.0895	-0.0643	-0.0355	-0.0611	-0.0779	-0.0021	0.0082	0.0292	1

Panel F: Japan

	RANGE	MAX	MIN	SD	IVOL	BETA	TSKEW	ISKEW	MV	EP	DY	EBITDA/EV	INTMOM	STMOM	OP	ES	ROE	INV	NSI
RANGE	1																		
MAX	0.8654	1																	
MIN	0.7895	0.4199	1																
SD	0.9154	0.7874	0.7355	1															
IVOL	0.8637	0.7507	0.6936	0.9347	1														
BETA	0.5081	0.4324	0.4216	0.5679	0.3539	1													
TSKEW	0.1941	0.1782	0.1505	0.2191	0.2141	0.1109	1												
ISKEW	0.1280	0.1173	0.0998	0.1512	0.1486	0.0712	0.8039	1											
MV	-0.1241	-0.1024	-0.1080	-0.1321	-0.2009	0.0882	-0.0090	-0.0392	1										
EP	-0.0908	-0.0690	-0.0836	-0.1033	-0.0786	-0.0748	0.0378	0.0211	-0.0306	1									
DY	-0.0374	-0.0191	-0.0499	-0.0446	-0.0373	-0.0677	0.0316	0.0149	-0.0651	0.3137	1								
EBITDA/EV	-0.1382	-0.1153	-0.1174	-0.1477	-0.1492	-0.0806	-0.0760	-0.0662	0.1809	0.1924	0.2219	1							
INTMOM	-0.0354	-0.0438	-0.0178	-0.0372	-0.0278	-0.0417	-0.1534	-0.0994	0.0995	-0.1426	-0.1558	0.0018	1						
STMOM	-0.0297	-0.0387	-0.0094	-0.0302	-0.0245	-0.0262	-0.0602	-0.0166	0.0663	-0.1466	-0.1270	0.0037	0.5691	1					
OP	-0.0740	-0.0657	-0.0656	-0.0811	-0.0829	-0.0290	-0.0649	-0.0756	0.1587	0.1496	0.2113	0.2031	-0.0100	0.0140	1				
ES	-0.0123	-0.0039	-0.0184	-0.0109	-0.0160	-0.0030	-0.0590	-0.0503	0.0176	-0.0671	-0.1146	-0.0144	0.3460	0.2122	-0.1646	1			
ROE	-0.1281	-0.1199	-0.0908	-0.1410	-0.1354	-0.0606	-0.1132	-0.0928	0.1971	0.4347	0.0363	0.2567	0.1269	0.0276	0.1661	0.0292	1		
INV	0.0838	0.0675	0.0810	0.0866	0.0966	0.0336	0.0765	0.0404	-0.0846	0.0525	-0.0820	-0.0050	-0.0493	-0.0300	0.1485	-0.0380	0.1347	1	
NSI	0.0064	0.0100	-0.0026	0.0047	0.0030	-0.0090	0.0007	0.0174	0.0468	-0.0523	-0.1607	-0.0373	0.0824	0.0477	-0.0116	0.0233	0.0433	0.0524	1

Panel G: Global

	RANGE	MAX	MIN	SD	IVOL	BETA	TSKEW	ISKEW	MV	EP	DY	EBITDA/EV	INTMOM	STMOM	OP	ES	ROE	INV	NSI
RANGE	1																		
MAX	0.8846	1																	
MIN	0.8563	0.5303	1																
SD	0.9597	0.8524	0.8196	1															
IVOL	0.9173	0.8190	0.7804	0.9496	1														
BETA	0.3082	0.2662	0.2764	0.3443	0.1169	1													
TSKEW	0.0816	0.0831	0.0595	0.0825	0.0814	0.0100	1												
ISKEW	0.0682	0.0693	0.0493	0.0692	0.0613	0.0273	0.9123	1											
MV	-0.2362	-0.2178	-0.1967	-0.2286	-0.3162	0.2227	-0.0659	-0.0336	1										
EP	0.0362	0.0341	0.0342	0.0334	0.0528	-0.0490	-0.0458	-0.0618	-0.1329	1									
DY	-0.0348	-0.0346	-0.0249	-0.0468	-0.0172	-0.1026	-0.1124	-0.1348	-0.1258	0.3978	1								
EBITDA/EV	0.0402	0.0342	0.0367	0.0425	0.0531	-0.0208	-0.0150	-0.0203	-0.1049	0.2256	0.1301	1							
INTMOM	0.0187	0.0178	0.0112	0.0218	0.0260	0.0011	0.1324	0.1606	0.0034	-0.1021	-0.1320	-0.0172	1						
STMOM	0.0001	0.0038	-0.0056	0.0019	0.0080	-0.0091	0.1377	0.1559	0.0085	-0.1162	-0.1197	0.0087	0.6192	1					
OP	-0.0039	-0.0062	-0.0010	-0.0061	0.0019	-0.0237	0.0039	0.0013	0.0210	0.0692	0.0905	0.0619	0.0100	0.0102	1				
ES	0.0066	0.0013	0.0093	0.0121	0.0069	0.0205	0.0139	0.0207	0.0225	-0.0238	-0.0299	-0.0060	0.0909	0.0757	-0.0153	1			
ROE	-0.0102	-0.0123	-0.0058	-0.0142	-0.0011	-0.0426	-0.0118	-0.0058	-0.0103	0.1465	0.0943	0.0935	0.1082	0.0587	0.4014	-0.0048	1		
INV	0.0177	0.0149	0.0185	0.0173	0.0237	-0.0091	0.0213	0.0127	-0.0315	0.0087	-0.0259	-0.0312	-0.0068	-0.0129	0.0298	-0.0106	0.0129	1	
NSI	0.0189	0.0135	0.0191	0.0203	0.0281	-0.0122	-0.0061	-0.0095	-0.0467	0.0069	-0.0371	-0.0385	0.0281	-0.0021	-0.0234	-0.0061	-0.0228	0.0439	1

Table A.2. Equal-Weighted Returns on Long-only Attribute Portfolios

For every month in the sample period, quintile portfolios are formed by sorting the country-industry indexes based on nineteen index attributes over the past month. Quintile 1 (5) includes the indexes with the lowest (highest) values for the relevant index attribute. The table reports the equal-weighted average raw (R_{Raw}) and risk-adjusted returns (alphas) for the long-only attribute portfolios, which go long the quintile 5. The Jensen alphas for the regional long-only portfolios are estimated using the regional versions of the CAPM, the Fama-French 3-Factor Model, and the Fama-French-Carhart 4-Factor Model, which are denoted as α_{CAPM}, α_{FF3}, and α_{FFC4}, respectively. The alphas for the global portfolio presented in Panel G are obtained using the global versions of the above-mentioned asset-pricing models. The Newey-West (1987) adjusted t-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5% and 10% levels, respectively.

	Panel A: North America				Panel B: Europe			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0117***	0.0073***	0.0057***	0.0064***	0.0239***	0.0148***	0.0032	0.0036*
	(3.47)	(5.64)	(4.58)	(4.94)	(5.13)	(5.66)	(1.63)	(1.87)
MAX	0.0265***	0.0220***	0.0199***	0.0209***	0.0507***	0.0416***	0.0305***	0.0307***
	(8.01)	(16.80)	(15.94)	(16.40)	(11.06)	(16.12)	(15.26)	(15.39)
MIN	-0.0050	-0.0096***	-0.0111***	-0.0107***	-0.0103**	-0.0191***	-0.0294***	-0.0289***
	(-1.55)	(-7.40)	(-8.46)	(-7.83)	(-2.49)	(-8.52)	(-17.55)	(-17.00)
SD	0.0121***	0.0078***	0.0059***	0.0065***	0.0262***	0.0170***	0.0049**	0.0054***
	(3.47)	(5.67)	(4.49)	(4.78)	(5.44)	(6.26)	(2.45)	(2.74)
IVOL	0.0120***	0.0079***	0.0055***	0.0062***	0.0261***	0.0170***	0.0048**	0.0052***
	(3.59)	(5.91)	(4.22)	(4.73)	(5.49)	(6.30)	(2.38)	(2.64)
BETA	0.0110***	0.0062***	0.0053***	0.0057***	0.0145***	0.0044**	-0.0019	-0.0015
	(3.53)	(5.39)	(4.54)	(4.80)	(3.70)	(2.45)	(-1.29)	(-0.93)
TSKEW	0.0111***	0.0067***	0.0052***	0.0056***	0.0149***	0.0067***	0.0008	0.0006
	(4.70)	(5.88)	(4.71)	(5.27)	(4.67)	(3.83)	(0.49)	(0.44)
ISKEW	0.0120***	0.0074***	0.0068***	0.0071***	0.0155***	0.0073***	0.0014	0.0011
	(4.99)	(7.04)	(6.16)	(6.60)	(4.95)	(4.34)	(0.94)	(0.82)
MV	0.0095***	0.0042***	0.0053***	0.0056***	0.0103***	0.0016	-0.0012	-0.0010
	(5.00)	(5.00)	(7.34)	(8.07)	(4.03)	(1.47)	(-1.27)	(-1.06)
EP	0.0120***	0.0077***	0.0059***	0.0061***	0.0162***	0.0075***	0.0004	0.0008
	(5.31)	(6.68)	(7.02)	(7.03)	(4.99)	(4.05)	(0.31)	(0.62)
DY	0.0108***	0.0065***	0.0057***	0.0063***	0.0174***	0.0092***	0.0024*	0.0031**
	(5.62)	(6.48)	(6.28)	(7.42)	(5.74)	(4.97)	(1.73)	(2.40)
EBITDA /EV	0.0116***	0.0068***	0.0062***	0.0061***	0.0174***	0.0088***	0.0021	0.0019
	(4.89)	(6.39)	(6.78)	(6.60)	(5.48)	(5.07)	(1.49)	(1.44)
INTMOM	0.0135***	0.0096***	0.0087***	0.0076***	0.0192***	0.0113***	0.0048***	0.0029**
	(5.64)	(8.92)	(8.43)	(8.98)	(6.11)	(6.19)	(3.14)	(2.28)
STMOM	0.0108***	0.0067***	0.0054***	0.0046***	0.0184***	0.0110***	0.0048***	0.0033**
	(4.36)	(5.45)	(4.78)	(4.04)	(5.64)	(5.95)	(3.01)	(2.19)
OP	0.0116***	0.0062***	0.0058***	0.0057***	0.0138***	0.0042***	-0.0016	-0.0017
	(4.98)	(6.67)	(5.61)	(5.46)	(4.23)	(2.57)	(-1.23)	(-1.32)
ES	0.0101***	0.0057***	0.0038***	0.0034***	0.0115***	0.0040**	-0.0009	-0.0011
	(3.44)	(4.26)	(3.00)	(2.81)	(3.24)	(2.18)	(-0.67)	(-0.82)
ROE	0.0109***	0.0063***	0.0067***	0.0064***	0.0163***	0.0077***	0.0015	0.0012
	(4.45)	(6.52)	(6.30)	(6.44)	(5.23)	(4.83)	(1.06)	(0.86)
INV	0.0097***	0.0055***	0.0052***	0.0053***	0.0124***	0.0032**	-0.0022*	-0.0022*
	(3.56)	(4.38)	(4.55)	(4.57)	(3.71)	(2.16)	(-1.83)	(-1.92)
NSI	0.0090***	0.0044***	0.0029***	0.0029***	0.0114***	0.0028*	-0.0026*	-0.0025*
	(3.65)	(4.54)	(2.95)	(3.04)	(3.71)	(1.68)	(-1.86)	(-1.79)

Table A.2. Equal-Weighted Returns on Long-only Attribute Portfolios (cont.)

	Panel C: Asia-Pacific				Panel D: South America			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0280***	0.0182***	0.0077**	0.0082**	0.0484***	0.0370***	0.0192***	0.0185***
	(5.25)	(4.47)	(2.19)	(2.32)	(3.55)	(3.59)	(3.20)	(3.21)
MAX	0.0593***	0.0496***	0.0379***	0.0389***	0.0723***	0.0625***	0.0454***	0.0452***
	(11.37)	(12.35)	(11.66)	(11.60)	(6.65)	(7.66)	(9.06)	(9.24)
MIN	-0.0110**	-0.0204***	-0.0287***	-0.0289***	0.0018	-0.0086	-0.0227***	-0.0232***
	(-2.23)	(-5.52)	(-8.91)	(-8.95)	(0.14)	(-0.85)	(-3.86)	(-4.14)
SD	0.0302***	0.0201***	0.0089***	0.0097***	0.0520***	0.0407***	0.0216***	0.0210***
	(5.41)	(4.70)	(2.45)	(2.60)	(3.85)	(3.96)	(3.36)	(3.42)
IVOL	0.0298***	0.0198***	0.0084**	0.0091**	0.0519***	0.0410***	0.0221***	0.0215***
	(5.40)	(4.63)	(2.33)	(2.46)	(3.85)	(3.98)	(3.43)	(3.47)
BETA	0.0171***	0.0072**	-0.0019	-0.0008	0.0338***	0.0237***	0.0084**	0.0083**
	(3.62)	(2.21)	(-0.62)	(-0.25)	(3.99)	(4.30)	(2.14)	(2.19)
TSKEW	0.0189***	0.0104***	0.0026	0.0027	0.0251***	0.0177***	0.0068***	0.0071***
	(5.37)	(4.00)	(1.03)	(1.04)	(4.14)	(4.14)	(2.87)	(2.93)
ISKEW	0.0185***	0.0100***	0.0022	0.0024	0.0240***	0.0169***	0.0072***	0.0071***
	(5.19)	(3.70)	(0.87)	(0.90)	(4.20)	(3.98)	(3.00)	(2.95)
MV	0.0093***	0.0006	-0.0047**	-0.0045**	0.0143***	0.0056***	0.0034*	0.0031*
	(2.79)	(0.27)	(-2.46)	(-2.26)	(2.96)	(2.76)	(1.90)	(1.73)
EP	0.0205***	0.0123***	0.0041**	0.0041**	0.0236***	0.0152***	0.0098***	0.0092***
	(5.79)	(4.52)	(2.09)	(2.03)	(3.97)	(4.09)	(2.88)	(2.78)
DY	0.0205***	0.0126***	0.0058***	0.0067***	0.0235***	0.0159***	0.0127***	0.0125***
	(6.96)	(5.66)	(2.86)	(3.40)	(4.22)	(4.50)	(3.97)	(4.04)
EBITDA/EV	0.0192***	0.0109***	0.0031	0.0036*	0.0296***	0.0200***	0.0129***	0.0122**
	(5.16)	(4.48)	(1.49)	(1.71)	(2.85)	(2.57)	(2.58)	(2.52)
INTMOM	0.0169***	0.0083***	0.0023	0.0007	0.0248***	0.0160***	0.0087***	0.0071***
	(4.73)	(3.05)	(0.86)	(0.31)	(3.34)	(2.93)	(2.83)	(2.75)
STMOM	0.0169***	0.0087***	0.0016	0.0003	0.0243***	0.0166***	0.0114***	0.0105***
	(4.45)	(3.00)	(0.65)	(0.14)	(4.66)	(5.01)	(3.68)	(3.50)
OP	0.0159***	0.0075***	-0.0004	0.0000	0.0185***	0.0099***	0.0069**	0.0067**
	(4.19)	(2.95)	(-0.17)	(-0.01)	(3.27)	(3.22)	(2.29)	(2.28)
ES	0.0149***	0.0078***	-0.0005	-0.0001	0.0106**	0.0041*	0.0000	0.0002
	(3.36)	(2.85)	(-0.18)	(-0.05)	(2.03)	(1.77)	(0.00)	(0.08)
ROE	0.0158***	0.0076***	0.0004	0.0004	0.0247***	0.0162***	0.0096***	0.0090***
	(4.38)	(3.35)	(0.16)	(0.18)	(4.17)	(4.60)	(2.63)	(2.61)
INV	0.0122***	0.0037	-0.0048*	-0.0044*	0.0135**	0.0058**	0.0011	0.0010
	(3.23)	(1.41)	(-1.79)	(-1.67)	(2.37)	(2.10)	(0.40)	(0.34)
NSI	0.0152***	0.0059**	-0.0015	-0.0013	0.0238***	0.0153***	0.0093***	0.0096***
	(4.16)	(2.44)	(-0.69)	(-0.59)	(3.76)	(3.74)	(2.89)	(3.14)

Table A.2. Equal-Weighted Returns on Long-only Attribute Portfolios (cont.)

	Panel E: MENA				Panel F: Japan			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0157**	0.0060	0.0001	0.0012	0.0166***	0.0129***	0.0126***	0.0121***
	(2.40)	(1.43)	(0.01)	(0.28)	(4.03)	(8.09)	(7.68)	(7.21)
MAX	0.0500***	0.0401***	0.0336***	0.0345***	0.0273***	0.0237***	0.0233***	0.0222***
	(7.51)	(9.42)	(7.83)	(8.61)	(6.82)	(15.30)	(14.24)	(14.36)
MIN	-0.0240***	-0.0327***	-0.0375***	-0.0366***	-0.0004	-0.0044***	-0.0045***	-0.0045***
	(-4.28)	(-9.30)	(-9.80)	(-10.55)	(-0.12)	(-2.85)	(-2.71)	(-2.58)
SD	0.0196***	0.0090**	0.0037	0.0051	0.0180***	0.0142***	0.0139***	0.0130***
	(2.94)	(2.15)	(0.80)	(1.22)	(4.26)	(8.70)	(8.59)	(7.69)
IVOL	0.0194***	0.0089**	0.0029	0.0041	0.0188***	0.0149***	0.0145***	0.0135***
	(2.85)	(2.07)	(0.62)	(0.99)	(4.60)	(9.32)	(9.08)	(8.26)
BETA	0.0146***	0.0054	0.0014	0.0015	0.0133***	0.0093***	0.0094***	0.0086***
	(2.90)	(1.55)	(0.36)	(0.44)	(3.36)	(6.57)	(6.74)	(6.05)
TSKEW	0.0157***	0.0090***	0.0048	0.0058**	0.0092***	0.0051***	0.0048***	0.0047***
	(3.36)	(2.86)	(1.57)	(2.14)	(2.79)	(3.52)	(3.77)	(3.63)
ISKEW	0.0146***	0.0080***	0.0046	0.0056**	0.0093***	0.0052***	0.0052***	0.0051***
	(3.16)	(2.59)	(1.55)	(2.06)	(2.75)	(3.58)	(4.27)	(4.06)
MV	0.0074	-0.0008	-0.0042*	-0.0046*	0.0068**	0.0025***	0.0034***	0.0033***
	(1.64)	(-0.26)	(-1.75)	(-1.87)	(2.09)	(3.39)	(5.80)	(5.49)
EP	0.0158***	0.0089***	0.0047**	0.0045**	0.0103***	0.0064***	0.0059***	0.0059***
	(4.27)	(3.64)	(2.30)	(2.12)	(3.66)	(4.97)	(6.38)	(6.18)
DY	0.0203***	0.0141***	0.0114***	0.0105***	0.0107***	0.0070***	0.0065***	0.0067***
	(4.69)	(4.61)	(3.96)	(3.81)	(3.80)	(4.55)	(5.15)	(5.39)
EBITDA/EV	0.0176***	0.0110***	0.0078***	0.0069***	0.0106***	0.0063***	0.0058***	0.0057***
	(4.46)	(3.71)	(2.89)	(2.57)	(3.44)	(4.93)	(4.74)	(4.61)
INTMOM	0.0139***	0.0068*	0.0027	0.0022	0.0106***	0.0066***	0.0066***	0.0054***
	(2.68)	(1.84)	(0.76)	(0.84)	(3.27)	(4.18)	(4.29)	(5.19)
STMOM	0.0178***	0.0108***	0.0062**	0.0053**	0.0108***	0.0076***	0.0074***	0.0061***
	(4.01)	(3.62)	(2.34)	(2.11)	(3.23)	(5.19)	(5.04)	(5.00)
OP	0.0141***	0.0068**	0.0018	0.0011	0.0079**	0.0043***	0.0039***	0.0041***
	(2.86)	(1.99)	(0.58)	(0.35)	(2.31)	(3.58)	(3.31)	(3.52)
ES	0.0094**	0.0031	-0.0009	-0.0010	0.0059*	0.0067***	0.0067***	0.0064***
	(1.96)	(0.89)	(-0.27)	(-0.32)	(1.84)	(4.28)	(5.04)	(4.98)
ROE	0.0109***	0.0041	0.0020	0.0009	0.0090***	0.0052***	0.0061***	0.0060***
	(2.61)	(1.38)	(0.69)	(0.32)	(2.80)	(4.93)	(5.93)	(5.82)
INV	0.0103**	0.0039	-0.0017	-0.0024	0.0112***	0.0077***	0.0071***	0.0071
	(2.17)	(1.06)	(-0.63)	(-0.87)	(2.80)	(6.05)	(5.87)	(6.03)
NSI	0.0073*	0.0001	-0.0013	-0.0019	0.0106***	0.0065***	0.0059***	0.0055***
	(1.74)	(0.02)	(-0.56)	(-0.82)	(3.34)	(5.62)	(5.47)	(5.25)

Table A.2. Equal-Weighted Returns on Long-only Attribute Portfolios (cont.)

	Panel G: Global			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0248***	0.0142***	0.0030**	0.0031**
	(5.78)	(5.52)	(1.97)	(2.00)
MAX	0.0540***	0.0436***	0.0329***	0.0331***
	(12.84)	(17.44)	(22.93)	(21.16)
MIN	-0.0118***	-0.0218***	-0.0316***	-0.0316***
	(-3.03)	(-9.66)	(-22.60)	(-22.26)
SD	0.0270***	0.0162***	0.0045***	0.0047***
	(6.04)	(6.06)	(2.87)	(2.87)
IVOL	0.0274***	0.0169***	0.0049***	0.0051***
	(6.27)	(6.34)	(3.28)	(3.26)
BETA	0.0143***	0.0034**	-0.0026**	-0.0027**
	(3.93)	(2.00)	(-2.04)	(-2.11)
TSKEW	0.0172***	0.0084***	0.0023***	0.0021**
	(6.20)	(6.49)	(2.57)	(2.33)
ISKEW	0.0176***	0.0087***	0.0030***	0.0029***
	(6.35)	(6.91)	(3.63)	(3.38)
MV	0.0097***	0.0008*	-0.0004	-0.0005
	(4.36)	(1.72)	(-1.02)	(-1.27)
EP	0.0174***	0.0085***	0.0019**	0.0020**
	(5.95)	(5.21)	(2.19)	(2.47)
DY	0.0177***	0.0094***	0.0035***	0.0040***
	(6.94)	(6.56)	(3.81)	(4.73)
EBITDA/EV	0.0192***	0.0102***	0.0031***	0.0030***
	(6.32)	(6.85)	(3.57)	(3.46)
INTMOM	0.0193***	0.0105***	0.0046***	0.0028***
	(6.79)	(5.96)	(3.31)	(2.64)
STMOM	0.0192***	0.0109***	0.0046***	0.0032***
	(6.35)	(6.06)	(3.88)	(2.99)
OP	0.0143***	0.0047***	-0.0010	-0.0010
	(4.76)	(3.43)	(-1.08)	(-1.17)
ES	0.0102***	0.0033**	-0.0023**	-0.0025**
	(3.14)	(2.22)	(-2.17)	(-2.34)
ROE	0.0159***	0.0073***	0.0010	0.0007
	(5.52)	(4.83)	(1.16)	(0.80)
INV	0.0124***	0.0032**	-0.0028***	-0.0027***
	(3.94)	(2.23)	(-2.63)	(-2.65)
NSI	0.0133***	0.0040***	-0.0018**	-0.0020**
	(4.66)	(3.01)	(-2.18)	(-2.41)

Table A.3. Value-Weighted Returns on Long-Only Attribute Portfolios

For every month in the sample period, quintile portfolios are formed by sorting the country-industry indexes based on nineteen index attributes over the past month. Quintile 1 (5) includes the indexes with the lowest (highest) values for the relevant index attribute. The table reports the value-weighted average raw (R_{Raw}) and risk-adjusted returns (alphas) for the long-only attribute portfolios, which go long the quintile 5. The Jensen alphas for the regional long-only portfolios are estimated using the regional versions of the CAPM, the Fama-French 3-Factor Model, and the Fama-French-Carhart 4-Factor Model, which are denoted as α_{CAPM}, α_{FF3}, and α_{FFC4}, respectively. The alphas for the global portfolio presented in Panel G are obtained using the global versions of the above-mentioned asset-pricing models. The Newey-West (1987) adjusted t-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5% and 10% levels, respectively.

	North America				Europe			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0059*	0.0009	0.0013	0.0016	0.0164***	0.0064**	-0.0008	-0.0006
	(1.87)	(0.55)	(0.74)	(0.93)	(3.47)	(2.18)	(-0.30)	(-0.21)
MAX	0.0214***	0.0161***	0.0158***	0.0165***	0.0427***	0.0326***	0.0254***	0.0257***
	(6.81)	(10.08)	(9.74)	(10.24)	(9.13)	(11.86)	(10.02)	(10.44)
MIN	-0.0090***	-0.0143***	-0.0141***	-0.0134***	-0.0191***	-0.0287***	-0.0352***	-0.0348***
	(-3.05)	(-9.29)	(-8.43)	(-7.69)	(-4.60)	(-11.82)	(-16.14)	(-15.72)
SD	0.0066**	0.0017	0.0019	0.0029*	0.0179***	0.0078***	0.0004	0.0008
	(1.98)	(1.06)	(1.04)	(1.66)	(3.63)	(2.59)	(0.13)	(0.28)
IVOL	0.0086***	0.0037**	0.0031*	0.0043**	0.0170***	0.0070**	-0.0008	-0.0004
	(2.57)	(2.08)	(1.65)	(2.28)	(3.38)	(2.31)	(-0.28)	(-0.15)
BETA	0.0077***	0.0025**	0.0029**	0.0036***	0.0106***	0.0007	-0.0030**	-0.0025*
	(2.73)	(2.08)	(2.42)	(3.07)	(3.03)	(0.43)	(-2.03)	(-1.77)
TSKEW	0.0093***	0.0040***	0.0050***	0.0056***	0.0101***	0.0011	-0.0017	-0.0015
	(4.26)	(3.12)	(3.85)	(4.71)	(3.46)	(0.69)	(-0.99)	(-0.91)
ISKEW	0.0079***	0.0028**	0.0043***	0.0048***	0.0110***	0.0021	-0.0007	-0.0009
	(3.19)	(1.98)	(3.07)	(3.52)	(3.91)	(1.40)	(-0.46)	(-0.63)
MV	0.0093***	0.0041***	0.0053***	0.0056***	0.0095***	0.0010	-0.0015*	-0.0014
	(4.72)	(4.99)	(8.00)	(8.27)	(3.88)	(0.93)	(-1.75)	(-1.63)
EP	0.0101***	0.0053***	0.0047***	0.0050***	0.0115***	0.0022	-0.0019*	-0.0014
	(4.81)	(4.33)	(5.68)	(5.82)	(3.64)	(1.31)	(-1.68)	(-1.35)
DY	0.0096***	0.0044***	0.0042***	0.0049***	0.0139***	0.0049***	0.0014	0.0024*
	(4.82)	(3.23)	(3.26)	(3.99)	(4.81)	(2.99)	(1.06)	(1.86)
EBITDA/EV	0.0107***	0.0057***	0.0055***	0.0051***	0.0112***	0.0026*	-0.0011	-0.0013
	(4.57)	(4.13)	(4.01)	(3.69)	(3.97)	(1.77)	(-0.75)	(-0.93)
INTMOM	0.0126***	0.0080***	0.0085***	0.0068***	0.0139***	0.0053***	0.0015	-0.0008
	(5.18)	(6.65)	(7.15)	(9.34)	(4.88)	(3.32)	(1.06)	(-0.80)
STMOM	0.0102***	0.0057***	0.0061***	0.0052***	0.0125***	0.0044***	0.0013	-0.0004
	(4.31)	(5.12)	(5.24)	(4.70)	(4.28)	(2.85)	(0.88)	(-0.32)
OP	0.0122***	0.0066***	0.0066***	0.0063***	0.0109***	0.0014	-0.0008	-0.0010
	(5.35)	(5.75)	(5.44)	(5.38)	(3.95)	(1.09)	(-0.64)	(-0.86)
ES	0.0104***	0.0062***	0.0059***	0.0052***	0.0096***	0.0022	-0.0001	-0.0005
	(3.95)	(4.87)	(4.50)	(4.21)	(2.94)	(1.39)	(-0.10)	(-0.36)
ROE	0.0100***	0.0052***	0.0063***	0.0059***	0.0115***	0.0028**	0.0007	0.0002
	(4.00)	(4.14)	(4.75)	(4.97)	(4.32)	(2.17)	(0.55)	(0.14)
INV	0.0085***	0.0041***	0.0048***	0.0047***	0.0106***	0.0012	-0.0011	-0.0012
	(3.36)	(3.45)	(3.92)	(3.74)	(3.40)	(0.93)	(-0.87)	(-0.91)
NSI	0.0061**	0.0008	0.0010	0.0008	0.0083***	-0.0010	-0.0043***	-0.0041***
	(2.17)	(0.53)	(0.62)	(0.52)	(2.74)	(-0.68)	(-3.08)	(-3.00)

Table A.3. Value-Weighted Returns on Long-Only Attribute Portfolios (cont.)

	Asia-Pacific				South America			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0165***	0.0065	-0.0013	0.0001	0.0231**	0.0124*	0.0028	0.0032
	(3.10)	(1.43)	(-0.29)	(0.02)	(2.22)	(1.70)	(0.59)	(0.68)
MAX	0.0445***	0.0344***	0.0251***	0.0267***	0.0552***	0.0451***	0.0318***	0.0319***
	(8.24)	(7.64)	(5.80)	(6.12)	(5.47)	(6.18)	(6.44)	(6.60)
MIN	-0.0193***	-0.0292***	-0.0353***	-0.0353***	-0.0095	-0.0197***	-0.0252***	-0.0249***
	(-3.89)	(-7.93)	(-9.84)	(-9.80)	(-1.00)	(-2.83)	(-5.40)	(-5.55)
SD	0.0178***	0.0073	-0.0018	-0.0002	0.0278**	0.0167**	0.0061	0.0062
	(3.12)	(1.51)	(-0.38)	(-0.03)	(2.49)	(2.17)	(1.03)	(1.10)
IVOL	0.0180***	0.0076	-0.0017	-0.0001	0.0299***	0.0192**	0.0101	0.0102
	(3.21)	(1.57)	(-0.35)	(-0.01)	(2.68)	(2.40)	(1.61)	(1.64)
BETA	0.0108**	0.0005	-0.0060*	-0.0049	0.0223***	0.0120***	0.0012	0.0011
	(2.42)	(0.16)	(-1.86)	(-1.53)	(2.91)	(2.57)	(0.35)	(0.31)
TSKEW	0.0137***	0.0049*	-0.0028	-0.0026	0.0166***	0.0082*	0.0002	0.0001
	(3.80)	(1.69)	(-0.98)	(-0.88)	(2.57)	(1.95)	(0.04)	(0.02)
ISKEW	0.0125***	0.0036	-0.0043	-0.0042	0.0180***	0.0096**	0.0013	0.0012
	(3.37)	(1.23)	(-1.55)	(-1.45)	(2.89)	(2.30)	(0.38)	(0.35)
MV	0.0088***	0.0001	-0.0049***	-0.0048***	0.0135***	0.0042**	0.0018	0.0014
	(2.72)	(0.04)	(-2.80)	(-2.65)	(2.61)	(2.00)	(0.96)	(0.74)
EP	0.0168***	0.0079***	0.0001	0.0006	0.0174***	0.0076**	0.0024	0.0023
	(4.49)	(2.73)	(0.07)	(0.27)	(2.84)	(2.03)	(0.77)	(0.78)
DY	0.0169***	0.0088***	0.0025	0.0040*	0.0192***	0.0105***	0.0078***	0.0078***
	(5.30)	(3.65)	(1.10)	(1.76)	(3.29)	(3.57)	(2.76)	(2.74)
EBITDA/EV	0.0132***	0.0038	-0.0031	-0.0028	0.0167***	0.0073***	0.0052**	0.0051*
	(3.30)	(1.35)	(-1.32)	(-1.18)	(3.25)	(2.83)	(1.92)	(1.82)
INTMOM	0.0113***	0.0023	-0.0029	-0.0050**	0.0154**	0.0058	0.0023	0.0002
	(3.01)	(0.82)	(-1.01)	(-2.17)	(2.35)	(1.32)	(0.63)	(0.07)
STMOM	0.0096**	0.0010	-0.0049*	-0.0064**	0.0180***	0.0094**	0.0084**	0.0069**
	(2.47)	(0.32)	(-1.81)	(-2.37)	(3.11)	(2.54)	(2.46)	(2.14)
OP	0.0116***	0.0026	-0.0036	-0.0032	0.0164***	0.0072***	0.0044	0.0039
	(2.83)	(0.93)	(-1.40)	(-1.29)	(3.02)	(2.61)	(1.53)	(1.40)
ES	0.0107**	0.0031	-0.0049*	-0.0049*	0.0078	0.0012	-0.0011	-0.0010
	(2.39)	(1.02)	(-1.72)	(-1.69)	(1.56)	(0.46)	(-0.41)	(-0.36)
ROE	0.0104***	0.0013	-0.0049*	-0.0048*	0.0187***	0.0094***	0.0024	0.0018
	(2.67)	(0.47)	(-1.92)	(-1.87)	(3.29)	(3.19)	(0.85)	(0.68)
INV	0.0100**	0.0005	-0.0067***	-0.0066***	0.0138**	0.0059**	0.0035	0.0030
	(2.46)	(0.19)	(-2.68)	(-2.71)	(2.49)	(1.96)	(1.04)	(0.85)
NSI	0.0103***	0.0009	-0.0048**	-0.0045**	0.0171***	0.0079***	0.0054	0.0056
	(2.78)	(0.39)	(-2.18)	(-1.99)	(2.93)	(2.59)	(1.43)	(1.48)

Table A.3. Value-Weighted Returns on Long-Only Attribute Portfolios (cont.)

	MENA				Japan			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0062	-0.0051	-0.0090*	-0.0080*	0.0160***	0.0123***	0.0122***	0.0118***
	(0.81)	(-0.91)	(-1.78)	(-1.71)	(3.57)	(6.68)	(6.78)	(6.49)
MAX	0.0457***	0.0343***	0.0293***	0.0305***	0.0252***	0.0215***	0.0213***	0.0203***
	(5.80)	(6.49)	(5.27)	(5.93)	(5.89)	(12.23)	(12.00)	(11.60)
MIN	-0.0343***	-0.0439***	-0.0476***	-0.0470***	-0.0013	-0.0051***	-0.0051***	-0.0053***
	(-5.35)	(-10.04)	(-10.62)	(-11.31)	(-0.34)	(-3.04)	(-3.13)	(-3.06)
SD	0.0128	0.0011	-0.0021	-0.0009	0.0177***	0.0139***	0.0143***	0.0139***
	(1.56)	(0.19)	(-0.38)	(-0.18)	(3.79)	(7.60)	(7.82)	(7.44)
IVOL	0.0127	0.0009	-0.0031	-0.0019	0.0176***	0.0136***	0.0138***	0.0133***
	(1.47)	(0.16)	(-0.57)	(-0.40)	(3.79)	(7.43)	(7.24)	(6.77)
BETA	0.0121**	0.0024	-0.0008	-0.0009	0.0125***	0.0085***	0.0090***	0.0085***
	(2.10)	(0.66)	(-0.22)	(-0.27)	(2.95)	(5.25)	(5.65)	(5.39)
TSKEW	0.0110*	0.0032	-0.0013	-0.0006	0.0083**	0.0041***	0.0044***	0.0044***
	(1.81)	(0.78)	(-0.36)	(-0.18)	(2.47)	(2.71)	(2.87)	(2.82)
ISKEW	0.0091	0.0015	-0.0025	-0.0016	0.0094***	0.0052***	0.0057***	0.0055***
	(1.55)	(0.40)	(-0.68)	(-0.49)	(2.63)	(3.26)	(3.78)	(3.52)
MV	0.0071	-0.0007	-0.0040	-0.0044*	0.0067**	0.0023***	0.0031***	0.0029***
	(1.58)	(-0.24)	(-1.61)	(-1.78)	(2.09)	(3.37)	(5.80)	(5.35)
EP	0.0096**	0.0018	-0.0022	-0.0027	0.0080***	0.0042***	0.0038***	0.0038***
	(2.15)	(0.63)	(-0.89)	(-1.08)	(2.87)	(3.27)	(4.98)	(4.96)
DY	0.0130**	0.0059	0.0036	0.0015	0.0101***	0.0064***	0.0059***	0.0059***
	(2.31)	(1.41)	(1.03)	(0.43)	(3.58)	(4.19)	(4.43)	(4.51)
EBITDA/EV	0.0136***	0.0060*	0.0027	0.0019	0.0091***	0.0050***	0.0051***	0.0049***
	(2.98)	(1.83)	(0.98)	(0.66)	(2.89)	(4.13)	(4.13)	(4.00)
INTMOM	0.0103	0.0021	-0.0019	-0.0015	0.0094***	0.0053***	0.0053***	0.0042***
	(1.58)	(0.49)	(-0.45)	(-0.58)	(2.93)	(3.13)	(3.29)	(4.56)
STMOM	0.0118**	0.0035	-0.0010	-0.0018	0.0101***	0.0067***	0.0070***	0.0059***
	(2.21)	(0.94)	(-0.29)	(-0.63)	(2.89)	(4.37)	(4.46)	(4.39)
OP	0.0085*	0.0010	-0.0032	-0.0036	0.0074**	0.0038***	0.0038***	0.0040***
	(1.74)	(0.29)	(-1.13)	(-1.22)	(2.06)	(2.88)	(2.96)	(3.13)
ES	0.0072	0.0005	-0.0041	-0.0043	0.0052	0.0060***	0.0061***	0.0058***
	(1.40)	(0.13)	(-1.11)	(-1.18)	(1.64)	(4.03)	(4.35)	(4.34)
ROE	0.0088*	0.0011	0.0004	-0.0004	0.0083**	0.0043***	0.0056***	0.0055***
	(1.88)	(0.33)	(0.14)	(-0.11)	(2.46)	(3.84)	(5.36)	(5.37)
INV	0.0054	-0.0005	-0.0046	-0.0052*	0.0100**	0.0066***	0.0069***	0.0068***
	(1.24)	(-0.15)	(-1.56)	(-1.67)	(2.41)	(4.81)	(4.62)	(4.65)
NSI	0.0040	-0.0035	-0.0051*	-0.0058*	0.0086**	0.0043***	0.0040***	0.0035***
	(0.83)	(-1.07)	(-1.69)	(-1.91)	(2.47)	(3.67)	(3.24)	(2.81)

Table A.3. Value-Weighted Returns on Long-Only Attribute Portfolios (cont.)

	Global			
	R_{Raw}	α_{CAPM}	α_{FF3}	α_{FFC4}
RANGE	0.0130***	0.0012	-0.0036	-0.0031
	(2.84)	(0.47)	(-1.52)	(-1.26)
MAX	0.0393***	0.0279***	0.0239***	0.0242***
	(8.92)	(11.66)	(11.49)	(11.04)
MIN	-0.0223***	-0.0328***	-0.0370***	-0.0366***
	(-6.22)	(-17.04)	(-19.50)	(-19.39)
SD	0.0148***	0.0028	-0.0025	-0.0023
	(3.09)	(1.00)	(-0.99)	(-0.85)
IVOL	0.0156***	0.0044	-0.0031	-0.0034
	(3.30)	(1.57)	(-1.24)	(-1.32)
BETA	0.0078***	-0.0027***	-0.0028***	-0.0029***
	(2.60)	(-2.58)	(-2.68)	(-2.62)
TSKEW	0.0103***	0.0005	0.0008	0.0009
	(3.71)	(0.41)	(0.60)	(0.72)
ISKEW	0.0112***	0.0013	0.0024**	0.0023**
	(4.09)	(1.04)	(1.99)	(2.02)
MV	0.0086***	-0.0002	0.0004***	0.0004***
	(4.08)	(-0.97)	(3.13)	(3.27)
EP	0.0121***	0.0028**	-0.0007	-0.0005
	(4.43)	(2.08)	(-1.10)	(-0.72)
DY	0.0118***	0.0034***	0.0009	0.0015*
	(5.06)	(2.76)	(1.00)	(1.67)
EBITDA/EV	0.0112***	0.0021*	-0.0014	-0.0018
	(4.30)	(1.65)	(-1.28)	(-1.64)
INTMOM	0.0121***	0.0025*	0.0011	-0.0017**
	(4.26)	(1.65)	(0.73)	(-1.99)
STMOM	0.0131***	0.0042***	0.0023	0.0002
	(4.54)	(2.88)	(1.57)	(0.17)
OP	0.0109***	0.0015	0.0007	0.0005
	(4.25)	(1.33)	(0.60)	(0.41)
ES	0.0023	-0.0047***	-0.0049***	-0.0050***
	(0.80)	(-4.01)	(-3.71)	(-3.72)
ROE	0.0106***	0.0020	0.0014	0.0008
	(4.07)	(1.56)	(1.30)	(0.84)
INV	0.0097***	0.0000	-0.0003	-0.0005
	(3.19)	(-0.04)	(-0.33)	(-0.49)
NSI	0.0082***	-0.0015	-0.0035***	-0.0039***
	(3.03)	(-1.32)	(-3.25)	(-3.66)