

ABACUS ANALYTICS

Equity Factors and Portfolio Management:

Alpha Generation Versus Risk Control

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The Return Generating Process for Equities: 4 Components of Returns

$$R_t = \alpha + \beta_t^M \times M_t + \beta_t^I \times I_t + \beta_t^F \times F_t + \epsilon_t \quad \text{where}$$

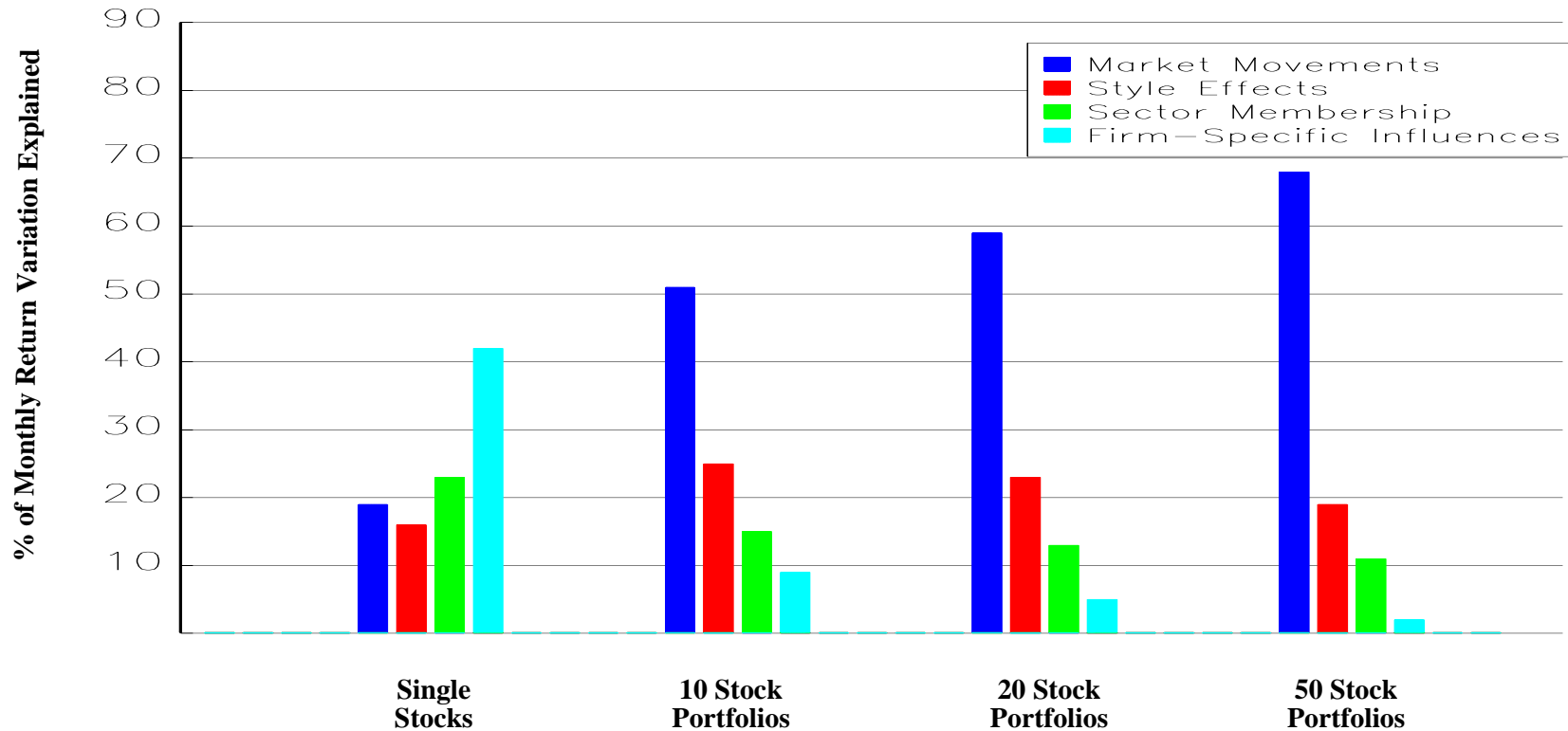
R_t = Nx1 vector of stock returns in month t
 α = 1x1 average return to all stocks (market drift)
 β_t^M = Nx1 vector normalized market betas
 M_t = 1x1 return on the S&P 500 in month t
 β_t^I = NxP matrix of 0-1 industry membership dummies
 I_t = Px1 vector of industry returns unrelated to F and M
 β_t^F = NxK matrix of normalized factor exposures
 F_t = Kx1 vector of systematic factor returns in month t
 ϵ_t = Nx1 vector of firm-specific returns

| | | | |
|--|--|---|--|
| $\alpha + \beta^M \times M$ | $\beta^I \times I$ | $\beta^F \times F$ | ϵ |
| General Market Movements | Industry Membership | Exposure to Systematic Factors | Firm-Specific Return |
| <p>This portion of returns is attributable to general market movements. It consists of a market drift term, α, which is the return that all stocks earn just for being a stock that month, plus the incremental return associated with the stock's <i>normalized</i> beta. Here, β^M is the normalized coefficient from a 60 month market model regression.</p> | <p>A portion of a stock's monthly return flows from its industry membership. Industry related returns are estimated as the coefficients, I, of the 0-1 dummy variable matrix β^I encoding industry membership. $\beta^I \times I$ equals the returns attributable to industry membership after controlling for market movements and factor exposures.</p> | <p>Returns from systematic factors arise from characteristics such as P/E, volatility, momentum, growth orientation, and capitalization. They are estimated as the coefficients, F, of the factor exposure matrix β^F. The NxK β^F contains, for each of the N stocks, the normalized exposures or <i>betas</i> to the K different systematic factors.</p> | <p>This portion of monthly return is <i>unrelated</i> to general market moves, industry membership, or systematic factors. ϵ is therefore unique or specific to the company. Firm specific returns are calculated as the residuals in the cross-sectional regression that relates monthly stock returns to the other systematic factors.</p> |



The Portfolio Management Process: The Relative Importance of the Active Bets

Percentage of Monthly Returns Explained by Systematic Factors





Systematic Factors and Active Portfolio Management

- Performance Attribution
 - (1) Which Factors are Driving Current Returns
 - (2) What Alpha Strategies are Working
 - (3) What Risk-Factors are Influencing Returns (Correlations)
 - (4) Sector-Style Interactions

- Risk Control
 - (1) Decomposing Portfolio Variance
 - (2) Explaining Unexpected Tracking Error
 - (3) Systematic versus Idiosyncratic Risk
 - (3) Identifying Risk Maximizing Positions

- Alpha Generation:
 - (1) Identifying Reliable Alpha-Generating Factors
 - (2) Optimal Weights for Multi-factor Alpha Strategies
 - (3) Forecasting Factor Returns
 - (4) Sector/Industry/Macro Specific Investing

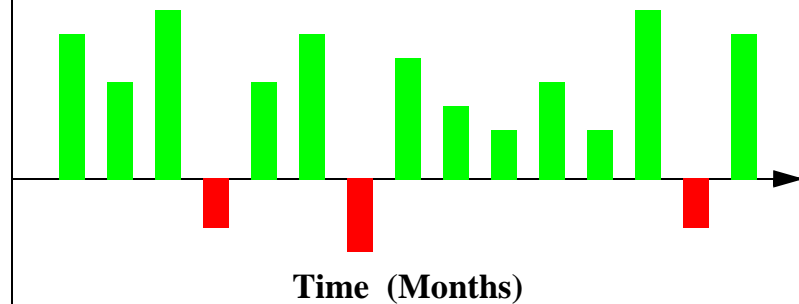


Alpha Generation Versus Risk Control: What Do The Factor Returns Look Like Across Time?

F is an Alpha Generator *and* a Risk Factor

Factor Returns are Consistently Large and Positive
Absolute Value of Factor Returns is Consistently Large

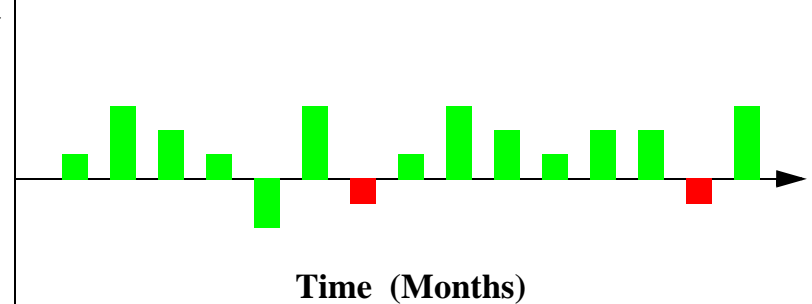
Monthly
Returns
to the
Factor
 F



F is an Alpha Generator

Factor Returns are Consistently Positive but Small
Absolute Value of Factor Returns is Rarely Large

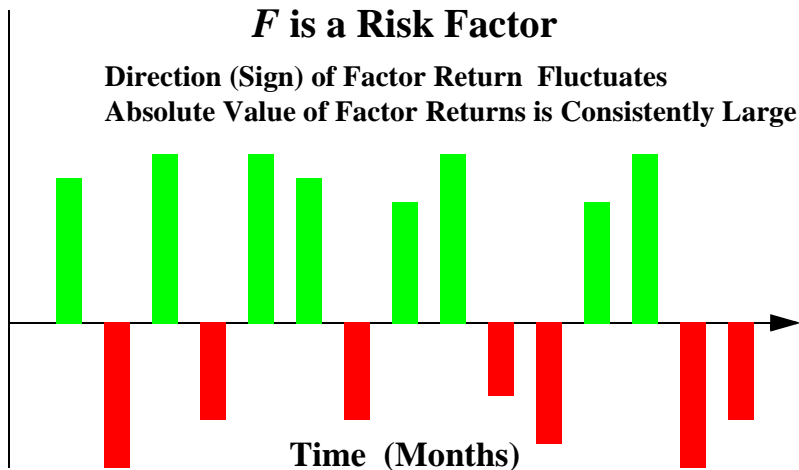
Monthly
Returns
to the
Factor
 F



F is a Risk Factor

Direction (Sign) of Factor Return Fluctuates
Absolute Value of Factor Returns is Consistently Large

Monthly
Returns
to the
Factor
 F



F was an Alpha Generator & Risk Factor *But Now is Only a Risk-Factor!*

Factor Returns were Large and Positive but now Fluctuate
Absolute Value of Factor Returns is Consistently Large

Monthly
Returns
to the
Factor
 F





Systematic Factors in U.S. Equity Returns: General Categories

| Potential Alpha Generators and Risk-Factors | |
|---|---|
| Traditional Value | Price/ Earnings, Price / Book, Price / Sales |
| Relative Value | Industry Relative Price Ratios Industry Relative Ratios Versus Past Averages |
| Historical Growth | Historical Growth in Sales, Earnings and Cash Flows |
| Expected Growth | Expected Earnings Growth Rates from I/B/E/S, First Call and Zacks |
| Profit Trends | First and Second Order Changes in Profit Margins, Asset Turnover, Overhead Ratios |
| Price Momentum | Price Performance Over the Past 6 - 12 Months (Trend Following Behavior) |
| Price Reversal | Price Performance Over the Past 1-4 Weeks (Trend Reversing Behavior) |
| Earnings Momentum | Revisions in Earnings Estimates Recent Earnings Surprises |
| Accelerating Sales | Second Order Change in Recent Sales |
| Small Size & Neglect | Premiums for Small and Neglected Stocks (Note Premiums are now Discounts) |

| Risk-Factors Only | |
|----------------------------------|---|
| Price Volatility | Price Volatility and Idiosyncratic Risk Market Risk (Beta) |
| Market Liquidity | Bid-Ask Spreads Share Turnover |
| Skewness of Returns | Investor Preferences for Skewed Distributions |
| Financial Leverage | Debt / Assets (Market & Book) Interest Expense Coverage |
| Earnings Risk | Variability of Historical Earnings and Sales Analyst Uncertainty About Future Earnings |
| Institutional Sponsorship | Change in Institutional Ownership Intensity of Analyst Coverage |
| Currency Risk | Price Sensitivity to Exchange Rate Movements |
| Other Macro Factors | Sensitivity to Yield Curve Changes, Inflation Shocks, and Economic Acitivity |



Systematic Factors in U.S. Equity Returns: Alpha Generators

| Category | Description of Individual Factor |
|--------------------------|---|
| Traditional Value | Price / Leading 12 Month Earnings (Weighted Avg of FY1 and FY2) Price / Trailing 12 Month Sales Price / Trailing 12 Month Cash Flow Price / Book Value Leading Dividend Yield |
| Relative Value | Industry Relative Price / Trailing Sales - Current Spread vs. 5 Year Avg Industry Relative Price / Trailing Earnings - Current Spread vs. 5Yr Avg Industry Relative Price / Trailing Cash Flow - Current Spread vs. 5Yr Avg Industry Relative Price / Trailing Sales Industry Relative Price / Forward Earnings Industry Relative Price / Trailing Cash Flow |
| Historical Growth | Consecutive Quarters of Positive Changes in Trailing 12 Month Cash Flow Consecutive Quarters of Positive Change in Quarterly Earnings 12 Month Change in Quarterly Cash Flow 3 Year Average Annual Sales Growth 3 Year Average Annual Earnings Growth Slope of Trend Line Through Last 4 Quarters of Trailing 12M Cash Flows |
| Expected Growth | 5 Year Expected Earnings Growth (First Call & I/B/E/S Consensus) Expected Earnings Growth: Fiscal Year 2 / Fiscal Year 1 (First Call & IBES) |
| Profit Trends | Consecutive Qtrs of Declines in (Receivables+Inventories) / Sales Consecutive Qtrs of Positive Change in Trailing 12M Cash Flow / Sales Consecutive Qtrs of Declines in Trailing 12 Month Overhead / Sales Industry Relative Trailing 12 Month (Receivables+Inventories) / Sales Industry Relative Trailing 12 Month Sales / Assets Trailing 12 Month Overhead / Sales Trailing 12 Month Earnings / Sales |

| Category | Description of Individual Factor |
|---------------------------|---|
| Small Size | Log of Market Capitalization Log of Stock Price Log of Trailing 12 Month Sales Log of Total Assets |
| Accelerating Sales | 3 Month Momentum in Quarterly Sales 6 Month Momentum in Trailing 12 Month Sales Change in Slope of 4 Quarter Trend Line through Quarterly Sales |
| Earnings Momentum | Change Since Last Report in Current Quarter (Q1) Estimate / Price 4 Week Change in Leading 12 Month Consensus Estimate / Price 8 Week Change in Leading 12 Month Consensus Estimate / Price Last Earnings Surprise / Current Price Last Earnings Surprise / Standard Deviation of Quarterly Estimates (SUE) |
| Price Momentum | Slope of 52 Week Trend Line (20 Day Lag) Percent Above 260 Day Low (20 Day Lag) 4/52 Week Price Oscillator (20 Day Lag) 39 Week Return (20 Day Lag) 51 Week Volume Price Trend (20 Day Lag) |
| Price Reversal | 5 Day Industry Relative Return 5 Day Money Flow / Volume 10 Day MACD - Signal Line 14 Day RSI (Relative Strength Indicator) 14 Day Stochastic 4 Week Industry Relative Return Last Month's Residual Return from CAPM Model |



Systematic Factors in U.S. Equity Returns: Risk-Factors Only

| Category | Description of Individual Factor |
|---------------------------|--|
| Price Volatility | 90 Day Price Volatility |
| | 60 Month Market Risk (Beta Coefficient from 60 Month CAPM) |
| | 60 Month Residual Risk (Regression Error from 60 Month CAPM) |
| | 90 Day Market Risk (Beta Coefficient from 60 Month CAPM) |
| | 90 Day Residual Risk (Regression Error from 60 Month CAPM) |
| Market Liquidity | 20 Day Average Bid-Ask Spread / Price |
| | 20 Day Average Turnover (Volume / Shares Outstanding) |
| | 20 Day Volume / 20 Day Price Volatility (%) |
| Institutional Sponsorship | Analyst Coverage |
| | 6 Month Change in Analyst Coverage |
| | Percentage of Months with Positive Increases in Analyst Coverage |
| Skewness of Returns | 90 Day Skewness of Returns |
| | 90 Day Co-Skewness of Returns with the S&P 500 |

| Category | Description of Individual Factor |
|--------------------|--|
| Earnings Risk | Coefficient of Variation: Last 8 Quarters of Trailing 12 Month Sales |
| | Coefficient of Variation: Last 8 Quarters of Trailing 12 Month Cash Flow |
| | Mean Absolute Deviation around 12 Quarter Trend Line in T12 Sales |
| | Mean Absolute Deviation around 12 Quarter Trend Line in T12 Earnings |
| | T24 Month Extraordinary Items + Discontinued Operations / Sales |
| Financial Leverage | Analyst Uncertainty (Standard Deviation of FY1 Estimates / Mean FY) |
| | Long-Term Debt / (Market Value Equity + Total Debt) |
| | Total Debt / (Market Value Equity + Total Debt) |
| | Total Debt / (Book Value Equity + Total Debt) |
| | Industry Relative Total Debt / (Market Value Equity + Total Debt) |
| Currency | Industry Relative Cash Flow / Interest Expense |
| | Sensitivity to Exchange Rates (Trade Weighted US Dollar) |
| Other Macro Risks | Sensitivity to 30 Year T-Bond Yields |
| | Sensitivity to Yield Curve Slope (30 Yr T-Bond - 6 Month T-Bill Yields) |
| | Sensitivity to Credit Risk Premiums (AA Corp - 30 Year T-Bond Yields) |
| | Sensitivity to Inflation Shocks (FIBER Leading Index - Inflation) |
| | Sensitivity to Economic Activity (FIBER Leading Index - Econ Growth) |



U.S. Equity Risk Models: Model Specifications

| Type | Factor Category | VENDOR AND RISK MODEL | | | | | |
|---|------------------------------|-----------------------|-------------------|---------------------|---------------------|--|-------------------------|
| | | Salomon RAM | Wilshire | BIRR | Vestek | BARRA E3 | Northfield Fundamental |
| Firm Specific Market Related | Price Reversal | | CAPM Residual | | | Relative Strength, α | Relative Strength |
| | Price Momentum | | | | | Volatility Composite | 52 Week H-L/H+L |
| | Price Volatility | | | | | Trading Activity | Share Turnover |
| | Market Liquidity | | | | | | |
| | Skewness of Returns | | | | | | |
| | Market Capitalization | | Log of Market Cap | | Log of Market Cap | $\text{Ln}(\text{Cap}), \text{Ln}(\text{Cap})^3$ | Log of Market Cap |
| Firm Specific Fundamental | Earnings Momentum | | Earnings Revision | | | Growth Composite | |
| | Expected Growth | | | | | Growth Composite | EPS Growth Rate |
| | Historical Growth | | Earnings Torpedo | | | | |
| | Profit Trends | | | | | | |
| | Traditional Value | | E/P, Book/Price | | E/P, Price/Book | E/P Composite, B/P | E/P, Book/Price |
| | Relative Value | | | | | | |
| | Financial Leverage | | | | | Leverage Composite | Debt / Equity |
| | Earnings Risk | | | | | Earnings Variability | σ^2 Around Trend |
| Dividend Yield | | | | | IAD Yield | Trailing 12M Yield | |
| Sponsorship | | | | | | | |
| Sensitivity to Macro Factors | Market Movements | APT Residuals | CAPM Beta | APT Residuals | Two Factor Beta | | |
| | Yield Curve Level | 20Yr T-Bond Yields | | | 15-20 Yr Treasuries | | |
| | Yield Curve Slope | TBond - TBill Yields | | Time Horizon Risk | | | |
| | Credit Premiums | AA Corps - TBonds | | Confidence Risk | | | |
| | Inflation Shocks | ARIMA Forecast | | Inflation Risk | | | |
| | Economic Activity | Industrial Production | | Business Cycle Risk | | | |
| | Exchange Rates | FED USD Index | | | | | Currency Sensitivity |



Evaluating Alpha Generators and Risk Factors: Three Dimensions of Performance

| Alpha Generators | |
|----------------------|---|
| Criterion | Property of F (Signed) |
| Profitability | F Is Large Across Time and for Many Stocks |
| Breadth | F is Large For Many Stocks |
| Reliability | F is Large Often |

Overall Strength...

Strength Across Stocks...

Strength Across Time...

| Risk-Factors | |
|--------------------------|---|
| Criterion | Property of $Abs\ Value\ F $ |
| Explanatory Power | $ F $ Is Large Across Time and for Many Stocks |
| Reach | $ F $ is Large For Many Stocks |
| Consistency | $ F $ is Large Often |



What Makes a Good Alpha Generator? Four Properties to Guide the Search

| Performance Criterion | Description of the Property |
|-----------------------|---|
| Profitability | The defining characteristic of an alpha-generator is its <i>profitability</i> . The more profitable an alpha generator, the more return it generates for a given level of factor exposure. We measure profitability as the performance spread between portfolios of high and low exposure stocks. Profitability partly reflects the alpha generator's <i>breadth</i> and <i>reliability</i> as described below. |
| Breadth | <i>Breadth</i> refers to the number of stocks for which the alpha generator is predictive. The greater the factor's breadth, the more likely it is that stocks with high factor sensitivities will outperform when the factor return is positive. Alpha generators with good breadth will forecast winners (and losers) across most sectors and size groups. |
| Reliability | The <i>reliability</i> of an alpha generator refers to its frequency of success. The more reliable the factor, the more often its returns are positive. Alpha generators with the same profitability can have different reliability characteristics, with some repeatedly delivering small returns and others occasionally delivering substantial returns. |
| Symmetry | For alpha generators, we consider four dimensions of performance <i>symmetry</i> : long-short, bull-bear, big-small, and inter-sector. The respective indicators compare the factor's performance in long versus short positions, bull versus bear markets, large versus small stocks, and across sectors. |

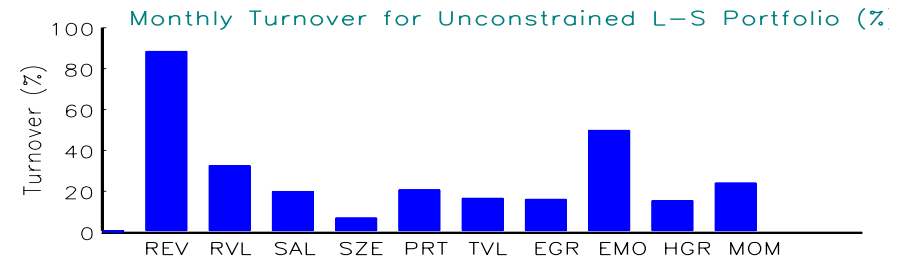
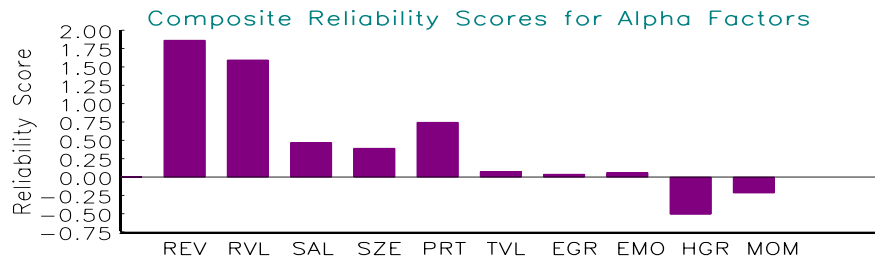
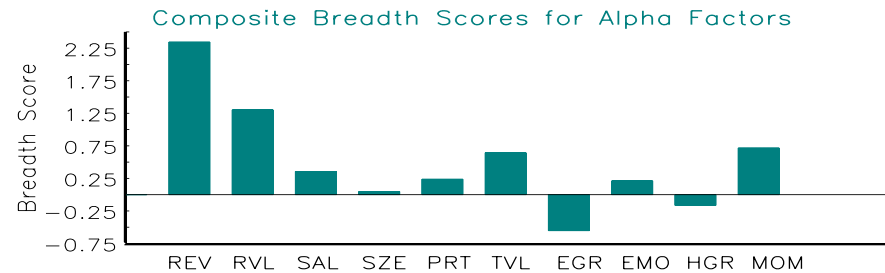
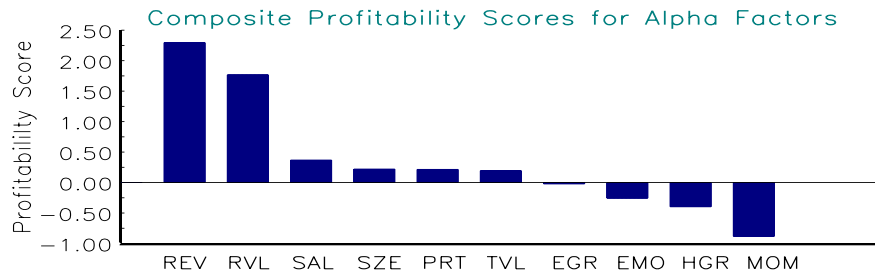


Evaluating Alpha-Generators: Performance Statistics

| Criterion | Performance Statistic |
|---------------|--|
| Profitability | Average Across Time: Cross-Sectional Correlation Coefficient (IC) (Factor Exposures & Base Model Residuals) |
| | Average Across Time: Spearman Rank Correlation (Factor Exposures & Base Model Residuals) |
| | Sharpe Ratio: Decile 10-1 Performance Spread for Sector Neutral Decile 10-1 Performance Spread |
| | Sharpe Ratio using Pure Play Factor Returns (Coefficient from Pure Play Regression) |
| | Downside Sharpe Ratio: Pure Play Factor Returns Adjusted by the Semi-Standard Deviation |
| Breadth | Average Across Time: T Statistic from Pure Play Regression (Cross-Sectional) |
| | Average Across Time: Percent of Sectors for Which the Sector Information Coefficient is Positive |
| | Average Across Time: Ordering Accuracy of Rankings Across Factor Deciles $\sum (Decile_x - Decile_{x-1}) > 0 / 9$ |
| | Average Across Time: Advance-Divide Breadth Indicator $(\% \text{ Advancers in } 9-10 - \% \text{ in } 1-8 + \% \text{ Dwn } 1-2 - \% 3-10)/2$ |
| | Percent of Sectors for Which the Decile 10-1 Sharpe Ratio is Greater than 1 |
| Reliability | Percent of Months Unconstrained Decile 10-1 Performance Spread is Positive |
| | Percent of Months Sector-Neutral Decile 10-1 Performance Spread is Positive |
| | Percent of Months Size-Neutral Decile 10-1 Performance Spread is Positive |
| | Percent of Months Pure Play Factor Return is Positive |
| | Percent of Months T Statistic from Pure Play Regression is Greater than 1 |
| Symmetry | Long-Short Symmetry: Sharpe Ratio Decile 10 - Sharpe Ratio Decile 1 |
| | Bull-Bear Symmetry: Sharpe Ratio Up Months - Sharpe Ratio Down Months (Deciles 10-1) |
| | Large-Small Symmetry: Sharpe Ratio S&P 500 - Sharpe Ratio S&P 600 (Deciles 10-1) |
| | Coefficient of Variation: Sector Specific Sharpe Ratios Based on Decile 10-1 Performance Spread |
| Miscellaneous | Monthly Turnover |



Performance of Alpha Generators: 60 Months: September 1998 - August 2003



Performance Summary: 60 Months: Sept 1998 – Aug 2003

| Abbrv | Alpha Factor | COMPOSITE SCORES | | | | RANKINGS (1-10) | | | |
|-------|----------------------------------|------------------|---------|-------------|----------|-----------------|---------|-------------|----------|
| | | Profitability | Breadth | Reliability | Turnover | Profitab | Breadth | Reliability | Turnover |
| REV | EQW Composite: Price Reversal | 2.30 | 2.34 | 1.86 | 88 | 1 | 1 | 1 | 1 |
| RVL | EQW Composite: Relative Value | 1.77 | 1.30 | 1.59 | 32 | 2 | 2 | 2 | 3 |
| SAL | EQW Composite: Accelerating Sale | 0.37 | 0.36 | 0.47 | 20 | 3 | 5 | 4 | 6 |
| SZE | EQW Composite: Small Size | 0.22 | 0.05 | 0.39 | 7 | 4 | 8 | 5 | 10 |
| PRT | EQW Composite: Profit Trends | 0.22 | 0.24 | 0.74 | 21 | 5 | 6 | 3 | 5 |
| TVL | EQW Composite: Traditional Value | 0.19 | 0.64 | 0.08 | 17 | 6 | 4 | 6 | 7 |
| EGR | EQW Composite: Expected Growth | -0.02 | -0.55 | 0.04 | 16 | 7 | 10 | 8 | 8 |
| EMO | EQW Composite: Earnings Momentum | -0.26 | 0.21 | 0.06 | 50 | 8 | 7 | 7 | 2 |
| HGR | EQW Composite: Historical Growth | -0.39 | -0.16 | -0.51 | 15 | 9 | 9 | 10 | 9 |
| MOM | EQW Composite: Price Momentum | -0.88 | 0.72 | -0.22 | 24 | 10 | 3 | 9 | 4 |



What Makes a Good Risk-Factor? Four Properties to Guide the Search

| Performance Criterion | Description of the Property |
|--------------------------|--|
| Explanatory Power | The defining characteristic of a risk-factor is its <i>explanatory power</i> , the factor's ability to explain the correlation structure of stock returns. The greater the factor's explanatory power, the greater the tendency for stocks with similar factor sensitivities to move together. A factor with high explanatory power frequently will generate large positive <i>or</i> negative returns. |
| Reach | The risk factor should influence the returns for <i>many</i> stocks. That is, factor sensitivities should be help explain correlations in most sectors and size groups. <i>Reach</i> measures the cross-sectional robustness of the risk factor. The greater the factor's reach, the greater the likelihood that a stock with high factor sensitivity will move when the market prices the factor (i.e. when the factor returns is strongly positive or negative). |
| Consistency | The risk-factor should be important across <i>time</i> . The more months in which the absolute value of the factor return is large (big positive or big negative returns), the greater will be its explanatory power over time. A <i>consistent</i> risk-factor will frequently create tracking error when managers diverge from the benchmark exposure to the factor. |
| Normality | The statistical properties of the factor exposures should resemble those of monthly stock returns, which are approximately <i>log-normally distributed</i> . Accordingly, the skewness of the distribution of the factor exposures should be close to zero, and the kurtosis close to three (tails of the distribution). |

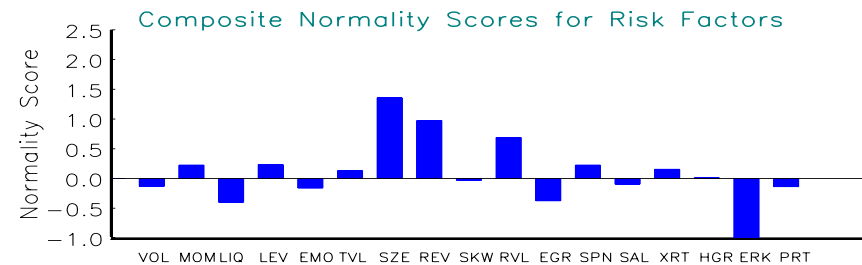
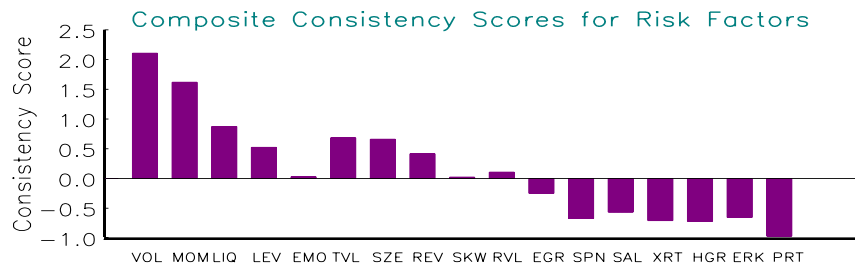
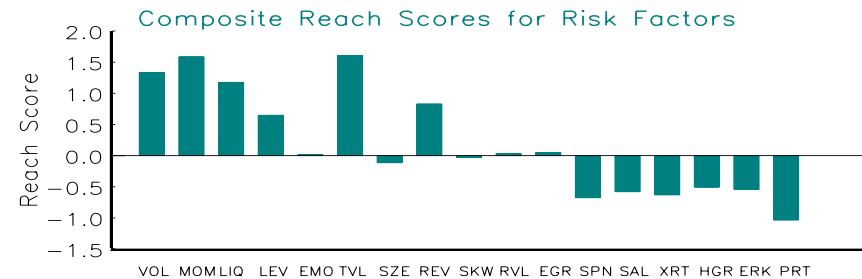
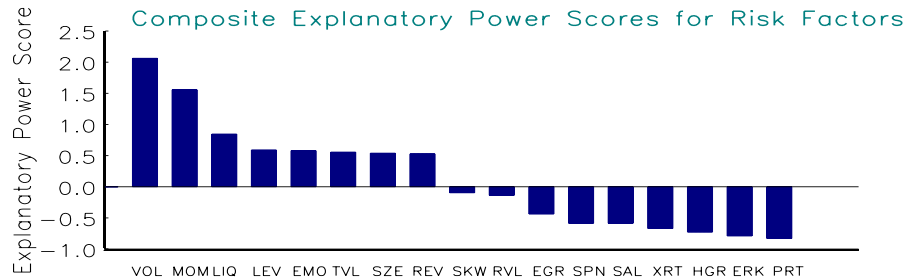


Evaluating Risk-Factors: Performance Statistics

| Criterion | Performance Statistic |
|-------------------|--|
| Explanatory Power | Average Across Time: Absolute Value of Cross-Sectional Correlation Coefficient (IC) - Unadjusted Returns |
| | Average Across Time: Absolute Value of Sector-Neutral Decile 10-1 Performance Spread |
| | Average Across Time: Absolute Value of Return on Pure Play Factor Portfolio (Base Model) |
| | Average Across Time: R^2 of Pure Play Cross-Sectional Regression for Factor |
| | Average Across Portfolios: Tracking Error Reduction Achieved by Including Factor in Risk-Model |
| Reach | Average Across Time: Absolute Value of Cross-Sectional T Statistic from Pure Play Regression |
| | Average Across Time: Ordering Accuracy of Factor Decile Rankings: Max of $\sum (Decile_x - Decile_{x-1}) > 0$ or < 0 |
| | Average Across Time: Percent of Sectors for Which the Sector IC is Greater than .1 or less than -0.1 |
| | Average Across Time: Advance-Decline Reach Indicator |
| | Percent of Stocks for Which the Time Series Regression Coefficient for BxF is > 2 |
| Consistency | Annualized Volatility of Sector-Neutral Decile 10-1 Performance Spread |
| | Annualized Volatility of Size-Neutral Decile 10-1 Performance Spread |
| | Annualized Volatility of Pure Play Factor Return |
| | Median Absolute Value of the T Statistic from the Pure Play Regression |
| | Percent of Months T Statistic from Pure Play Regression is Greater than 2.5 or Less Than -2.5 |
| Normality | Average Across Time: Skewness of Cross-Sectional Factor Exposures |
| | Average Across Time: Kurtosis of Cross-Sectional Factor Exposures (Normal = 3) |
| | Average Across Time: % of Cross-Sectional Factor Exposures $> 2.5\sigma$ (Normal = .621%) |
| | Average Across Time: % of Cross-Sectional Factor Exposures $< -2.5\sigma$ (Normal = .621%) |
| | Average Across Time: Chi Square Confidence in Rejecting Normality of Factor Exposures |



Performance of Risk-Factors: 60 Months: September 1998 - August 2003



Performance Summary

COMPOSITE SCORES

RANKINGS (1-17)

| Abbrv | Risk Factor | Explanatory Power | Reach | Consistency | Normality | Power | Reach | Consistency | Normality |
|-------|----------------------------------|-------------------|-------|-------------|-----------|-------|-------|-------------|-----------|
| VOL | EQW Composite: Price Volatility | 2.06 | 1.33 | 2.11 | -0.13 | 1 | 3 | 1 | 12 |
| MOM | EQW Composite: Price Momentum | 1.56 | 1.59 | 1.62 | 0.23 | 2 | 2 | 2 | 5 |
| LIQ | EQW Composite: Liquidity | 0.85 | 1.17 | 0.87 | -0.40 | 3 | 4 | 3 | 16 |
| LEV | EQW Composite: Financial Leverag | 0.59 | 0.65 | 0.52 | 0.23 | 4 | 6 | 6 | 4 |
| EMO | EQW Composite: Earnings Momentum | 0.58 | 0.01 | 0.03 | -0.16 | 5 | 9 | 9 | 14 |
| TVL | EQW Composite: Traditional Value | 0.56 | 1.61 | 0.68 | 0.13 | 6 | 1 | 4 | 8 |
| SZE | EQW Composite: Small Size | 0.54 | -0.11 | 0.66 | 1.36 | 7 | 11 | 5 | 1 |
| REV | EQW Composite: Price Reversal | 0.53 | 0.83 | 0.42 | 0.98 | 8 | 5 | 7 | 2 |
| SKW | EQW Composite: Skewness | -0.09 | -0.03 | 0.03 | -0.03 | 9 | 10 | 10 | 10 |
| RVL | EQW Composite: Relative Value | -0.14 | 0.04 | 0.11 | 0.69 | 10 | 8 | 8 | 3 |
| EGR | EQW Composite: Expected Growth | -0.44 | 0.05 | -0.25 | -0.37 | 11 | 7 | 11 | 15 |
| SPN | EQW Composite: Sponsorship | -0.59 | -0.68 | -0.67 | 0.23 | 12 | 16 | 14 | 6 |
| SAL | EQW Composite: Accelerating Sale | -0.59 | -0.58 | -0.56 | -0.09 | 13 | 14 | 12 | 11 |
| XRT | EQW Composite: Currency Exposure | -0.67 | -0.63 | -0.71 | 0.15 | 14 | 15 | 15 | 7 |
| HGR | EQW Composite: Historical Growth | -0.73 | -0.50 | -0.72 | 0.01 | 15 | 12 | 16 | 9 |
| ERK | EQW Composite: Earnings Risk | -0.79 | -0.55 | -0.66 | -1.05 | 16 | 13 | 13 | 17 |
| PRT | EQW Composite: Profit Trends | -0.83 | -1.03 | -0.97 | -0.14 | 17 | 17 | 17 | 13 |