

# CREDIT SUISSE COMPOSITE ALPHA FACTORS

Credit Suisse developed the comprehensive factors and tested them back to 1980; tested them individually and in composite format; created decile portfolios on unconstrained, sector-neutral and sector-only bases; and analyzed the results using long-short and rank information coefficients.

CATEGORY	COMPOSITE ALPHA FACTOR	UNDERLYING ALPHA MEASUREMENT – Equity Factor Listing
VALUE	Traditional Value	Price / Forward Earnings Price / Trailing Sales Price / Trailing Cash Flow Dividend Yield Price / Book Value
	Relative Value	Industry Relative Price / Trailing Sales (Current Spread vs. 5-Year Average) Industry Relative Price / Trailing Earnings (Current Spread vs. 5-Year Average) Industry Relative Price / Trailing Cash Flow (Current Spread vs. 5-Year Average) Industry Relative Price / Trailing Sales Industry Relative Price / Forward Earnings Industry Relative Price / Trailing Cash Flow
GROWTH	Historical Growth	Consecutive Quarters of Positive Change 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 12-Quarter Trendline in Trailing 12-Month Earnings Slope of Trendline through Last 4 Quarters of Trailing 12-Month Cash Flows
	Expected Growth	5-Year Expected Earnings Growth (I/B/E/S Consensus) Expected Earnings Growth: Fiscal Year 2 / Fiscal Year 1 (IBES)
PROFITABILITY	Profit Trends	Consecutive Quarters of Declines in (Receivables+Inventories) / Sales Consecutive Quarters of Positive Change in Trailing 12-Month Cash Flow / Sales Consecutive Quarters 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
	Accelerating Sales	3-Month Momentum in Quarterly Sales 6-Month Momentum in Trailing 12-Month Sales Change in Slope of 4-Quarter Trendline through Quarterly Sales
MOMENTUM	Earnings Momentum	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 Trendline (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)
TECHNICAL	Price Reversal	5-Day Industry Relative Return 5-Day Money Flow / Volume 10-Day MACD – Signal Line 14-Day RSI (Relative Strength Indicator) 20-Day Stochastic 4-Week Industry Relative Return
	Small Size	Log of Market Capitalization Log of Market Capitalization Cubed Log of Stock Price Log of Total Assets Log of Trailing 12-Month Sales