

All Risks Are Not Created Equal

Nomura

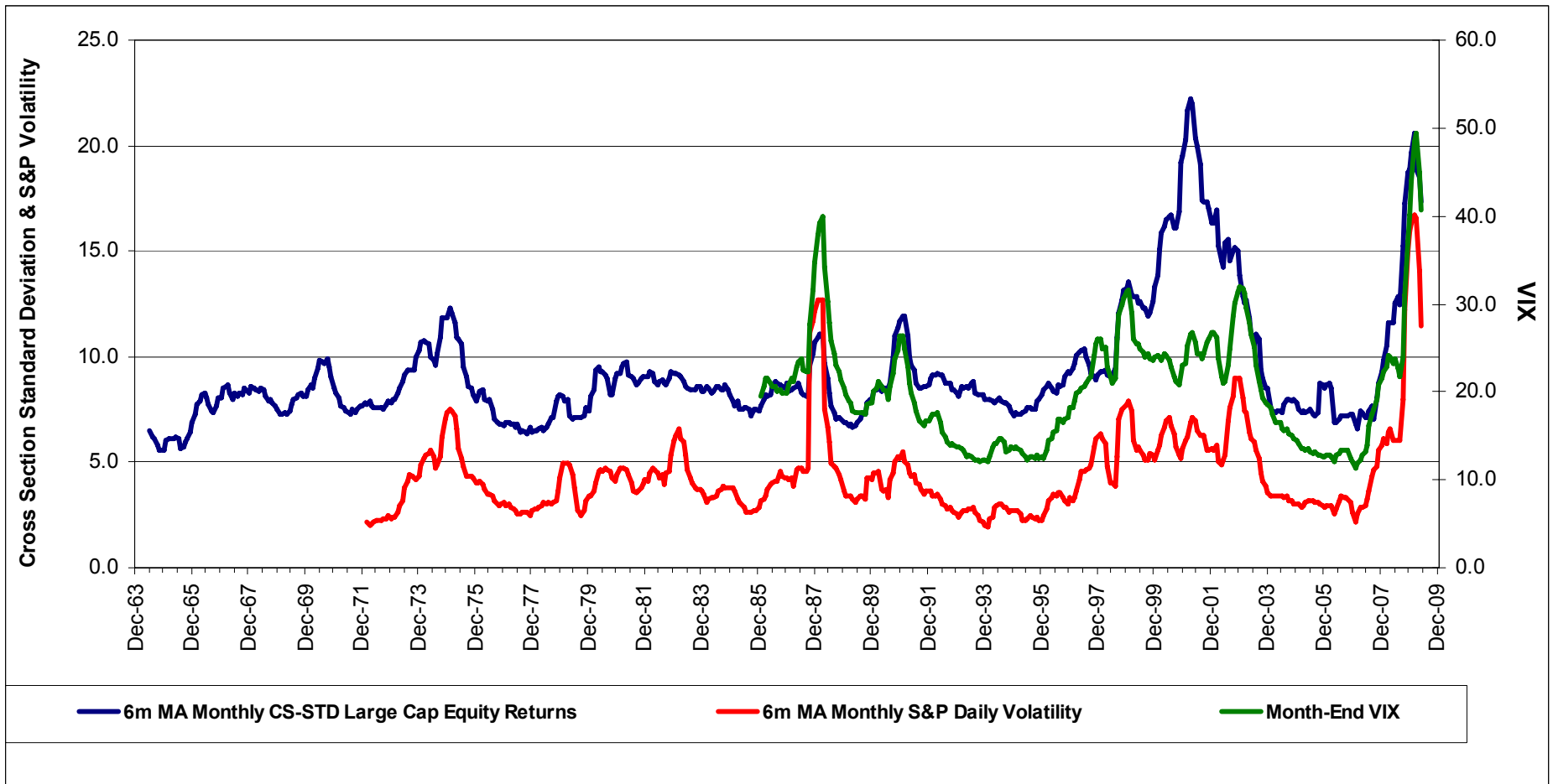
Quantitative Investment Strategies Conference 2009

Tuesday, June 16 2009

Eric Remole
Head of Quantitative Research
U.S. Equity
JP Morgan Asset Management

JPMorgan 
Asset Management

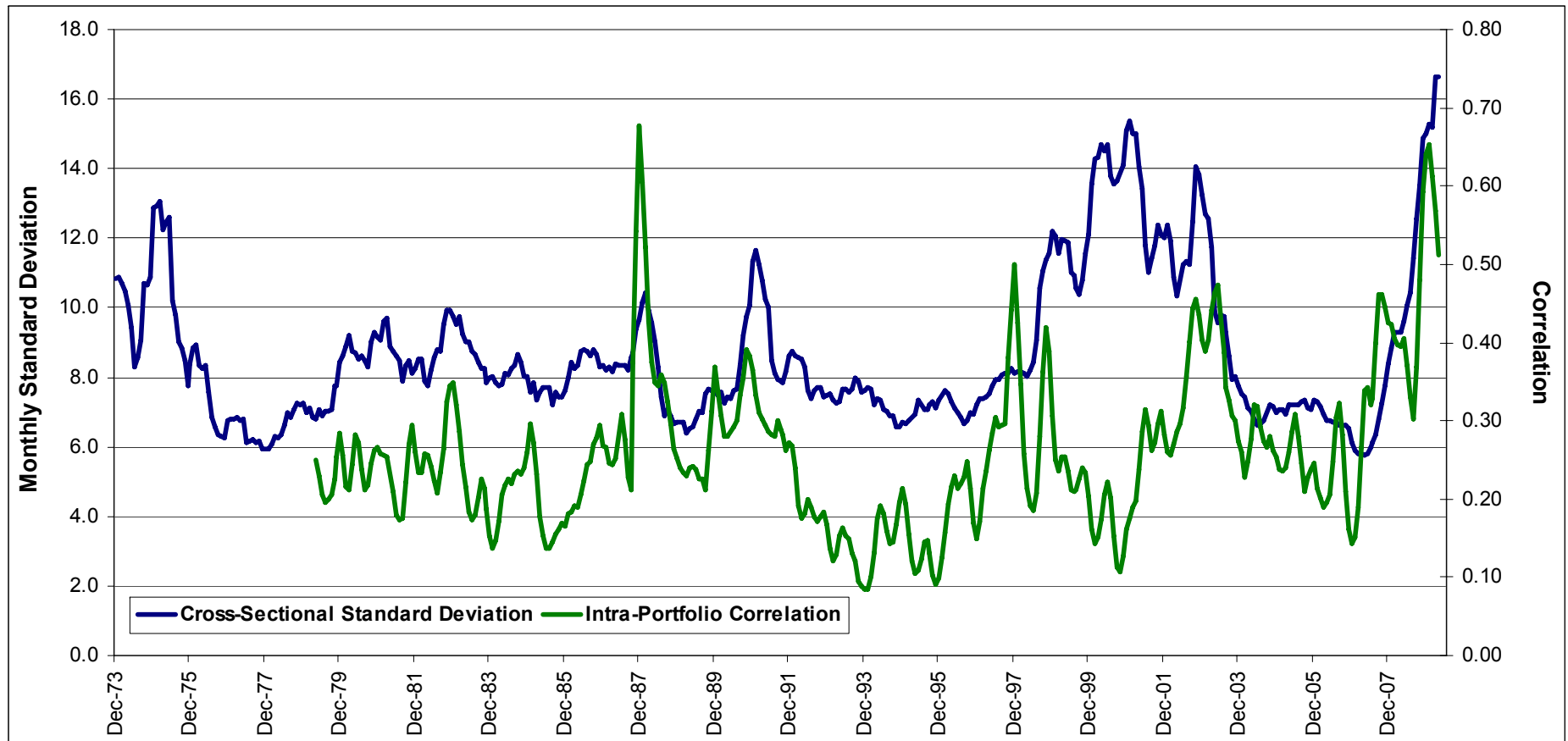
Measures of Equity Market Volatility



S&P500 Measures of Risk & Volatility

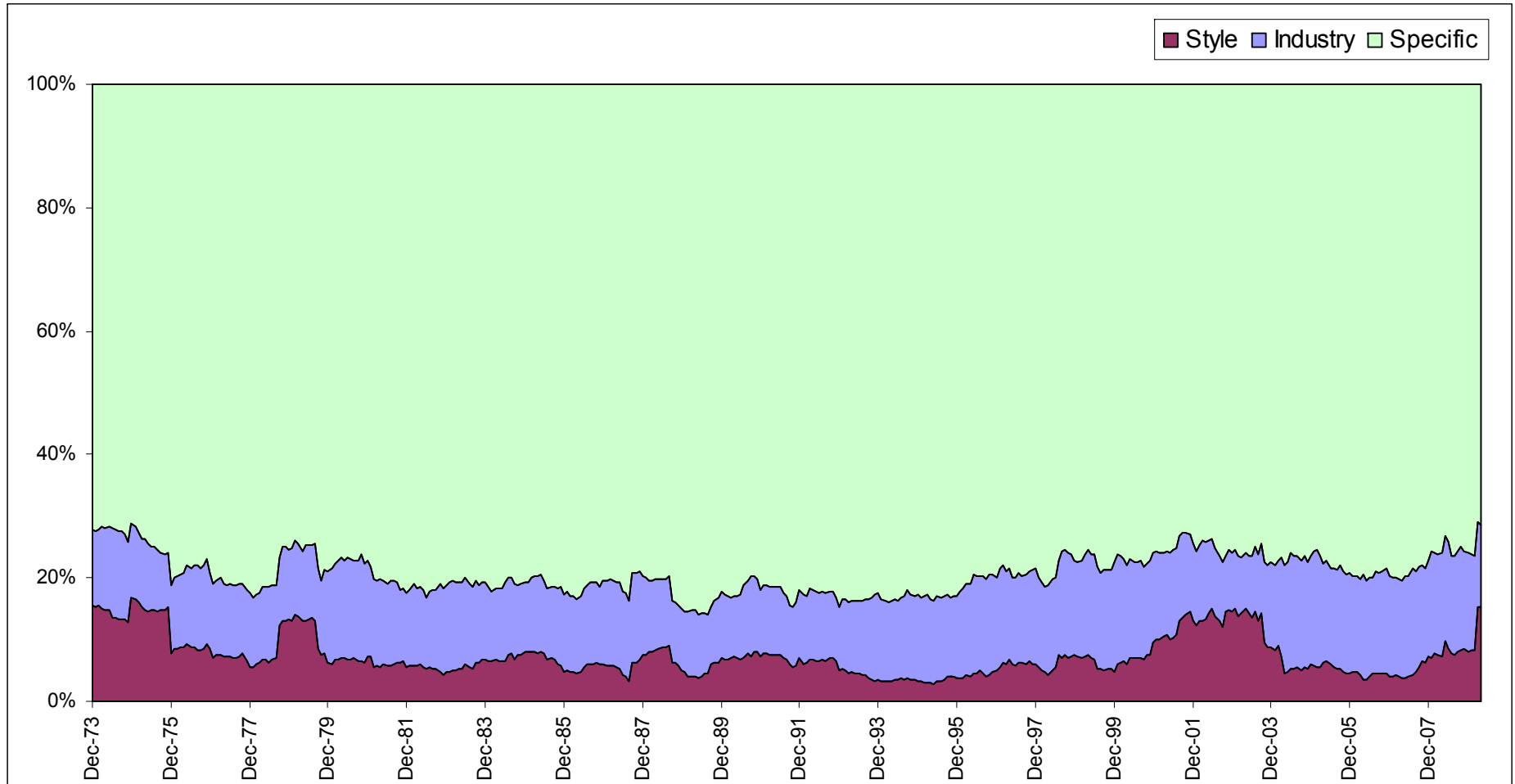
Monthly Cross-Sectional Standard Deviation – 6 Month Moving Average

Intra-Portfolio Correlation Coefficient – 3 Month Moving Average



Allocation of Variance – S&P 500

12 Month Moving Average



MSCI Barra USE3L Risk Model

Monte Carlo Backtest

Methodology:

1. Generate a factor exposure from a normal distribution
2. Assemble a portfolio of factor exposures
3. Generate monthly portfolio returns - 120 months randomly selected from Dec 72 through Mar 09
4. Calculate Kurtosis (adjusted for Normal)
5. Repeat 200,000 times

Style Factor Portfolio:

Standardized exposure

Exposure $N(0.0, 0.5)$; max +2.0, min -2.0

Industry Factor Portfolio:

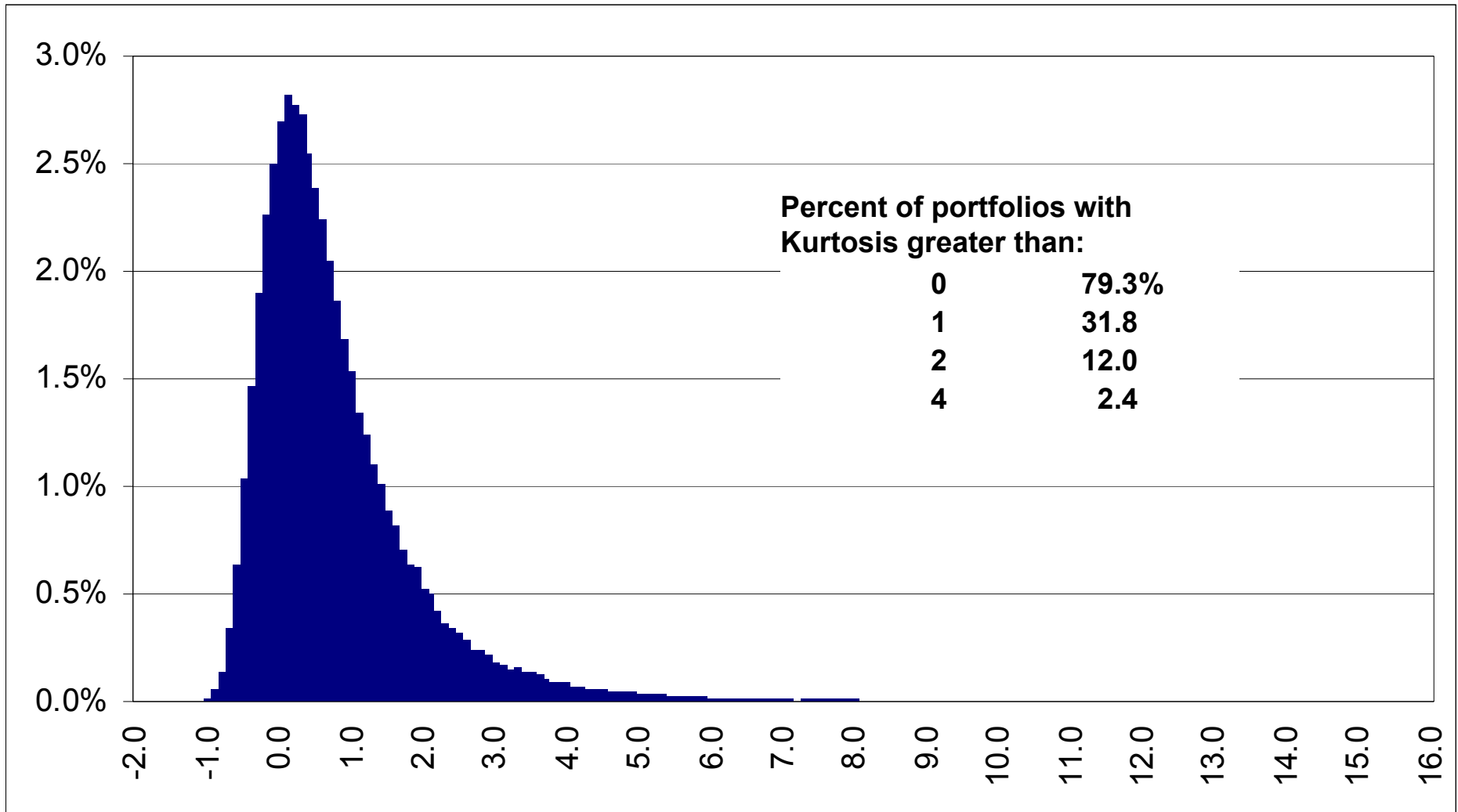
Percentage exposure

Exposure $N(0, 25)$; max +15, min -15

Adjust exposures so net = 0

Portfolio Simulation – Industry Factors

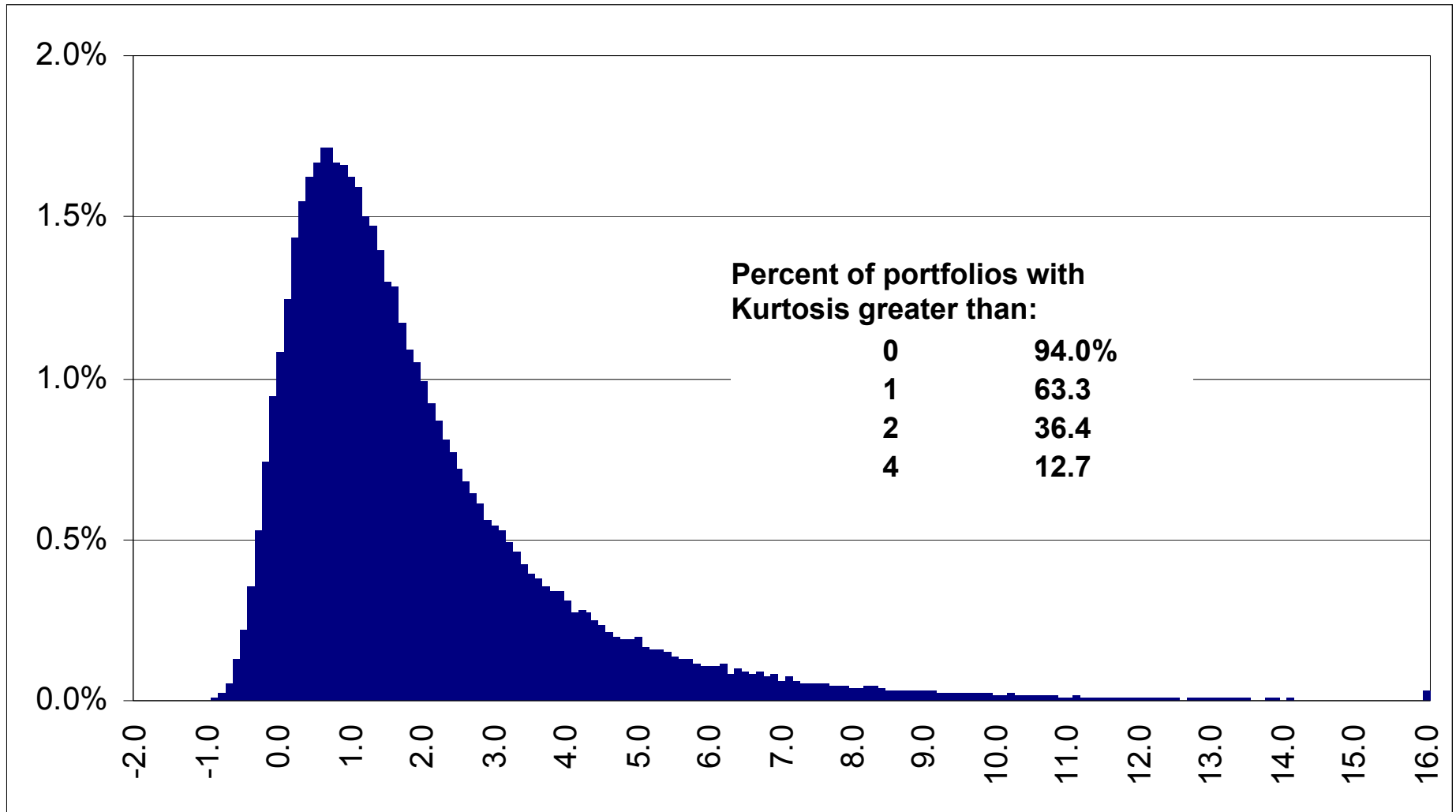
Adjusted for comparison to Normal



MSCI Barra USE3L Risk Model

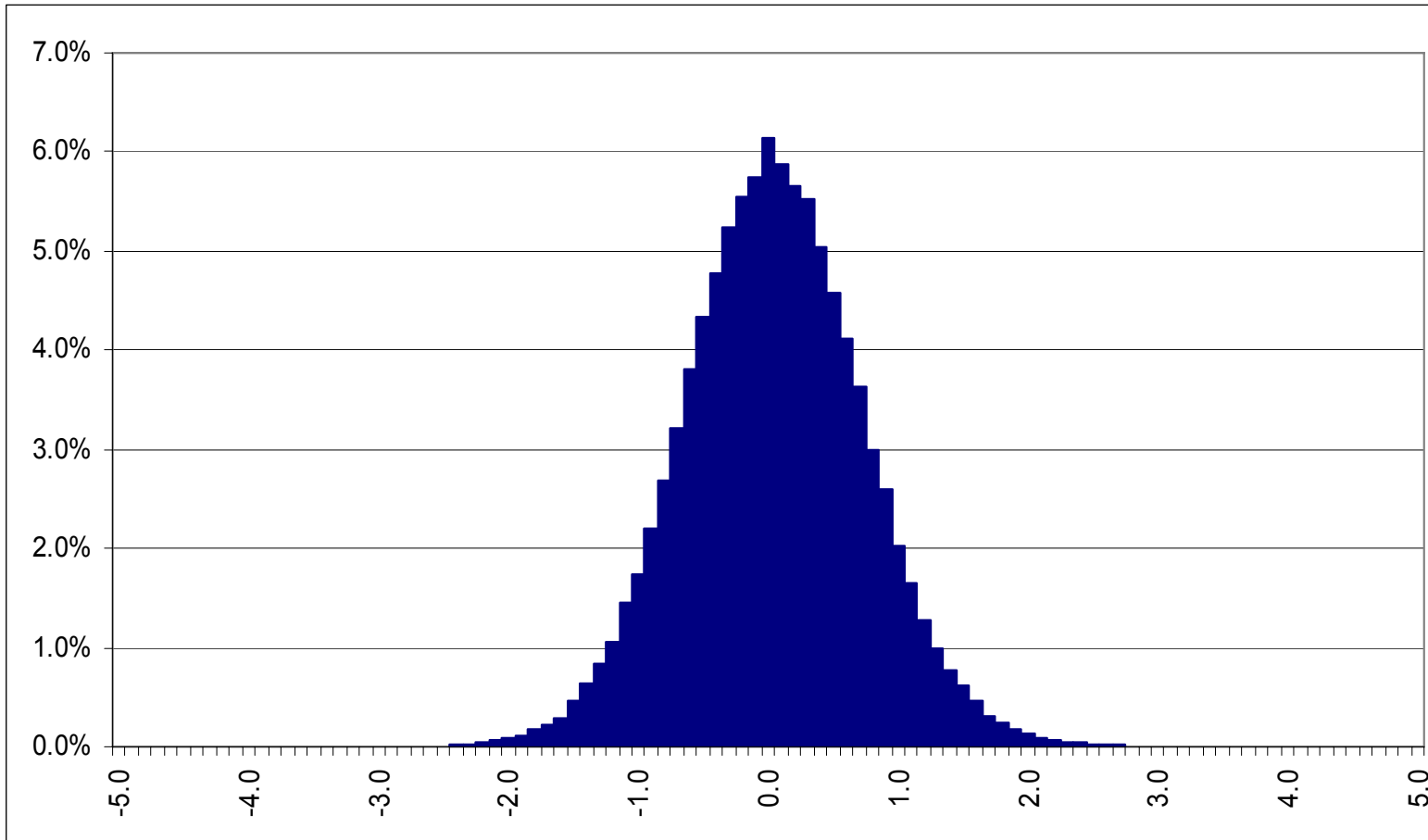
Portfolio Simulation – Style Factors

Adjusted for comparison to Normal



MSCI Barra USE3L Risk Model

Portfolio Simulation – Distribution of Specific Returns



Parameters:

Core (2 – 4% tracking risk)
100,000 Iterations
Returns 12/87 – 12/09
MSCI Barra USE3L Risk Model

Statistics:

Mean **-0.010**
Stdev **0.691**
Skew **0.065**
Kurt **0.371**