

# Barra Analytics on FactSet

## Risk Analytics and Optimizer

Superior risk and portfolio optimization analytics to help you construct and rebalance your portfolios in line with your investment objectives.

### Key Benefits

**Identify Sources of Risk**—Isolate industry, style, market or asset specific sources of risk to see which policies are the largest contributors to the portfolio's risk.

**Enhance Understanding of Performance**—Strengthen your understanding of the risk/return trade-off and the impacts to performance from transaction costs, penalties and other user-defined constraints.

**Process Control**—Barra Portfolio Manager allows you to monitor, control and improve your process to ensure a consistent and replicable investment process.

**User-defined Constraints**—Incorporate user-defined values into the construction process to neutralize unintended exposures and manage policies.

**Reduce Unintentional Bets**—By combining the exposure and volatility of each source of risk, you can better discover your unintentional bets.

**Workflow Integration**—Import alphas from FactSet's Alpha Testing application and fundamental data from FactSet's databases directly into the Barra Portfolio Manager on FactSet to provide a seamless workflow.

**Customizable Long/Short Optimization**—Flexibility to control the long and short sides of your portfolio separately or together using both hard and soft constraints. Additional features allow users to determine optimal leverage within user-defined ranges.

**Greater Control Over Risk Targets**—In addition to standard optimization, where the optimizer chooses the portfolio with the best risk-return trade-off, users can optimize toward user-defined risk and return targets.

The screenshot displays the Barra Risk Decomposition tool interface. The main window shows a summary of risk metrics for an EAFE Portfolio compared to the MSCI EAFE benchmark as of 6/30/2009. The analysis is based on the Barra Global Long-Term Model (GEM2L) in U.S. Dollars. The summary table includes Total Risk (32.39), Benchmark Risk (30.47), and Active Risk (5.56). A breakdown of Common Factor Risk shows contributions from World (.00), Risk Indices (1.47), Industries (1.30), Countries (2.57), and Currencies (1.24). Asset Selection Risk is 4.18. The Barra Risk Decomposition (%) table shows contributions from Common Factors (World: .00, Risk Indices: 6.97, Industries: 5.50, Countries: 21.30, Currencies: 4.96, Covariance \* 2: 4.87) and Asset Selection (56.40%).

Summary	
Predicted Beta (vs. Bmk)	1.05
Barra Risk Decomposition (Std Dev)	
Total Risk	32.39
Benchmark Risk	30.47
Active Risk	5.56
Common Factor Risk:	
World	.00
Risk Indices	1.47
Industries	1.30
Countries	2.57
Currencies	1.24
Covariance * 2	--
Asset Selection Risk	4.18
Barra Risk Decomposition (%)	
% Contribution- Common Factors	
World	.00
Risk Indices	6.97
Industries	5.50
Countries	21.30
Currencies	4.96
Covariance * 2	4.87
% Contribution- Asset Selection	56.40

Holdings Data As Of  
EAFE Portfolio 6/30/2009  
MSCI EAFE 6/30/2009  
Risk Model As Of  
Barra Global Long-Term Model (GEM2L) 7/01/2009

## CONTACT US

Americas  
1.888.588.4567

Amsterdam  
+ 31.20.462.1382

Atlanta  
+ 1.404.551.3212

Boston  
+ 1.617.532.0920

Cape Town  
+ 27.21.673.0100

China Netcom  
10800.852.1032

China Telecom  
10800.152.1032

Chicago  
+ 1.312.675.0545

Frankfurt  
+ 49.69.133.859.00

Geneva  
+ 41.22.817.9777

Hong Kong  
+ 852.2844.9333

London  
+ 44.20.7618.2222

Madrid  
+ 34.91.700.7275

Milan  
+ 39.02.5849.0415

Montreal  
+ 1.514.847.7506

New York  
+ 1.212.804.3901

Paris  
0800.91.59.17

San Francisco  
+ 1.415.576.2323

São Paulo  
+ 55.11.3706.1360

Singapore  
+ 65.6834.6777

Stamford  
+ 1.203.325.5630

Sydney  
+ 61.2.9033.9333

Tokyo  
+ 813.5226.8222

Toronto  
+ 1.416.628.1007

Zurich  
+ 41.44.220.9300

## Key Features and Coverage

The Barra Optimizer can be used with all available Barra models on the FactSet platform. It is loaded with a full set of portfolio construction and optimization features including:

- Constraints: Factor, User Data, Sectors, Turnover, Leverage, Beta
- Roundlotting during optimization, not after
- Penalty Functions: Factor, User Data, Sectors, Beta, Countries
- Transaction Costs
- Long/Short (hedge) Optimization
- Risk/Return Targets

## Available Barra Models

Market	Equity Models*	Risk Indices	Industries	Assets
Australia	<b>Australia Equity Models (AUE3) (Long-Term and Short-Term) –</b> For managers with investment horizons exceeding 6 months, or between 1-6 months, respectively.	9	14	1,600
Europe	<b>Europe Equity Models (EUE3) (Long-Term and Short-Term and Derived) –</b> For managers with investment horizons exceeding 6 months, or between 1-6 months, respectively. They also offer derived models that let managers choose a home region such as the UK, Western, or Eastern Europe.	9	29	9,500
Global	<b>Global Equity Models (GEM2) (Long-Term and Short-Term) –</b> For managers with investment horizons exceeding 6 months, or between 1-6 months, respectively.	8	34	45,000
Japan	<b>Japan Equity Models (JPE3 &amp; JPE3 S) (Long-Term and Short-Term) –</b> For managers with investment horizons exceeding 6 months, or between 1-6 months, respectively.	12	41	3,636
UK	<b>UK Equity Model (UKE7) (Long-Term and Short-Term) –</b> For managers with investment horizons exceeding 6 months, or between 1-6 months, respectively.	11	42	2,458
US	<b>US Equity Models (USE3) (Long-Term and Short-Term) –</b> For managers with investment horizons exceeding 6 months, or between 1-6 months, respectively.	13	55	11,722
	<b>US Small Cap Model (USSC) –</b> For managers concentrated in small-cap securities.	11	55	11,722

\*Barra Integrated Model (BIME) is also available on Factset. BIME is a model for forecasting the asset and portfolio level risk of global equities. The model uses innovative methods to couple broad asset coverage with the detailed analysis of Barra's models that focus on particular markets. This makes it suitable for a wide range of investment purposes, from conducting an in-depth analysis of a single-country portfolio to understanding the risk profile of a broad set of international investments.

\*Also Available for the following markets: Brazil, Canada, China, Hong Kong, Korea, Mexico, South Africa, Singapore, Taiwan.

## Risk and Performance in PA2

Barra's standard risk-forecasting analytics include portfolio, factor and asset-level measures in both absolute and benchmark relative terms. Barra models are also available for use with FactSet analytics.

## About MSCI Barra

MSCI Barra is a leading provider of investment decision support tools to investment institutions worldwide. MSCI Barra products include indices and portfolio risk and performance analytics for use in managing equity, fixed income and multi-asset class portfolios. The company's flagship products are the MSCI International Equity Indices, which include over 120,000 indices calculated daily across more than 70 countries, and the Barra risk models and portfolio analytics, which cover 56 equity and 46 fixed income markets. MSCI Barra is headquartered in New York, with research and commercial offices around the world.

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