



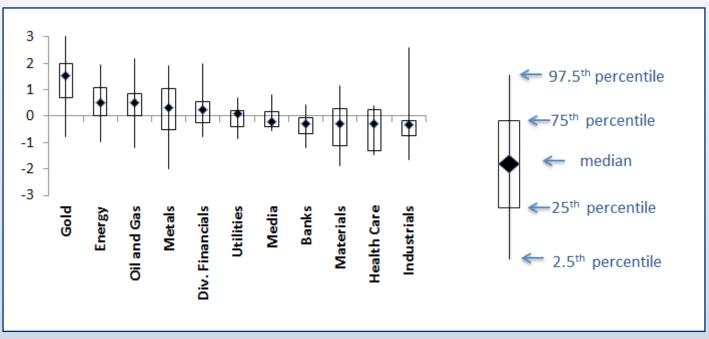
# Barra Canada Equity Model (CAE5)

The **Barra Canada Equity Model (CAE5)** is part of the family of models that includes the latest advances in risk methodology and provides institutional investors the ability to align factor structure with their investment processes.

## **Key Features**

- » Enhanced style factors use high-quality data and the latest research methodology to reformulate and improve style factors. New factors include new Gold and Oil factors reflecting the latest research and client feedback.
- » Multi-industry scheme introduced. The multi-industry business activities of firms are classified within GICS<sup>®</sup>.
- » Volatility Regime Adjustment allows clients to calibrate factor volatilities to current levels, resulting in faster response to market trends. This methodology can reduce the under-prediction of risk when entering a period of increased volatility and the over-prediction of risk when exiting a period of reduced volatility.
- » Over 6,100 assets covered including Depositary Receipts and cross-lists.
- » Separation of market effect from industries results in increased forecast accuracy and more responsive correlations.

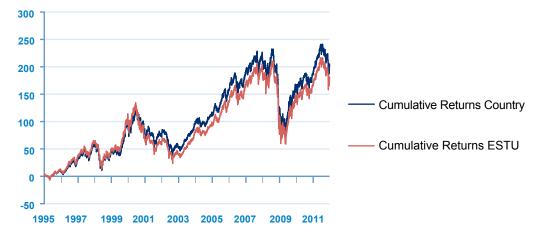
- » Daily model updates are designed to improve risk monitoring, exposure control, intra-month portfolio rebalancing, scenario/stress testing, and backtesting. Factor exposures, covariance matrices, and specific risk forecasts are updated daily.
- » Optimization Bias Adjustment improves factor risk forecasts for optimized portfolios. Clients can reduce forecasting bias within the factor covariance matrix by scaling up where risk is under-forecast and scaling down where risk is over-forecast.
- » Deep daily model history back to July 1995.
- » Fifteen industry factors based on GICS®.
- » Twelve style factors to model risk sources not captured by the market or industry factors.
- » Available in Short- and Long-horizon versions.
- » Available in Barra Portfolio Manager, Barra Aegis, and Barra Models Direct.



**Oil Sensitivity Exposures by Industry** 

Oil sensitivity style factor gives an additional source of information to industry exposures (using model estimation universe as of November 30, 2011).

#### Country vs. Cap-Weighted ESTU Returns



The CAE5 Country factor closely tracks the cap-weighted Estimation Universe, which is based on the MSCI IMI



Country vs. Gold Sensitivity Factor and Spot Gold Returns

The CAE5 Gold Sensitivity factor is correlated with spot gold returns and provides additional insight into Canadian market structure

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### About MSCI

MSCI Inc. is a leading provider of investment decision support tools to investors globally, including asset managers, banks, hedge funds and pension funds. MSCI products and services include indexes, portfolio risk and performance analytics, and governance tools.

The company's flagship product offerings are: the MSCI indexes with approximately USD 7.5 trillion estimated to be benchmarked to them on a worldwide basis<sup>1</sup>; Barra multi-asset class factor models, portfolio risk and performance analytics; RiskMetrics multi-asset class market and credit risk analytics; IPD real estate information, indexes and analytics; MSCI ESG (environmental, social and governance) Research screening, analysis and ratings; ISS corporate governance research, data and outsourced proxy voting and reporting services; and FEA valuation models and risk management software for the energy and commodities markets. MSCI is headquartered in New York, with research and commercial offices around the world.

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<sup>1</sup> As of March 31, 2013, as reported on July 31, 2013 by eVestment, Lipper and Bloomberg.

December 2013