

# Asset Risk Modeling Service

The Barra Asset Risk Modeling Service (ARMS) is available to users of BarraOne, MSCI Barra's global, multi-asset class platform for portfolio risk analysis and performance attribution.

BarraOne already provides broad asset coverage of pre-loaded "natively" covered instruments, where both security terms and conditions and valuation libraries are available. BarraOne also enables users to model financial instruments as "user assets", where clients upload their own security terms and conditions. While in many cases this provides more than adequate asset coverage of clients' portfolios, there may be instances when the complexity of financial instruments within the clients' portfolios calls for a different approach.

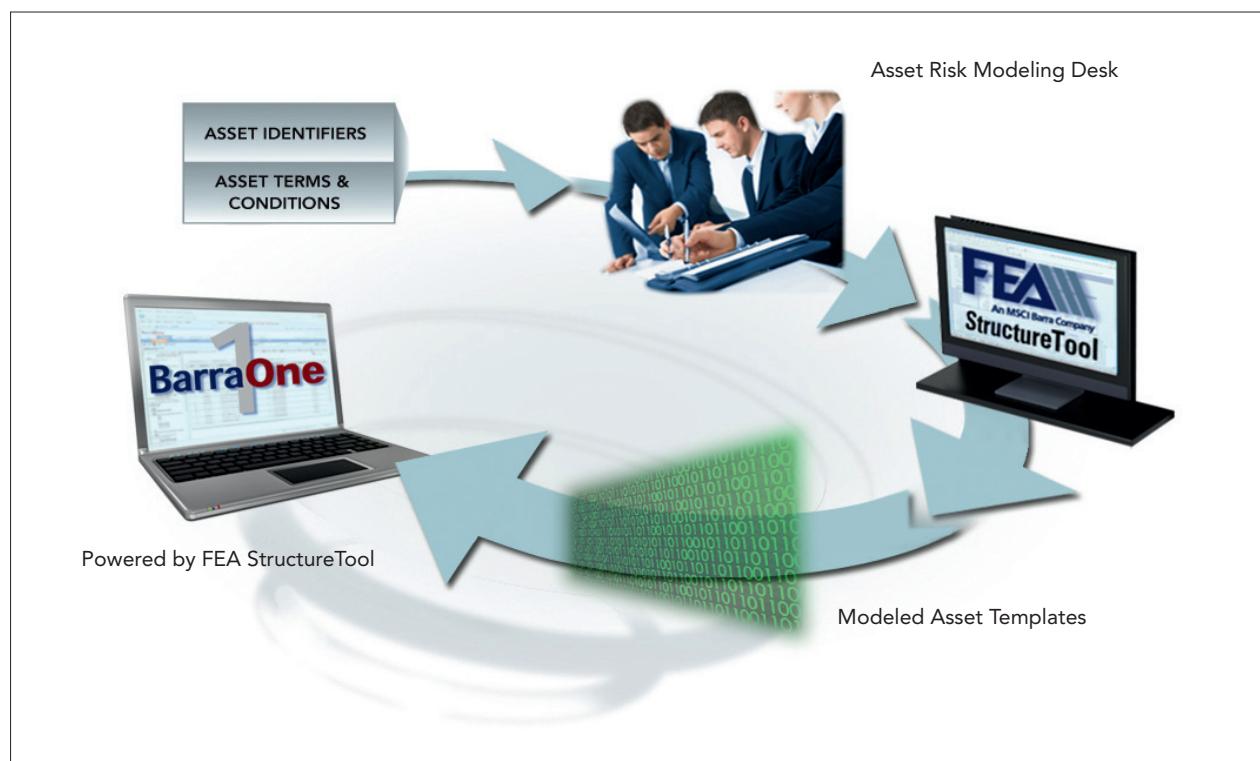
## Key Features & Benefits

- Broader coverage and full analytical support of complex financial instruments modeled in BarraOne
- Multiple market standard valuation models available via FEA StructureTool libraries
- Instrument risk analytics fully integrated in BarraOne
- Lower operational burden for clients wanting to run risk analysis for complex instruments
- Reduced time to model new instruments in client portfolios

## Asset Modeling

Asset Modeling is offered on a daily basis, where instrument risk exposures are calculated in BarraOne using the integrated analytical libraries from FEA StructureTool, a simulation based tool designed to compute values and hedge statistics of user-defined exotic and structured products.

### Asset Modeling Workflow



**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  
Chicago  
+1.312.675.0545  
China North  
10800.852.1032  
China South  
10800.152.1032  
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  
+39.025.849.0415  
Monterrey  
+52.81.1253.4020  
Montreal  
+1.514.847.7506  
New York  
+1.212.804.3901  
Paris  
0800.91.59.17  
San Francisco  
+1.415.836.8800  
São Paulo  
+55.11.3706.1360  
Seoul  
+822.2054.8538  
Singapore  
800.852.3749  
Stamford  
+1.203.325.5630  
Sydney  
+612.9033.9333  
Tokyo  
+81.3.5226.8222  
Toronto  
+1.416.628.1007  
Zurich  
+41.44.220.9300

FEA StructureTool allows users to specify arbitrary payoffs to value everything from plain vanilla options and bonds to complex structured products such as equity-linked notes, interest-rate "snowballs", exotic basket options, complex trigger options, Asian barrier options, and target return notes.

### Asset Proxying

If direct modeling is not available for an instrument, Asset Proxying is offered as an alternative to help BarraOne clients proxy financial instruments. The proxy methodology is presented to the client who then determines whether the proxy approach should be deployed in BarraOne.

### Structured Products Currently Supported by the Asset Risk Modeling Service

#### Underlying types:

- Interest rates
- Equities
- Foreign exchange rates
- Commodities
- Hybrids (combining underlying types above)

#### Examples of Pay-Off Structures:

- Reverse floater
- Accrual note
- Target Accrual Redemption Note (TARN)
- Inflation-Linked Note (ILN)
- Volatility floater
- Steepener
- Snowball
- Snowblade
- Altiplano
- Annapurna
- Everest
- Himalaya
- Kilimanjaro
- Cliquet
- Hindsight/lookback option
- Ladder option
- Napoleon
- Rainbow
- Worst-of option
- Wedding cake

For more information please email [mscibarra\\_arm\\_srvcs@mscibarra.com](mailto:mscibarra_arm_srvcs@mscibarra.com) or contact MSCI Barra Client Service.

### 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 59 equity and 48 fixed income markets. MSCI Barra is headquartered in New York, with research and commercial offices around the world.

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