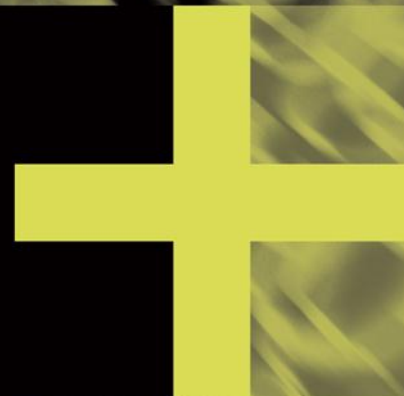


Property & Casualty  
Economic Scenario Generator

barrie+hibbert

Powering objectivity in the global financial services industry



## P&C ESG at a Glance

### +General model functions

- Unlimited simulations
- All model parameters editable
- Alternative parameters views
- Bulk import
- Multi-economy, multi currency capability

### +Interest rates & bonds

- Nominal & real yield curves
- Stochastic credit spreads
- Bond portfolios (government & corporate)
- MBS modelling
- Municipal bond modelling
- Floating Rate Notes
- Vanilla swaps and swaptions

### +Equity & Alternatives

- Equity indices
- Real estate indices
- Private Equity
- Hedge Funds
- Commodities
- Vanilla options

### +Portfolio modelling

- Create specific portfolios
- Apply alternative rebalancing rules

### +Calibration

- Multi-economy real-world calibration service provides regular documented global calibration updates

## Property & Casualty Economic Scenario Modelling

An important risk management requirement for any Property & Casualty insurer is the ability to generate economic scenarios to better understand the risks in their assets and liabilities.

Barrie & Hibbert provides a comprehensive Economic Scenario Generator (ESG) solution for the global Property & Casualty sector. Our services include ESG software, asset modelling, calibration services and ongoing support and training. We provide both a supported software service and managed services for the sector.

Our P+C ESG is a robust stochastic, Monte Carlo simulation tool with the ability to project a broad range of economic risk drivers and asset types across multi economies, giving Property & Casualty companies the tools they need to properly assess and manage risks.

### Key features

#### ESG modelling

The Barrie & Hibbert Property & Casualty Economic Scenario Generator (P+C ESG) provides a range of high-performance real-world multi-asset stochastic modelling capabilities:

- Joint stochastic modelling of multiple equity indices, yield curves, credit risk and inflation indices. Alternative asset modelling for asset classes such as hedge funds and commodities is also available.
- Can be run in multi-currency setting with correlated economies and stochastic FX rates.
- Equity modelling includes modelling choices to capture stochastic variation in equity volatilities and extreme jump events.
- Credit risk modelling (credit spreads and rating transitions/ defaults) that is fully integrated with equity and rate modelling. This can be used to model corporate bonds and other credit risky asset classes such as Municipal bonds.
- Framework to model a range of cost inflation indices in addition to price inflation – for example, medical cost inflation and wage inflation indices can be incorporated into inflation modelling module.
- Stochastic modelling choices within the software that can be used to analyse model risk.

## Asset modelling

Clients use Barrie & Hibbert P+C ESG output in conjunction with a range of asset pricing software and asset-liability modelling software to project complex asset portfolios and rebalancing strategies for assets such as MBS, FRNs, options and other derivatives. In addition, the P+C ESG has a range of asset modelling options built in along with portfolio and rebalancing options.

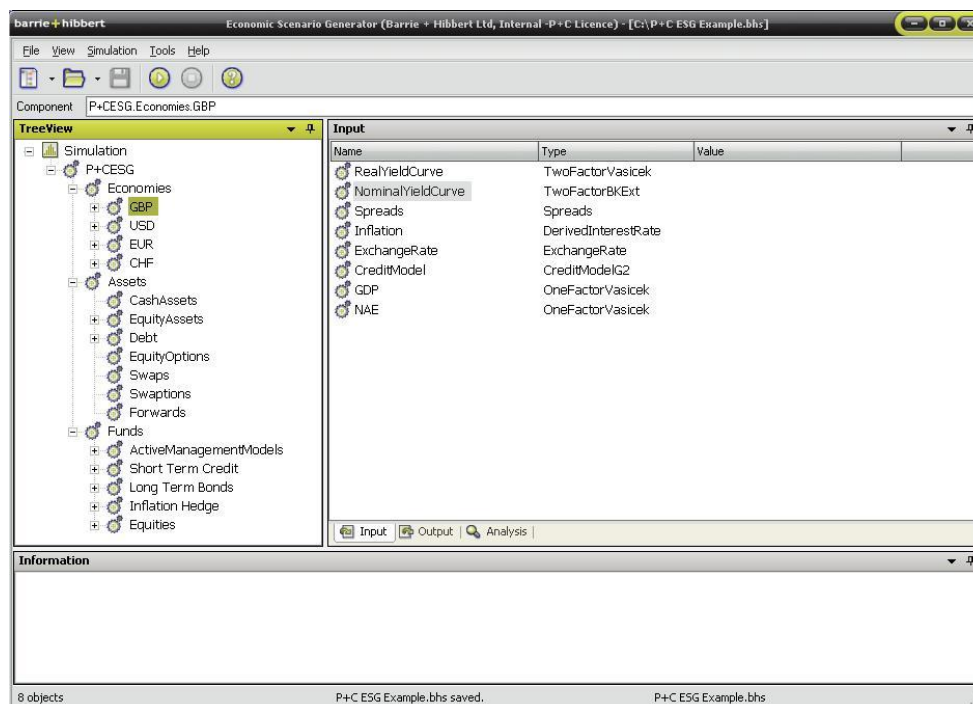
## Calibration tools and services

Our real-world calibration service provides regular calibration updates for all subscribed asset classes, indices and economies. Calibrations are available in over 20 global economies. Conditional and unconditional real-world calibrations are available appropriate to the specific needs of the P&C sector.

This is by far the most comprehensive global calibration service provided by any ESG service provider in the insurance sector.

## Software

- Software provided in Microsoft .Net in professional development and testing environment.
- Software is grid-enabled. API available.
- Easily integrated with standard actuarial modelling software.
- User friendly interface embedded Help System.



## Support, training and consultancy

- Training and ongoing (technical and actuarial) support embedded in product service.
- Consultancy services available relating to ALM / ERM implementation.

If you would like to know more about our Property & Casualty Economic Scenario Generator, then please contact us at [info@barhibb.com](mailto:info@barhibb.com)

## About Barrie & Hibbert

Barrie & Hibbert was established in 1995 by John Hibbert and Andrew Barrie. Our primary focus is the identification, quantification and management of financial risk in savings and investment products, institutional investment portfolios and complex financial liabilities.

Collectively our staff of leading academics, quantitative analysts, actuaries and software engineers offer a depth and breadth of expertise combined with an unrivalled track record of experience in implementing risk solution for financial institutions around the world.

Our asset and product modelling capability has been developed over the last 14 years resulting in Barrie & Hibbert becoming a global leader in stochastic asset modelling services.

The understanding of market risk is central to objective financial management. Our market-leading stochastic modelling framework allows our clients to model economic and asset scenarios to help to improve their understanding of financial market risk – and to make any appropriate adjustments within their business.

Our modelling framework, the Economic Scenario Generator (ESG), is the engine that powers our range of products and services. Rather than attempt to create a single model and calibration for every application, Barrie & Hibbert has developed a toolbox of academically robust models within a consistent framework that can be adapted to meet our clients' requirements.

Experience has taught us that different clients have different ways of working to suit their capabilities, organisational structure and geographic presence. As a consequence, our modelling solutions are deployed in a number of ways to suit each client's individual needs.

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