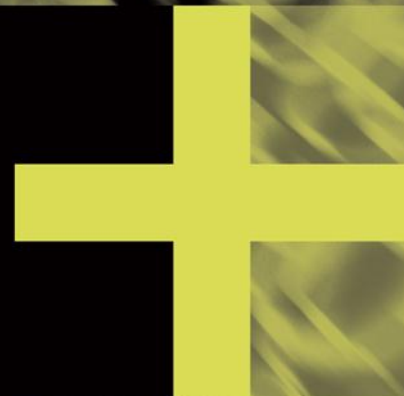


Fact Sheet

Product Design and Governance Service

barrie+hibbert

Powering objectivity in the global financial services industry



Product Design and Governance Services

Across the globe, retail products are becoming more sophisticated and choice facing consumers increasingly complex. To simplify the problem, providers and advisors are increasingly embedding advice into their product propositions. Solutions such as risk-graded model portfolios and DC default funds, attempt to match packaged solutions to the investor risk profile and planning objective.

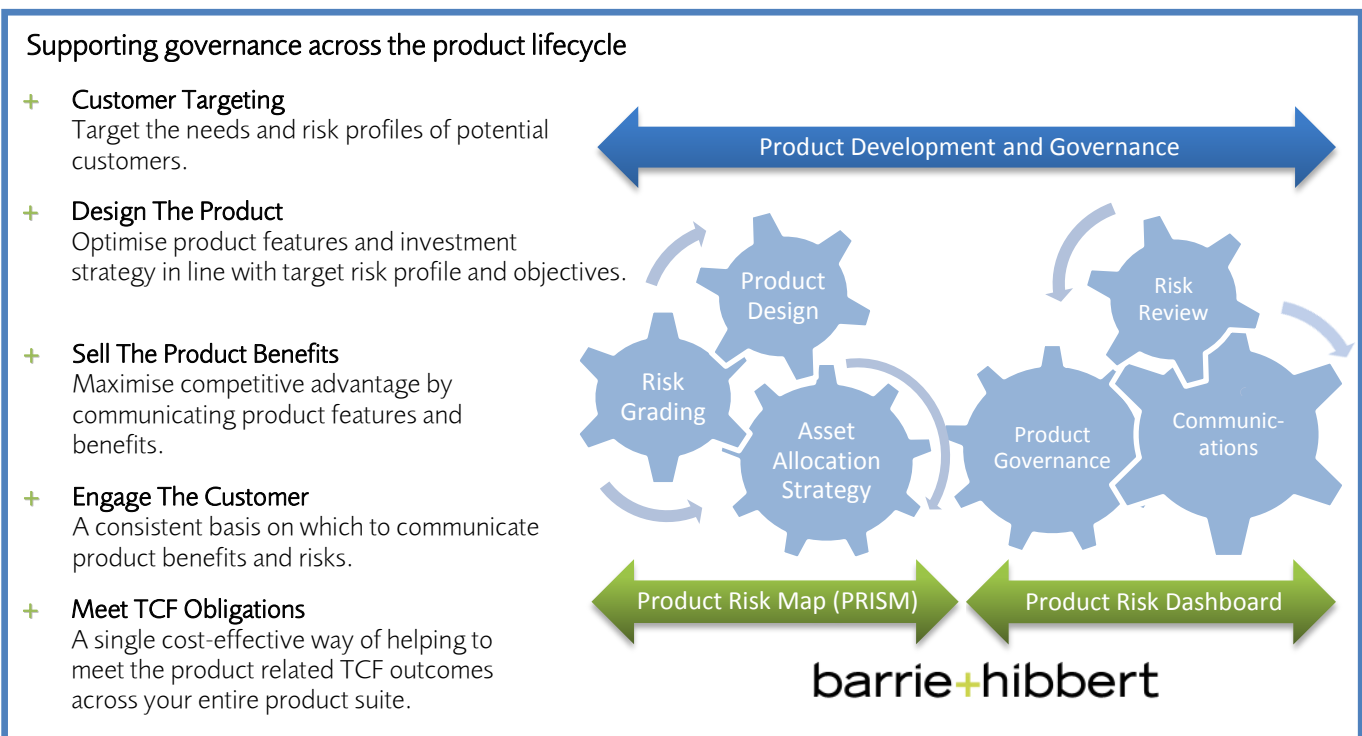
In addition regulations to protect retail investors are becoming more stringent. Products must be designed and sold. Firms involved in the distribution of financial products must have processes in place to monitor the risk in these products and provide communication to investors on product and investment performance as economic and market conditions change.

Increasingly, product manufacturers and advisors are competing not only on ability to deliver investment performance, but also on the strength of their governance processes.

<p>1. How do product manufacturers design and monitor products to ensure they fit customer risk profile and objectives?</p>	<p>2. How do advisers evaluate, compare and recommend products and assets in a robust and consistent way?</p>	<p>3. How to communicate these complex product features, risks and benefits to customers in a compliant manner?</p>
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Effective Governance for Retail Investment Products

Based on our market leading stochastic modelling capability, Barrie & Hibbert have developed a comprehensive framework for product design and governance. The Barrie & Hibbert Investment Governance Services comprise two complementary products that support you throughout the product life-cycle – **Product Risk Map** and **Product Risk Dashboard**:



Barrie & Hibbert have developed two distinct Product Design and Governance service modules:

Product Risk Map (PRISM): A solution for product development.
Ensuring product solutions are designed according to well-defined risk profiles and investment objectives, and can fit consistently within a robust customer sales and/or advice process.

Product Risk Dashboard: A solution for ongoing product governance.
Supporting ongoing monitoring and governance, ensuring products continue to fit the risk profile and objectives for which they were designed, under changing market conditions.

Where clients already have some or all of the above components in place, our independent modelling and analytics can be used to provide an independent review of existing products, validate proposed new product designs, and to enhance the existing governance framework.

Alternatively, we can work with clients to create a customer risk profiling and product governance framework.

Further details of these two service components are provided below.

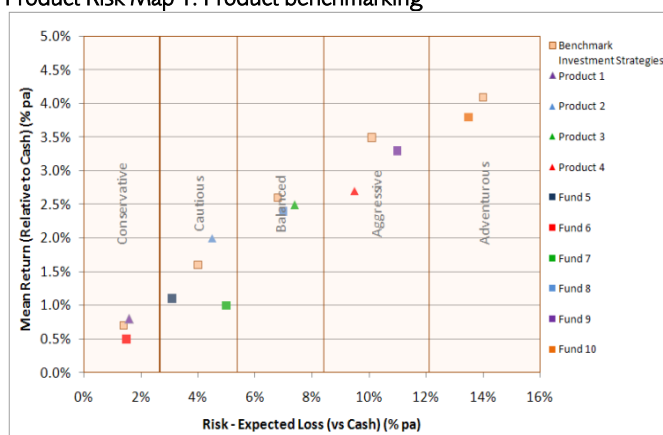
Product Risk Map (PRISM)

Product manufacturers and advisors need to ensure that product solutions are designed and sold according to well-defined investor risk profiles and objectives.

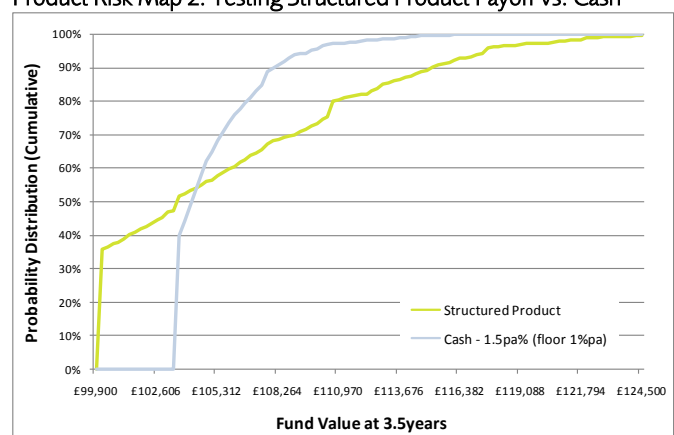
Barrie & Hibbert have developed a framework for evaluating the risks and benefits of retail investment products: **Product Risk Map**. Used as part of the product development process, this service allows product providers to specify any retail investment objective and customer risk profile and then:

- Test the efficiency and effectiveness of different product design options, allowing you to design the most appropriate product, given the product objective and risk level.
- Stress test the product design, including products with guarantees or path dependant investment rules.
- Compare new products against industry benchmarks and competitors, delivering independent analysis that can support product promotion.
- In addition, we will produce outputs which address specific compliance or TCF-related issues, such as the probability that the product beats a specified benchmark, or test whether a guarantee has economic value to the customer.
- Our clients are using Product Risk Maps in a variety of development projects from testing the design of target dated funds to the creation of risk graded strategic asset allocation solutions.

Product Risk Map 1: Product benchmarking



Product Risk Map 2: Testing Structured Product Payoff vs. Cash



Features

- Specify the product objective and basis for risk grading customers in relation to this objective.
- Test the efficiency and effectiveness of different product design options, given the product objective.
- Stress test the product design, including products with guarantees or path-dependant investment rules.
- Compare new products against industry benchmarks and competitors, delivering independent analysis.
- The framework allows you to design products on a basis that is consistent with the customer sales/advice process.

Benefits

- ➔ Communicate the product objectives and product design choices more effectively in targeted product promotion.
- ➔ Enhance the product proposition by designing more effective, compliant products.
- ➔ Demonstrate that specific compliance and TCF-related issues have been addressed effectively.
- ➔ Stronger competitive positioning: clearly illustrate the benefits of your products vs. competing products/solutions.
- ➔ Enhance the quality of product sales, increase the likelihood of meeting customer expectations, improve retention.

Product Risk Dashboard

Barrie & Hibbert's **Product Risk Dashboard** is a regularly updated risk analysis to support the continuous monitoring of retail investment products and their underlying assets in line with specified customer risk profiles and objectives. This is crucial if you are to meet your obligations to continuously review products under regulatory regimes such as TCF, meet the needs and expectations of your clients, and ensure your marketing material is fair and not misleading.

In an environment of lower investment returns and significant market volatility, retail product providers and advisors are increasingly competing on the strength of their investment governance proposition, rather than pure investment performance.

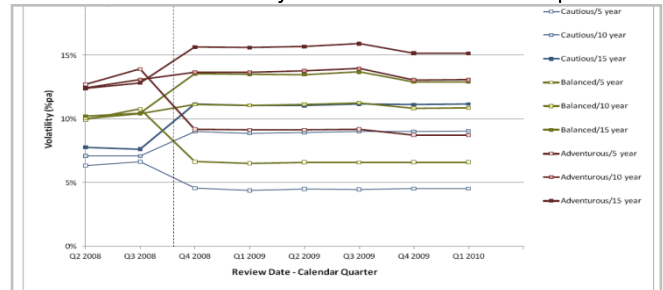
A Product Risk Dashboard delivers quarterly updates to provide early warning of movement in the risk profile of a product or investment solution. The Product Risk Dashboard therefore supports a number of important client requirements and compliance obligations:

- Support the governance process by regularly reviewing the risk profile of products against stated objectives and customer risk profiles.
- Take informed decisions regarding continued suitability of your products given changes in market and economic conditions, as part of a robust product risk governance process.
- Support informed decisions as to whether and how to adjust products to reflect changes in market conditions.
- Objectively support the effective communication of product features to investment advisors and customers.
- Demonstrate adherence to regulatory guidelines and best practice.
- Available in pre-configured modules for Investment, DC Pension and Retirement products.

Investment Risk Dashboard: Monitoring Risk for an investment solution

	Client ABC plc - Investment Product Suite									
	Product 1	Product 2	Product 3	Product 4	Fund 5	Fund 6	Fund 7	Fund 8	Fund 9	Fund 10
Risk Metrics: Total Returns										
Mean (total return) (% pa)	5.7%	7.2%	7.9%	8.2%	5.9%	5.3%	5.8%	7.8%	8.6%	8.9%
Volatility (total return) (% pa)	2.6%	5.7%	9.4%	13.1%	4.3%	2.5%	6.0%	9.4%	13.8%	17.6%
Upper 5% Best Case (total return) (%pa)	7.9%	11.8%	15.4%	17.1%	10.1%	7.7%	10.8%	16.2%	19.5%	21.9%
Median (total return, 5%) (%pa)	5.5%	6.6%	7.1%	7.3%	5.6%	5.6%	5.5%	7.5%	7.7%	7.5%
Lower 95% Value at Risk (total return) (% pa)	3.6%	2.6%	-0.2%	-2.2%	3.1%	3.7%	1.2%	0.3%	-2.5%	-5.4%
Expected Loss (total loss) (%)	0.0%	1.8%	5.7%	8.1%	2.1%	0.2%	2.4%	5.5%	9.0%	12.7%
Risk Metrics: Returns vs Benchmark/Objective										
Mean (relative to Cash) (% pa)	0.8%	2.0%	2.5%	2.7%	1.1%	0.5%	1.0%	2.4%	3.3%	3.8%
Probability of Beating Cash (%)	96.0%	87.3%	74.0%	68.0%	89.0%	93.0%	88.0%	73.0%	66.2%	61.1%
Probability of Beating Cash + 2% pa (%)	2.5%	10.1%	15.0%	22.1%	8.3%	0.8%	8.0%	14.1%	23.6%	31.6%
Probability of Beating Cash + 4% pa (%)	0.0%	2.5%	3.8%	7.8%	0.0%	0.0%	1.0%	2.3%	10.2%	13.2%
Expected Loss (total loss vs cash) (%)	1.6%	4.5%	7.4%	9.5%	3.1%	1.5%	5.0%	7.0%	11.0%	13.5%
Relative Efficiency (%)	99%	101%	93%	89%	96%	94%	96%	93%	92%	96%
Benchmark Investment/Risk-Grade Mapping (1-5)	1	2	3	4	2	1	2	3	4	5

Product Risk Dashboard: Analyse risk over time for investment portfolios



DC Risk Dashboard: Monitoring risk in default pension funds

Fund	Accumulation Phase				Decumulation Phase	
	Lower 95% Retirement Income (Real, % Initial)	Income Shortfall Risk: Lower 95th Real Income Loss	Within-Term Risk		Longevity Risk: Median SRT (Years) at 7% Fixed Income	Market Risk: Sequence of Returns Risk: (Reduction in SRT Years)
			Max Lower 95% 1 Year Loss (Age 50 - 65)	Lower 95% Loss (Final Year)		
Target Date Fund (1)	5.9%	-16%	-14.6%	-10.9%	24.2	-10.6
Target Date Fund (2)	5.9%	-16%	-14.3%	-12.1%	23.9	-10.5
Target Date Fund (3)	5.4%	-22%	-17.5%	-13.8%	25.9	-13.5
Average Super	5.5%	-22%	-17.3%	-15.0%	27.3	-15.4
Average with Lifestyle	5.8%	-17%	-17.3%	-8.7%	23.5	-8.6

Objectives

Strengthen the product proposition



Consistency across the entire product range



Independent



Cost-effective



Benefits

Demonstrating a 'best-practice' investment governance process provides a clear competitive differentiator for your proposition.

The Barrie & Hibbert Product Governance Services cover the full range of investment, pension accumulation, and retirement income products, providing a completely consistent framework for design, governance and communication across the product offering.

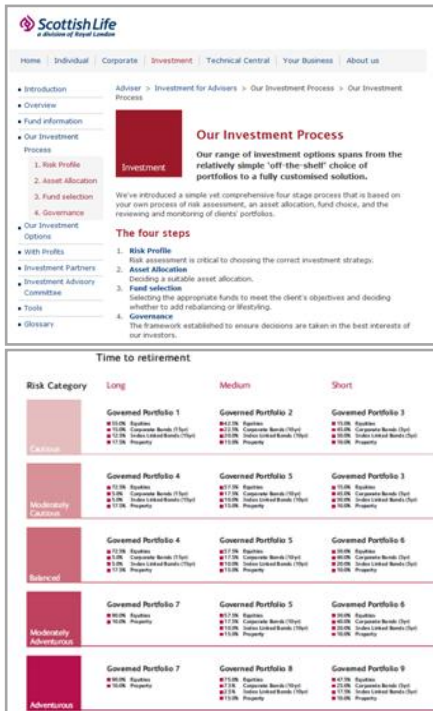
By using the market-leading risk modelling specialist, our clients are in a stronger position to demonstrate the validity of their products and the strength of their governance process.

In Product Risk Map (PRISM) and Product Risk Dashboard, Barrie & Hibbert's modelling expertise has been packaged to meet design and governance needs across different products, offering a simple and highly cost-effective governance solution.

Client Case Studies

Royal London: Scottish Life Governed Portfolios

Royal London use Barrie & Hibbert's Investment Governance Services (Product Risk Map and Product Risk Dashboard) to support the design and governance of their 'Governed Portfolios' default DC investment proposition.



"A robust investment governance framework underpins the whole approach, and Barrie & Hibbert play an important independent role in this process. Barrie and Hibbert's Product Risk service ensures that the strategic asset allocation benchmarks underpinning the framework continue to match these defined objectives, and that active positions taken by the fund manager are within agreed risk budgets."

Ewan Smith, Group Product Development Director, Royal London

"Scottish Life have developed their Governed Range to enable advisers to deliver exactly this [choice, flexibility and governance]. There are a range of risk profiled portfolios, automatic rebalancing for investors and increased flexibility for life styling. The governance means that there is a formal review process, which includes an investment advisory committee to review +investments and the use of analysis from investment risk management experts Barrie and Hibbert. The Scottish Life Governed Range offers the flexibility and governance that I believe a default option should have in order to meet client and adviser needs in an increasingly complex market."

Jason Walker, Senior Manager, AWD Chase de Vere

www.scottishlife.co.uk

Tenet Group

Tenet Group use B&H's Investment Governance services to design and regularly monitor their risk-graded portfolios for investment clients with growth or income objectives.



www.tenetgroup.co.uk

Why Barrie & Hibbert?

Barrie & Hibbert was established in 1995 by John Hibbert and Andrew Barrie. We provide a range of software modelling tools, research and consulting services to a wide range of financial institutions and strategic partners.

Barrie & Hibbert's primary focus is the identification, quantification and management of financial risk in savings and investment products, institutional portfolios and life and pensions balance sheets. Barrie & Hibbert has developed a powerful library of financial models that can be used to understand the complicated joint financial relationships that drive uncertainty in long-term financial plans.

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 13 years resulting in Barrie & Hibbert becoming a global market leader in stochastic asset modelling services.

Barrie & Hibbert is privately owned and employs around 100 staff across locations in the UK, US and Asia.

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