



BNP PARIBAS
SECURITIES SERVICES



Solvency II – Your Custodian as an integrator across pillars

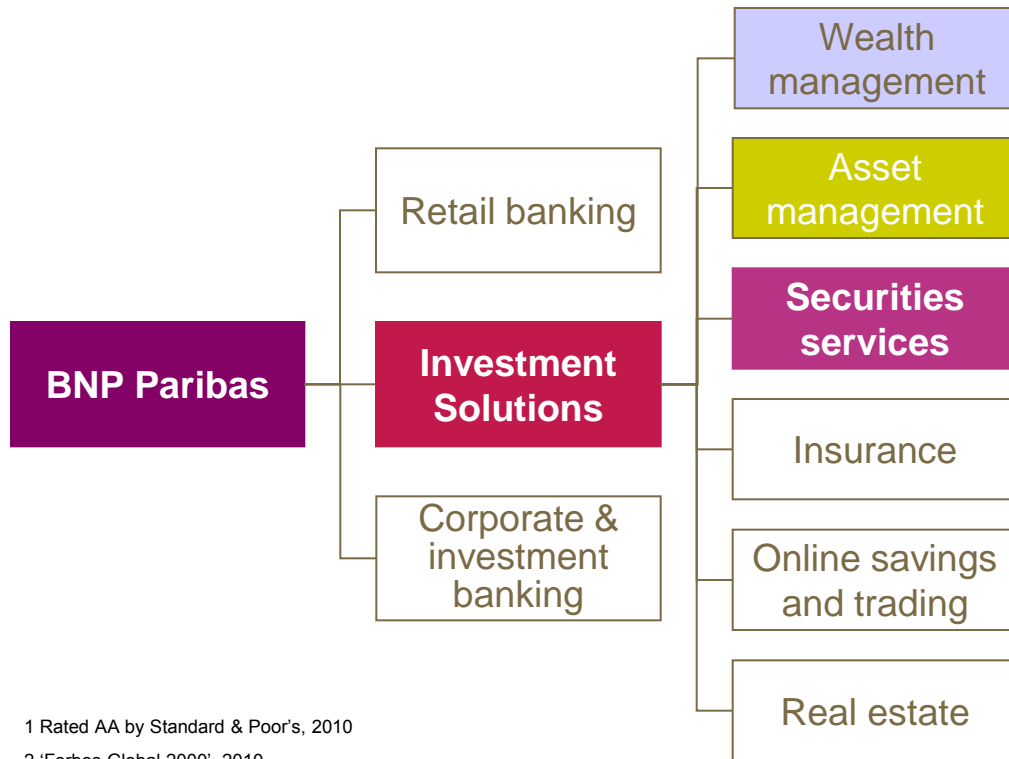
11 October 2011

Dave Carter
Product R&D, UK

afm association
of financial
mutuals



BNP Paribas: a powerful banking group



- One of the **strongest banks in the world**¹
- **7th largest** company in the banking sector²
- One of the **lowest CDS spreads** in the industry³
- Present in over **80 countries** worldwide
- Over **200,000** employees
- **World's 5th** largest global custodian (by AUC)⁴

1 Rated AA by Standard & Poor's, 2010

2 'Forbes Global 2000', 2010

3 March 2011

4 globalcustody.net 2 February 2011



Services

- **Global custody**
- **Depository bank and trustee services**
- Transfer agency and fund distribution support
- **Fund administration and middle-office outsourcing**
- **Investment reporting & performance measurement**

Key figures

- **6,329** funds administered
- **18** locations in Europe and **23** locations worldwide
- USD **1,031** bn assets under administration

Awards

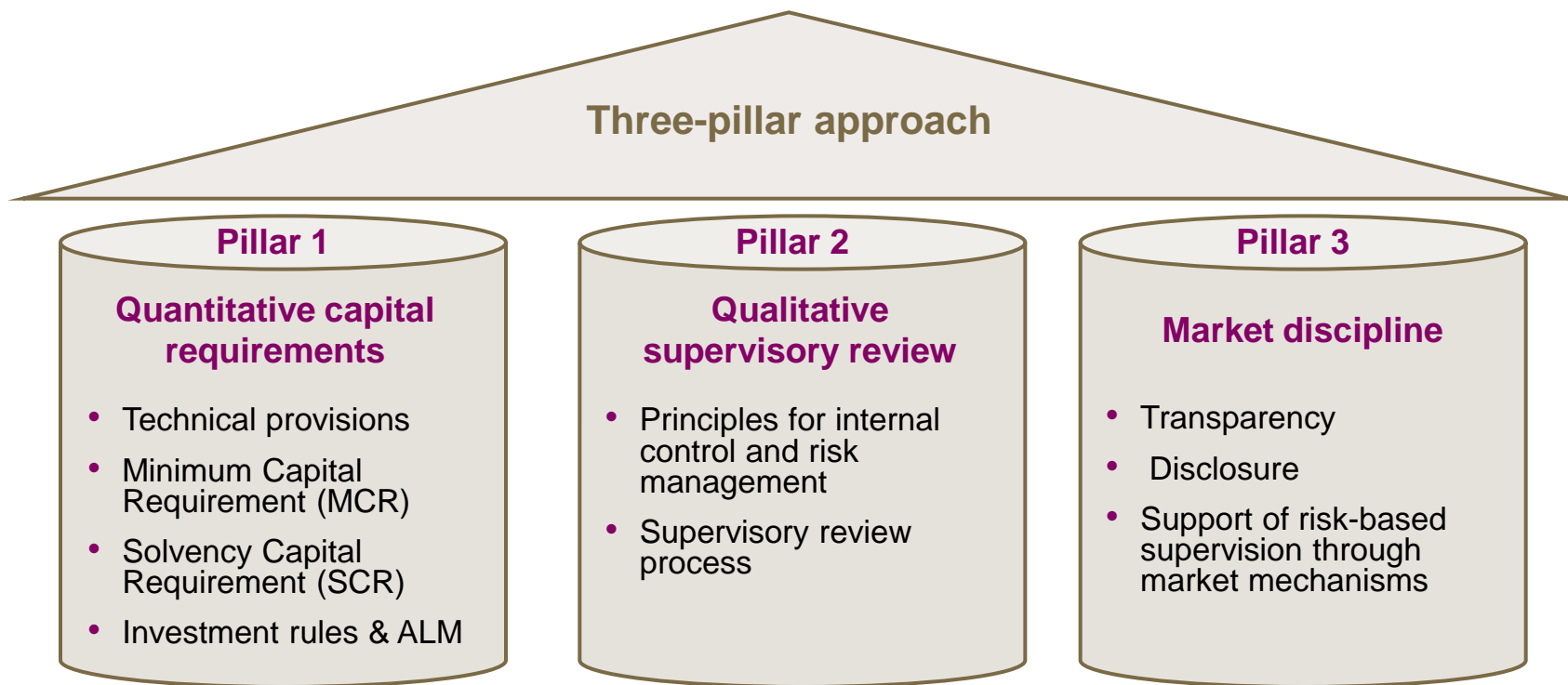
- Hedge fund administrator of the year – Americas (ICFA awards 2010)
- Most effective outsourcing support (Systems in the City awards 2010)
- Mutual funds EMEA unweighted (Global Investor awards 2010)
- Best sub-custodian bank France – weighted and unweighted (Global Investor awards 2010)



* All figures 31 December 2010



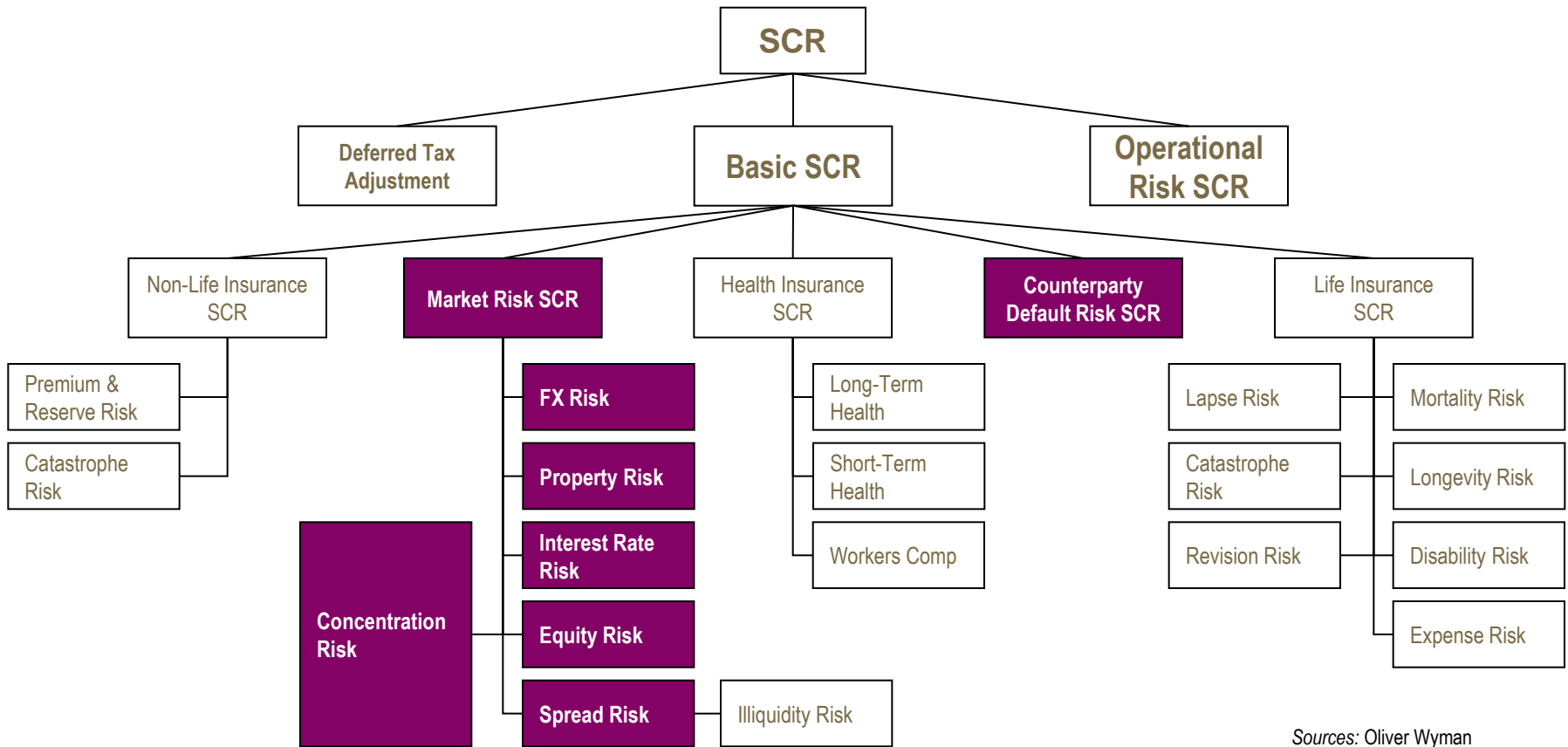
The Solvency II “Pyramid”



Agenda is to give some examples how a Securities Services and Custodian firm can add value in these pillars



Scope: Portfolio*SCR



Sources: Oliver Wyman



Our service provider capabilities:

Pillar 1: Quantitative requirements

Pillar 2: Supervisor review

Pillar 3: Disclosure

Data Delivery

Risk Analysis

Liability Analysis

Strategy Decisions

Measure Strategies

Disclosure

Data

*Portfolio*SCR & Decision Support*

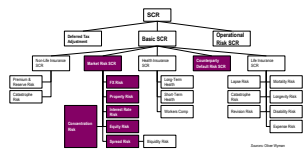
Optimisation

Monitor & Report

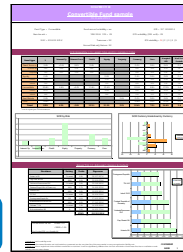
External Managers

Look through

Accounting Data



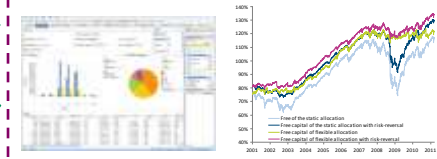
Solvency II analysis services



Specialist Investment Banking

Specialist Asset Management

Derivative Administration & Collateral Mgt



Extended Portfolio Reporting / Risk Testing

Securities Services Provider

Increasingly analytical

Implementation specific



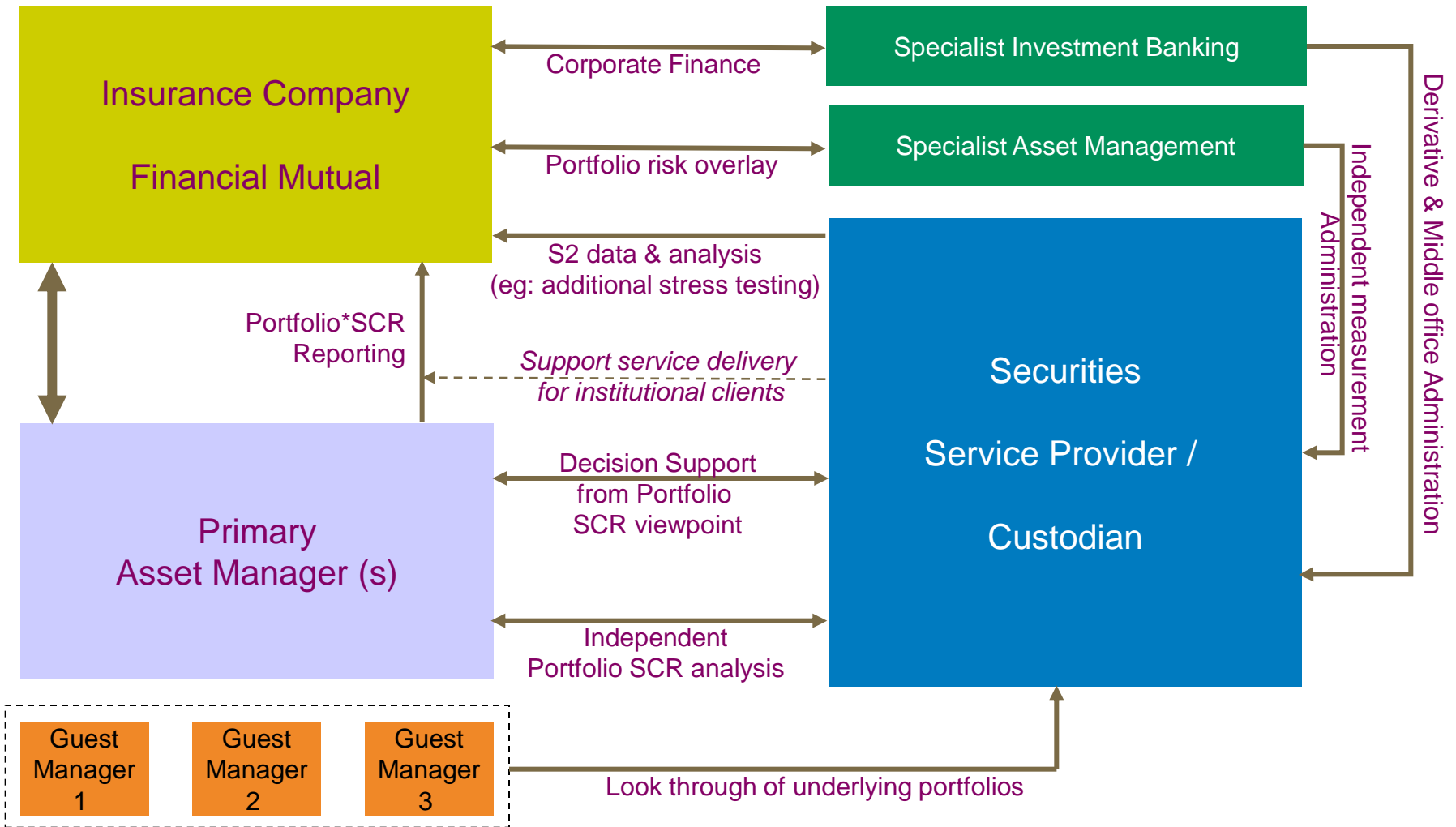
BNP PARIBAS
SECURITIES SERVICES

Our product offer:

Solvency II solutions		Pillar	Feature
1	Data delivery	I	<ul style="list-style-type: none"> • Provision of accounting data • Provision of look through portfolio data (Fund of Funds) • Additional supplementary data enrichment (Market Data)
2	Portfolio*SCR calculations		<ul style="list-style-type: none"> • Portfolio*SCR based on asset data universe • Portfolio*SCR on look through structures
3	Portfolio*SCR fact sheets		<ul style="list-style-type: none"> • Standard Portfolio*SCR views (similar to institutional brief fact sheets) • Tailored incorporating additional specific views (eg: fund of fund or stress tests) • Tailored incorporating asset allocation views of (4)
4	Decision support	II	<ul style="list-style-type: none"> • Asset Allocation what / if analysis • Portfolio / SCR perspective & heat map analysis
5	Ratios		<ul style="list-style-type: none"> • Reporting on limits set out in mandates by investors to Fund Managers (with a context of S2) <ul style="list-style-type: none"> ▪ Institutional Client requirements
6	Optimisation		<ul style="list-style-type: none"> • Derivative Servicing / Collateral Management / Counterparty operations • <i>Specialist Asset Management</i> • <i>Specialist Investment Banking</i>
7	Regulatory reporting	III	<ul style="list-style-type: none"> • Contribution to the production of Pillar III reporting: <ul style="list-style-type: none"> ▪ Report to supervisor ▪ Solvency & Financial Condition Report ▪ Quantitative reporting templates



Our client positioning: Service touch points

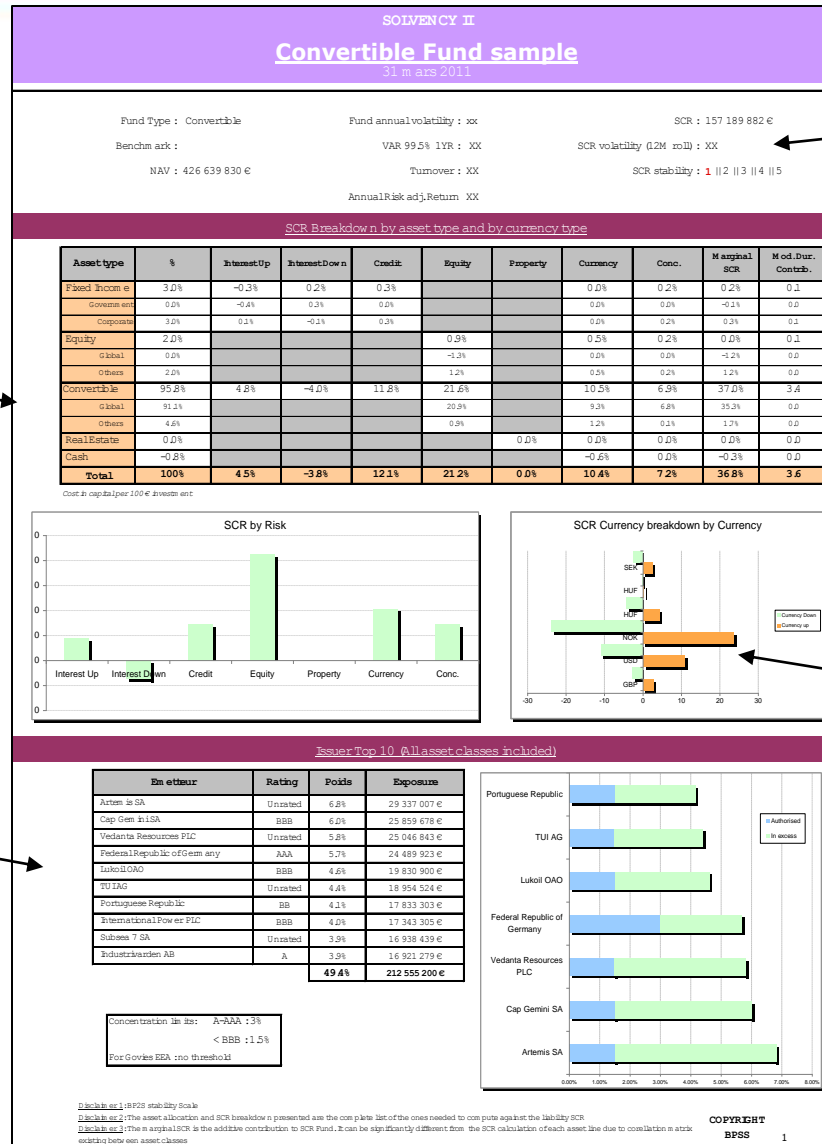


Service examples:

Insurance Company Financial Mutual	Primary Asset Manager	Specialist Support
Aggregated view of Portfolio*SCR	Independent view of Portfolio for SCR purposes	Administration support for risk overlays
Counterparty Risk & Ratios	Specialist Solvency II investment reporting for Institutional Mandates	Independent view of strategy
Actuary delegation / support (eg: Portfolio SCR insights)	Support for portfolio decisions to maintain a notional SCR	Ongoing stress testing
Portfolio Data gathering / Fund Look-through / Valuation		Financing / Collateral Operations
Custody, Fund Accounting and Investment Reporting Banking & Financing		



Portfolio*SCR Factsheet: Example fund



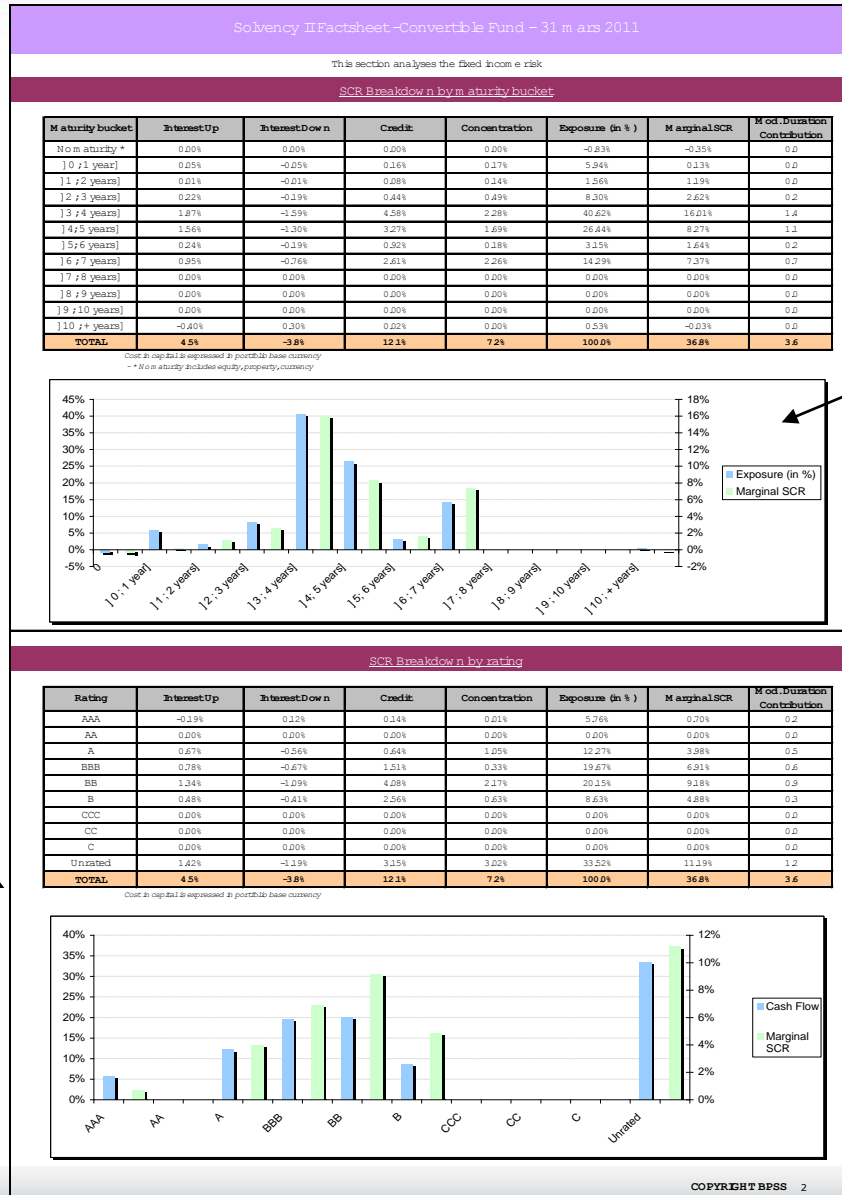
SCR versus the type of risk

Top 10 exposures

Various headline indicators

View of SCR via currency indicators

Portfolio*SCR: SCR breakdown by maturity / rating...



SCR by maturity

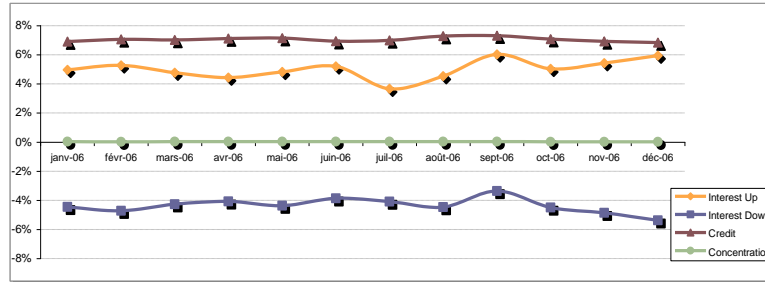
SCR by rating

Portfolio*SCR: Tracking SCR profile over time...

Solvency II Factsheet - Fixed Income sample - 31th January 2011

Solvency Capital Requirement evolution over the last 12 months

	NAV (M€)	Interest Up	Interest Down	Credit	Equity	Property	Currency	Conc.	Total SCR (M€)	% var
02/2010	993.43	5.0%	-4.5%	6.9%	0.00	0.00	0.00	0.03%	0.82	-
03/2010	1 006.54	5.3%	-4.7%	7.1%	0.00	0.00	0.00	0.03%	0.85	4.60%
04/2010	1 015.84	4.8%	-4.3%	7.0%	0.00	0.00	0.00	0.03%	0.83	-2.40%
05/2010	961.94	4.4%	-4.1%	7.1%	0.00	0.00	0.00	0.03%	0.79	-5.37%
06/2010	938.69	4.2%	-4.4%	7.1%	0.00	0.00	0.00	0.03%	0.79	-0.33%
07/2010	968.31	5.2%	-3.9%	6.9%	0.00	0.00	0.00	0.03%	0.77	-2.24%
08/2010	986.06	3.7%	-4.1%	7.0%	0.00	0.00	0.00	0.03%	0.80	3.92%
09/2010	923.39	4.5%	-4.5%	7.3%	0.00	0.00	0.00	0.03%	0.79	-1.25%
10/2010	876.35	6.0%	-3.4%	7.3%	0.00	0.00	0.00	0.03%	0.71	-10.57%
11/2010	825.08	5.0%	-4.5%	7.1%	0.00	0.00	0.00	0.03%	0.69	-2.08%
12/2010	808.63	5.4%	-4.9%	6.9%	0.00	0.00	0.00	0.02%	0.68	-1.07%
01/2011	806.00	5.9%	-5.4%	6.8%	0.00	0.00	0.00	0.02%	0.70	2.44%



Impact of restrictions checking

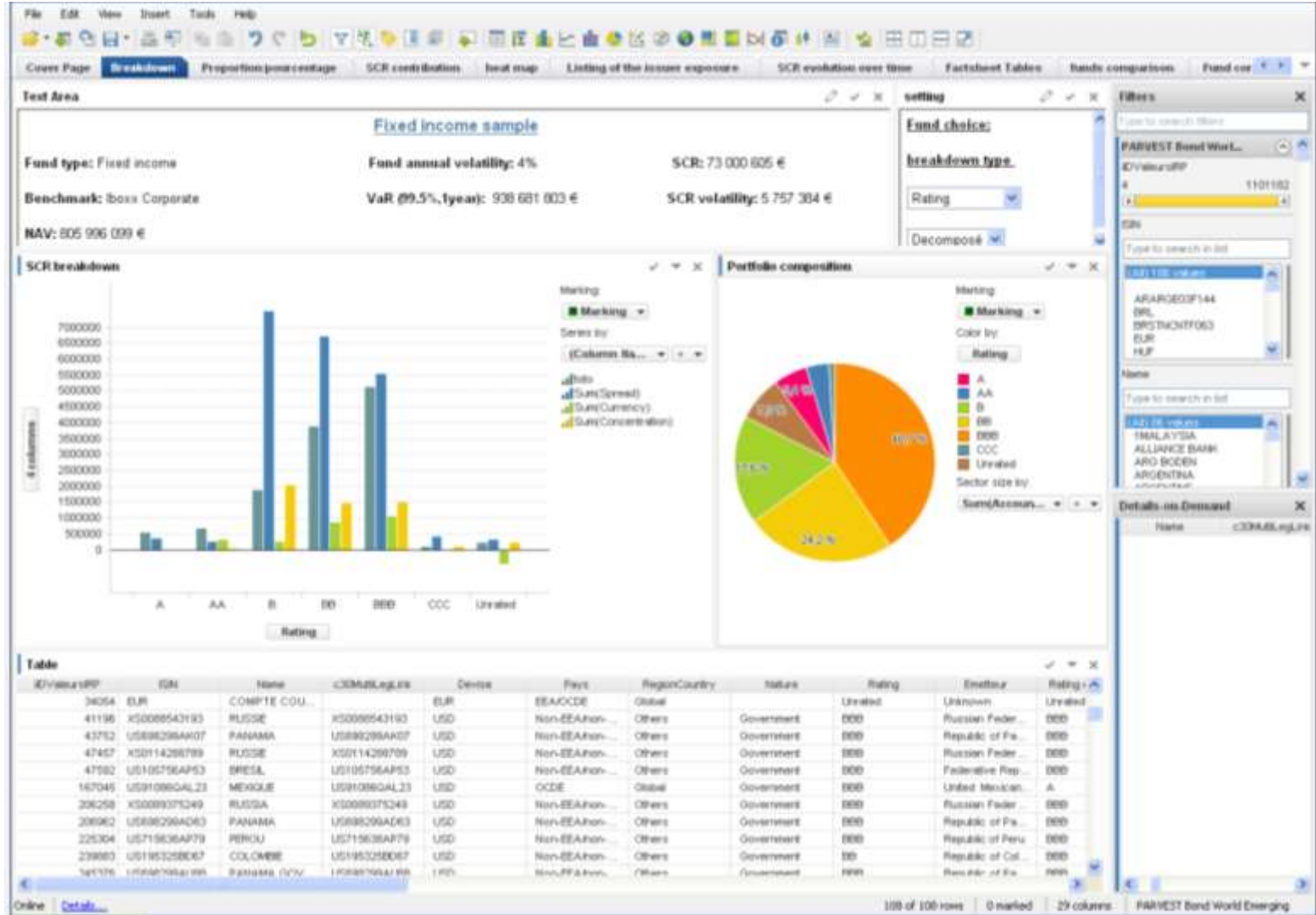
Past SCR profile

Trend v rating over time

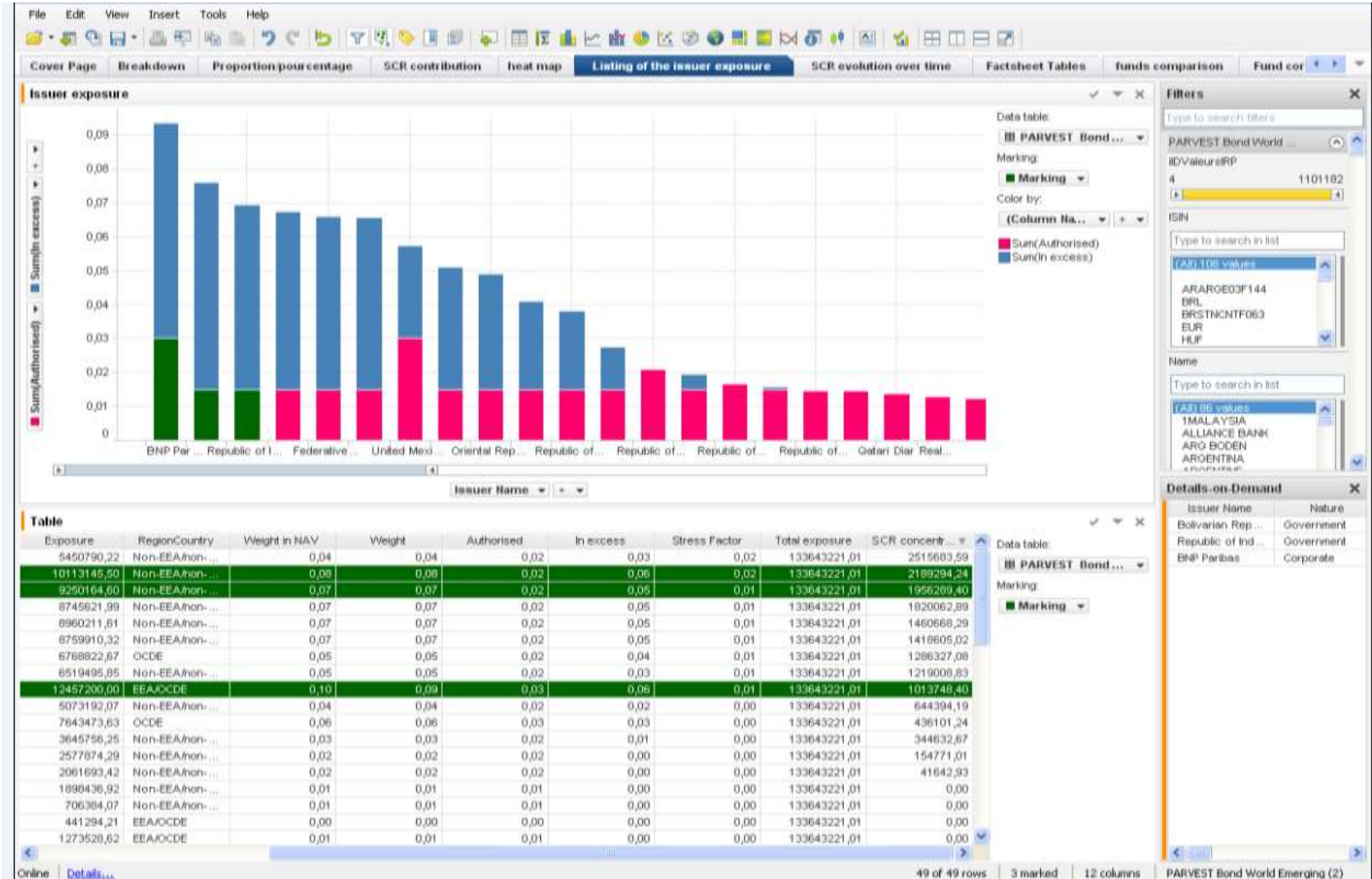
Focus on the rating allocation over the last 12 months

	AAA		AA		A		BBB		CCC		Unrated	
	%	SCR	%	SCR	%	SCR	%	SCR	%	SCR	%	SCR
02/2010	-1.24	0.56	17.68	1.28	54.82	4.85	22.89	2.71	0.12	0.01	1.40	0.00
03/2010	-2.30	0.12	15.22	1.00	54.22	4.77	25.70	3.16	0.00	0.00	2.89	0.00
04/2010	0.14	0.28	15.16	0.96	50.72	4.31	27.07	3.42	0.00	0.00	5.10	0.00
05/2010	1.43	0.33	16.04	0.98	52.98	4.30	26.65	3.32	0.00	0.00	2.27	0.00
06/2010	0.09	0.14	16.84	0.99	53.38	4.25	27.62	3.34	0.00	0.00	0.00	0.00
07/2010	1.42	0.52	17.38	1.02	51.50	4.13	26.76	3.24	0.00	0.00	2.27	0.00
08/2010	1.21	0.21	17.38	0.92	53.01	3.96	26.50	3.14	0.00	0.00	1.25	0.00
09/2010	-1.42	0.01	16.06	0.92	53.86	4.30	28.90	3.44	0.00	0.00	1.18	0.00
10/2010	-0.74	1.10	14.25	0.80	55.52	4.47	29.85	3.64	0.00	0.00	0.27	0.00
11/2010	0.00	0.00	12.94	0.75	57.52	4.61	28.40	3.41	0.00	0.00	1.14	0.00
12/2010	0.00	0.00	13.17	0.77	60.82	4.93	25.53	3.18	0.00	0.00	0.48	0.00
01/2011	0.00	0.00	12.38	0.77	61.14	5.09	25.35	3.29	0.00	0.00	1.13	0.00

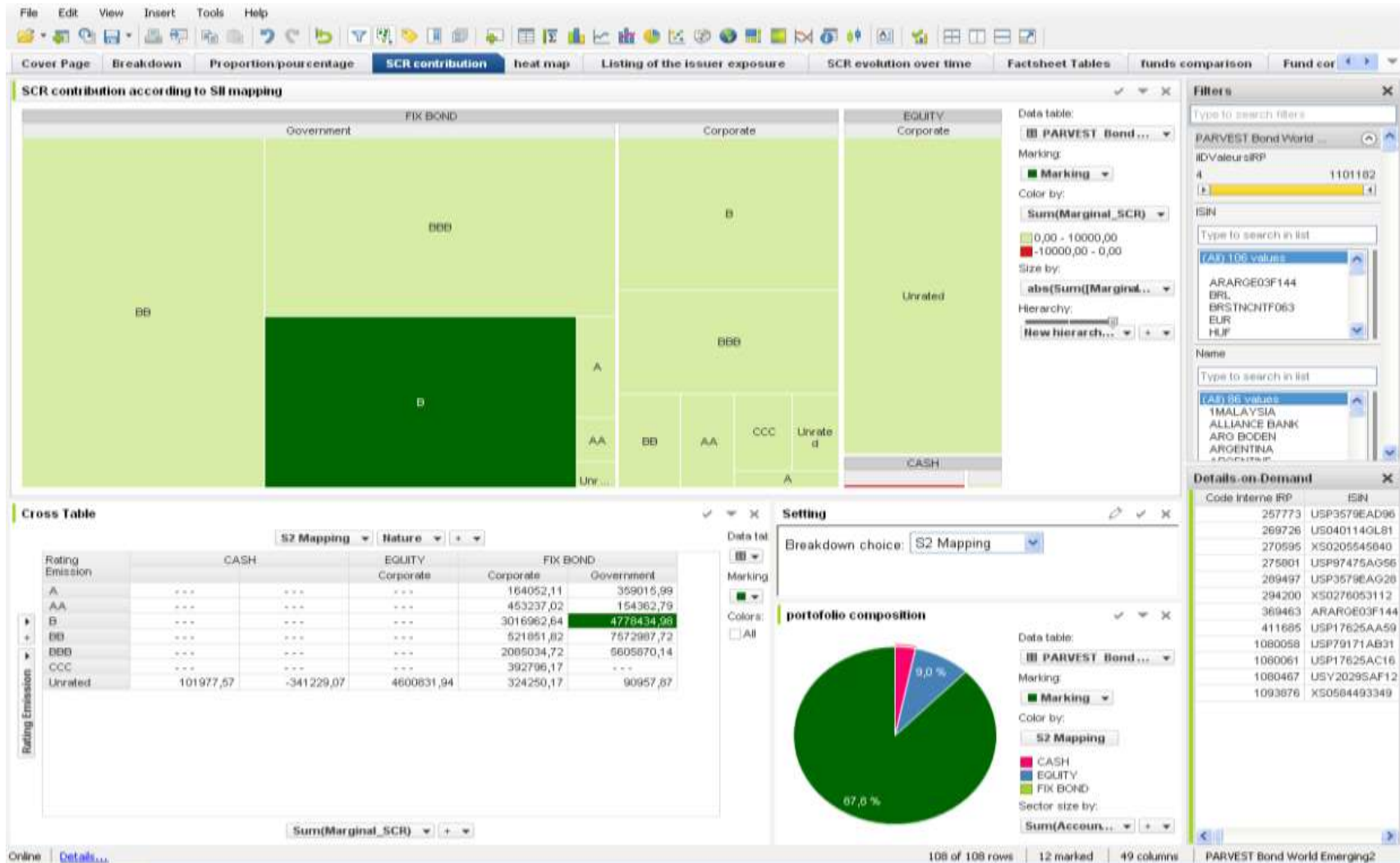
Portfolio*SCR: A decision support perspective: (1/3)



Focus in on specific assets (2/3)



A heat-map of portfolio v rating v contribution (3/3)



Independent stress / Back testing:

Stress
DOWN

Measuring the risk perspectives....

Asset allocation / Breakdown compliant with Solvency II	
Equity	12%
Global	6%
GBP	4%
EUR	1%
USD	1%
Others	4%
Listed and not listed equity	2%
Equity UCITS Funds	1%
Equity Hedge Funds	1%
Participations	2%
Real Estate	5%
Fixed Income	80%
Government Bond (OECD & EEA)	40%
GBP	35%
EUR	2%
USD	3%
Corporate Bond	40%
AAA	1%
AA	8%
A	18%
GBP	15%
USD	4%
BBB	12%
B or lower	1%
Unrated	0%
Cash & cash equivalent	3%

	Asset allocation	Interest rate risk	Credit risk	Illiquidity risk	Equity risk	Property risk	FX risk	TOTAL
Cost in capital	100%	9.2	17.9	3.2	4.0	1.3	3.6	39.2
Equity	12%	-	-	-	4.0	-	0.5	4.5
Global	6%				2.3		0.5	2.8
GBP	4%				1.6			1.6
EUR	1%				0.4		0.3	0.6
USD	1%				0.4		0.3	0.6
Others	4%				2.0			2.0
Listed and not listed equity	2%				1.0			1.0
Equity UCITS Funds	1%				0.5			0.5
Equity Hedge Funds	1%				0.5			0.5
Participations	2%				0.4			0.4
Real Estate	5%	-	-	-	-	1.3	0.0	1.3
Fixed Income	80%	9.2	17.9	3.2	-	-	3.1	33.4
Government Bond (OECD & EEA)	40%	4.6		1.6			1.3	7.4
GBP	35%	4.1		1.4				5.5
EUR	2%	0.2		0.1			0.5	0.7
USD	3%	0.3		0.1			0.8	1.2
Corporate Bond	40%	4.6	17.9	1.6			1.8	26.0
AAA	1%	0.1	0.1	0.0				0.2
AA	8%	0.9	0.9	0.3				2.1
A	18%	2.1	2.6	0.7			0.9	6.3
GBP	15%	1.7	2.1	0.6				4.4
USD	4%	0.4	0.5	0.1			0.9	2.0
BBB	12%	1.4	3.7	0.5				5.6
B or lower	1%	0.1	1.7	0.0				1.8
Unrated	0%	0.0	9.0	0.0				9.0
Cash & cash equivalent	3%	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Stress
UP



Post SCR: Portfolio re-allocation & mandate compliance

- Testing SCR sensitivity to changing asset allocation (eg: Increase exposure to certain asset classes)
 - Assist in your asset re-allocation decisions while taking into account the specifics of the mandate
 - Help support decisions for “a best” asset allocation mindful of the SCR impact

- With depositary bank experience, monitor your SCR exposure around investment decisions in order to ensure compliance, including:
 - The monitoring of the investment guidelines and prudential ratios, as outlined in the fund's prospectus (or newly the KIID)
 - Rules relating to minimum asset requirement of a fund
 - **The certification of the asset inventory of a fund**

Asset allocation / Breakdown compliant with Solvency II	
Equity	12%
Global	6%
GBP	4%
EUR	1%
USD	1%
Others	4%
Listed and not listed equity	2%
Equity UCITS Funds	1%
Equity Hedge Funds	1%
Participations	2%
Real Estate	5%
Fixed Income	80%
Government Bond (OECD & EEA)	40%
GBP	35%
EUR	2%
USD	3%
Corporate Bond	40%
AAA	1%
AA	8%
A	18%
GBP	15%
USD	4%
BBB	12%
B or lower	1%
Unrated	0%
Cash & cash equivalent	3%



Summary thoughts:

- Administration and portfolio analysis
 - Primary focus on the Portfolio*SCR view
- Provision of look through portfolio analysis:
 - Multi-manager
 - Multi-administrator
- Servicing support for specialist hedging / asset managers
- Independent view between relationships
- Solvency II delay
 - Provides a window to consider additional capabilities





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