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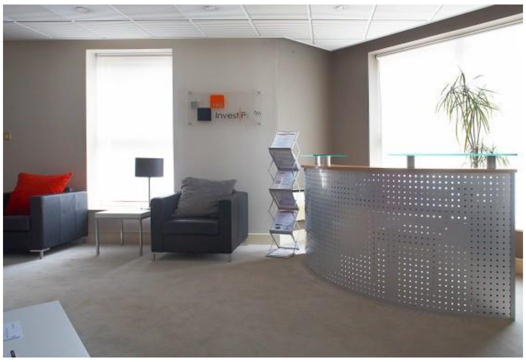


Research Update: July 2014

Risk Management for Insurance Assets in a Solvency II world

Background

Much has been written about the responsibilities of the risk management function in the Solvency II world but less focus has been placed on the tools that risk managers will need to fulfil their responsibilities. In this research update, George McCutcheon discusses risk management for insurance assets in more detail.

Key Messages for Insurance Companies

- Insurance companies will need to increase spending on risk and performance analytics to support the risk management function
- Risk and performance analytics are particularly important for firms that have outsourced fund administration as unfettered access to data is crucial to the effective oversight process required by regulators
- Firms need to take action now to consider during the preparatory phase what immediate changes are required to give effect to Solvency II requirements as the investment risk management of undertakings has to be fully compliant with the prudent person principle at the start of Solvency II.

EIPOA Guidelines on System of Governance

The EIOPA Guidelines on System of Governance give preliminary effect to certain Solvency II requirements.

- Under Guideline 5, the undertaking has to implement risk management and compliance functions.
- Under Guideline 16, the undertaking has to establish a risk management policy including a definition of risk categories and the methods to measure the risks, an outline of how it manages the relevant risk categories, area of risks and any potential aggregation of risks and which specifies the risk tolerance limits within all relevant risk categories
- Under Guideline 19, the undertaking is required to have processes to identify, analyse and report on operational risk events and to establish a process for collecting and monitoring operational risk events. The risk management policy has to cover the activities and internal processes for managing operational risks, including the IT system supporting them.
- Under Guideline 23, the risk management policy must cover the level of security, quality, liquidity, profitability and availability of the portfolio of assets; quantitative limits on assets and exposures; the procedure for appropriately valuing and verifying the investment assets; procedures to monitor the performance of the investments, etc.

Background

Solvency II will have a major effect on the working lives of insurance professionals. This has particular resonance for risk management and compliance professionals as Articles 44 and 46 of the Solvency II Directive requires that undertakings implement a risk management function and a compliance function and so provides a regulatory underpinning of these roles. With those roles come great responsibilities and a critical component of the responsibility will lie with asset monitoring and compliance.

> *Article 132 of the Directive prescribes undertakings should only invest in assets and instruments whose risks the undertaking concerned can* ***properly identify, measure, monitor, manage, control and report****.*

Firms will need to consider carefully how they will meet this requirement which will be a challenge for the risk management and compliance functions and will require fundamental change to how these functions carry out their roles.

The need for a new perspective

Traditionally fund administration has operated on a silo basis which has become increasingly out-dated. Risk management and compliance functions have had to come through the gatekeepers of the fund administration system in order to access information. The increasing trend towards outsourcing the fund administration function has distanced further the risk management and compliance functions from the core operations and served to further restrict access to data.

In the Solvency II world, there will be an increased focus on management reporting and analytics driven by external pressures such as increasing regulatory scrutiny, the new Pillar 3 reporting requirements and the need to improve risk management. Insurance companies will need to increase spending on risk and performance analytics in order to improve their capabilities in this area.

Outsourcing

Where the fund administration function is outsourced, particular difficulties can arise in ensuring effective oversight unless unfettered access to data is available. Insurance companies will be familiar with the cost and timescale problems routinely encountered in getting required asset data reports often arising from miscommunications and misunderstandings of the relevant issues. Risk and performance analytics are an effective way of resolving such issues.

Practical Compliance with Article 132

The requirement is to only invest in assets and instruments whose risks the undertaking concerned can properly identify, measure, monitor, manage, control and report.

There are a number of critical pre-requisites:

- Comprehensive asset dataset
- Real-time access to data
- Data granularity
- Data visualisation techniques
- Data dashboards
- Look-through capability

Comprehensive asset dataset

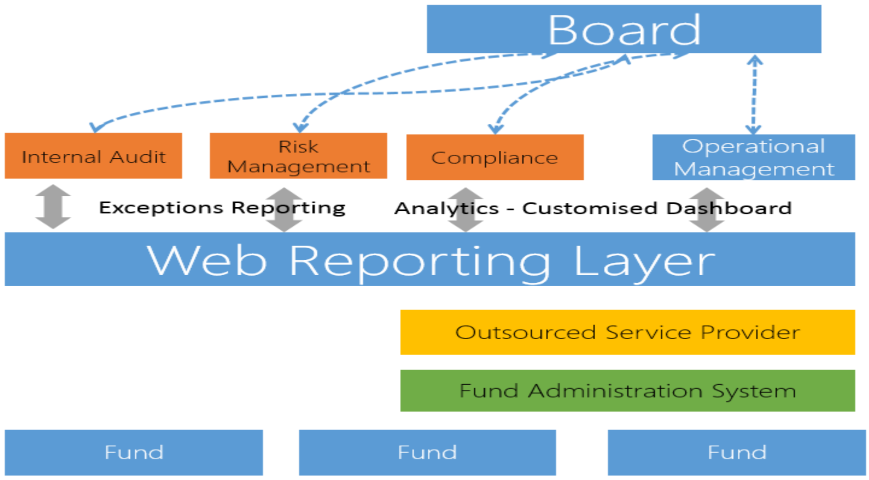
At a minimum details in respect of all on-balance sheet assets should be included in the asset dataset available to the risk management function. This might seem to be non-problematic but in practice will require significant operational changes for some firms in respect of some business lines e.g. private insurance business via discretionary asset managers.

Real-time access to data

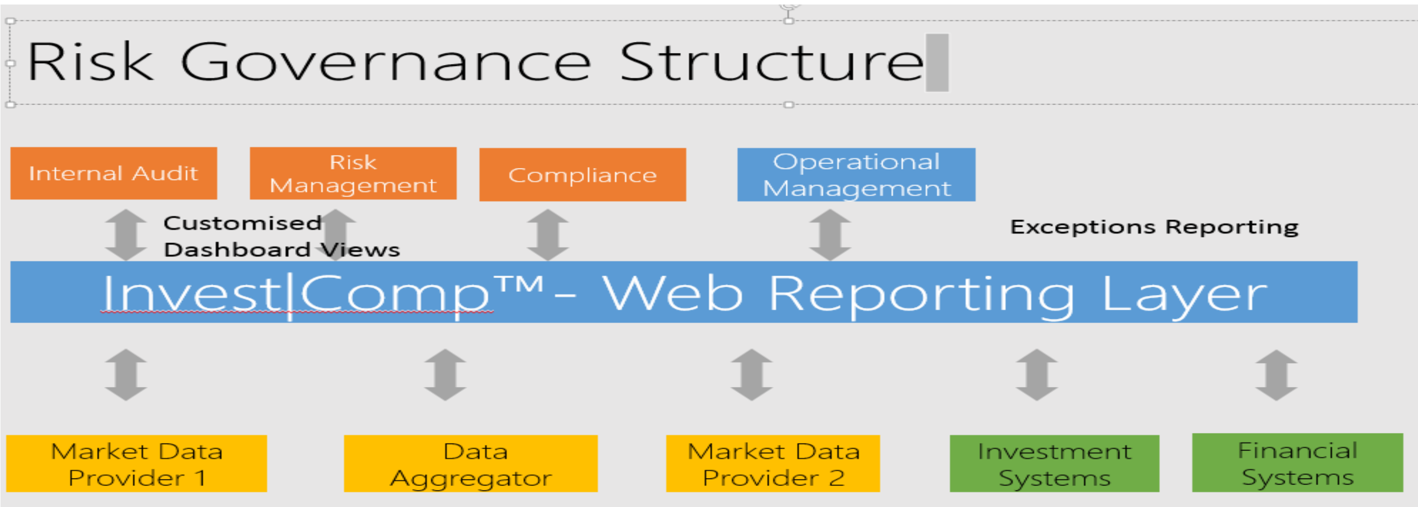
EIOPA has specified that an adequate risk management system requires an effective and efficient set of integrated measures which must fit into the organisation and operational activity of the undertaking. Risk Management is intended to be an integral part of organizational processes; to be a systematic and structured process; to be based on the best available information and to be part of the decision making process.

Whilst insurance companies will have various different operating models – some will have in-house operations, others will use outsourcing service providers - the risk management system will need to be capable of operating successfully in either environment. Increasingly this will require that asset reporting solutions be browser based with the capability to either look-through into the primary investment system as shown in the schematic below or to deploy asset reporting tools that operate based on data pumps from the primary investment system and from market vendor data sources.

- Risk managers require real time access to asset data independent of the fund administration team.
- Risk managers will demand comprehensive analytics capabilities geared to their needs



In the Solvency II world, risk management and compliance functions will require access to asset data through a web reporting layer providing them with real-time unfettered access to asset data without needing to go through any gatekeepers.
Ironically with the silo approach the risk management function, whilst trying to assess/monitor risks, can inadvertently increase operational risk because its data requests can be a large burden on the fund administration department and a distraction from their core BAU focus.
Solvency II asset QRT reporting will require feeds from further data sources.



Data Granularity
Solvency II being a risk based regime requires reporting of assets on a line by line basis. The granularity of data at asset line is crucial to the requirement to fully understand asset risks and to manage them properly. This granularity of data is improved even further by the look-through provisions. This requires comprehensive drill-down capabilities.

Data Visualisation
A data visualisation layer is now generally recognised as the optimum means of interpreting, exploring and communicating data. This requires advanced data filtering, sorting, paging and user configurability. Data should be displayed through a wide range of interactive display options – bar graphs, pie charts, column charts, bubble charts, heat maps, tree maps, candlestick graphs, etc.

Data Dashboards
Firms need to unlock the value of the data they store. Dashboards remove the restriction to exploring Big Data and

enable organizations to unlock the value of their stored data.
The risk management and compliance functions will require their own customised dashboard views of the data they require and in the format that they require complemented by exceptions and breach reporting. This serves to quickly alert review staff to changes that are impactful.
An example dashboard from Google Analytics is shown below.

Look-through
There will be a step change in the granularity and transparency of asset data as a consequence of the availability of look-through data arising from the D4 investment funds QRT requirement. This will have beneficial effects as enhanced data transparency will assist insurance companies in evaluating their risk-reward profiles in investment decision-making. In particular this will assist managers of fund of funds in selecting an appropriate range of asset managers and investment funds.

Timelines
Because the investment risk management of undertakings is to be fully compliant with the prudent person principle at the start of Solvency II, firms need to consider during the preparatory phase what immediate changes are required to give effect to Solvency II requirements.

FRS have such a compliance offering called Invest|Comp™ which we would be happy to discuss further if this is appropriate, feel free to email frank.carr@frsltd.com to discuss this further.

Biography; George McCutcheon MSc FIA:
Mr. McCutcheon is a graduate of University College Dublin in Mathematical Science and is a Fellow of the Institute of Actuaries. He is a director and co-founder of Financial Risk Solutions (FRS). He has presented a number of papers at the Life Convention of the Institute of Actuaries and has co-authored a number of papers for the Society of Actuaries in Ireland.

About Financial Risk Solutions (FRS)
Financial Risk Solutions Ltd (FRS) is a leading provider of unit pricing and fund administration software to the life assurance and pensions industries. Its Invest|Pro™ product family is a recognised leading benchmark in the investment fund administration area and customers include some of the biggest brands in life assurance and third party administration including MetLife, SEB, IFDS Percana, and Accenture Managed Services.

FRS's mainline product Invest|Pro™ manages unit pricing and portfolio valuations, asset/liability unit matching, box management, trade order management, investment accounting, financial reporting and compliance with investment mandates in a single application. Product types covered include unit linked funds, portfolio bonds, self-invested/directed pensions, shareholder funds and with-profit funds. Invest Pro™ was specifically designed to securely automate complex fund administration processes.

FRS's product Invest|Comp™ provides visibility of aggregate asset positions and other relevant compliance and risk management data. Invest|Comp™'s Data|Pump server application is used to populate and synchronise the Invest|Comp™ data warehouse with data from the company's investment systems and from external market data providers.

For more information contact frank.carr@frsltd.com or visit www.frsltd.com

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