



cutting through complexity

ADVISORY

# Solvency II

Data Impacts on  
Asset Management

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## 1

# Foreword



**Peter De Proft**  
Director General  
EFAMA

It is a pleasure for me to introduce to you this report on Solvency II: Data Impacts on Asset Management. This report has been commissioned by EFAMA and undertaken by a select group of experts made up of specialists and practitioners from the asset management industry. I would like to thank all of them for their valuable support and contribution to this report and a special thanks to KPMG and Aviva Investors, both of which co-chaired this group of experts and provided support in delivering the report.



**Richard Field**  
Chief Risk Officer  
Aviva Investors

Recent market developments and the oncoming regulation have created the most challenging environment that the asset management industry has encountered to date. Among all these pieces of regulation, Solvency II represents an important challenge for the asset management industry and we are fully aware of the need for our industry to be ready to respond to these strategic changes.



**Tom Brown**  
Partner  
KPMG LLP

Solvency II is a fundamental review of the capital adequacy regime for the European insurance industry with the wide objective to fundamentally transform the regulatory framework for the EU insurance industry. However, the impact of this directive will affect not only the European insurers but also European asset managers. The implementation of Solvency II is a challenge for the asset management industry in so many areas such as risk management and governance, which have been requested to have greater levels of disclosure, transparency and more frequent reporting. This challenge will specifically affect those companies that operate in multiple countries.

This Report does not pretend to be the solution to the specific adjustment required to implement changes regarding Solvency II. Our goal has been to identify the potential impacts that this specific directive will have on asset managers' daily business models, to produce some genuine value and insight for all our members and to provide some potential solutions to issues related to data provision, data management, asset allocation and the wider regulatory landscape.

One of EFAMA's primary goals is to put investors at the heart of EFAMA's strategy. The implementation of Solvency II will open the way for a new relationship between insurers and asset managers. By enhancing its focus on investors' needs, our industry can considerably boost its significance, attractiveness and credibility, and pave the way for sustainable growth. As the buy-side players of the financial industry, we hope to strengthen long-term trust among our customers in the insurance business and encourage policymakers to support the development of long-term investment.

Finally, we hope that our concerns and potential solutions will be part of the discussions that the European Commission, Council and Parliament will have in the coming months on the final version of the Omnibus II Directive. We want to encourage our members to be proactive in the face of Solvency II and we would be especially pleased if this Report is a call for them to get ready for the changes that this new regulation will bring to their business models.

**Peter De Proft**



## 2



**Daniel Gorton**  
Director  
KPMG LLP

# Executive Summary

## Background

Solvency II is the most comprehensive regulation ever imposed on the insurance industry across Europe. The essence of the Directive is to require insurers to provide transparency over their risk and the levels of capital held to cover that risk.

Originally, Solvency II was to be implemented by 2012 but the complexity of the Directive and the need to achieve Europe-wide consensus between regulators has seen the implementation date pushed back not once but twice, and is now expected to be January 2014.

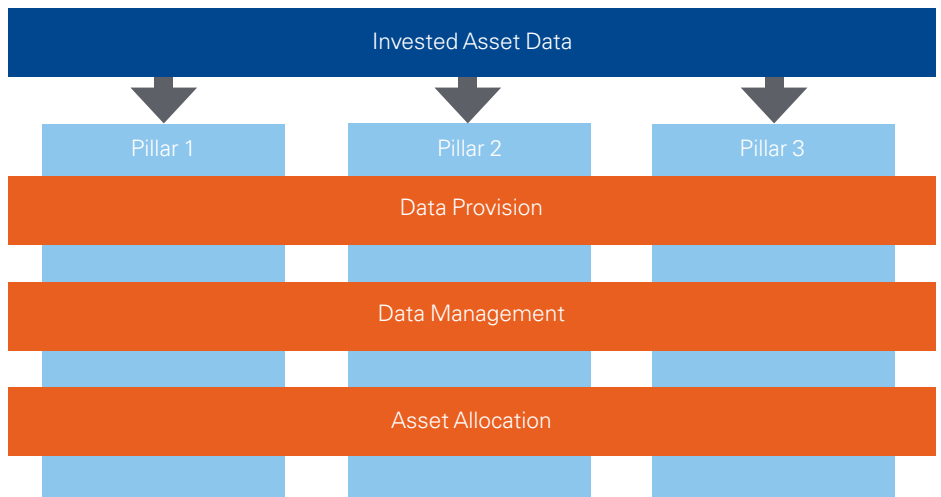
## Solvency II Data Requirements

Insurers are required to demonstrate that they have fully defined, assessed, governed, quality tested and (where necessary) remediated the data that is material to Solvency II. The Directive states that 'external data', i.e. data provided to the insurer from a third party, must also be held to these standards and therefore insurers will expect their data providers to assure them that these standards have been met.

Solvency II has also created new requirements for the provision of asset data in the form of new data fields, new data coding conventions, greater granularity of data and increased frequency of reporting.

Insurers will typically have no more than six weeks at each quarter end to complete their Solvency II reporting and will usually be running some comparable form of their Solvency II process at each month end. There will be very short operational windows for asset managers to quality assure and deliver data to support these cycles.

Additionally, Solvency II sets out a range of capital charges for each asset class which is likely to influence insurers' asset allocation strategy to ensure optimal use of their capital whilst continuing to address their asset-liability matching requirements.



Source: KPMG LLP

### Challenges and Impacts

**Granularity** – The need to provide data for each asset held on a security-by-security basis will represent a significant challenge for insurers, particularly where they hold large diverse investment pools across multiple service providers.

**Complementary Identification Codes** – Assets need to be classified by means of a Complementary Identification Code (CIC), however the CICs are ambiguous and an asset manager may be required to allocate a single asset into different CICs for different insurers. This will increase the effort at the asset manager and may result in inconsistent treatment of an asset by insurers.

**Look-through data** – Insurers must be able to ‘look-through’ fund of fund and other investment structures to identify the ultimate asset. This will necessitate a dramatic increase in data exchange between asset managers within a given asset hierarchy and require an increased level of disclosure between asset managers.

**Ad-hoc data provision** – Data that is provided on ad-hoc basis is subject to the same quality and governance standards as the data provided on a periodic basis, but the very nature of these requests means that their data set and timescales cannot be standardised. The changes needed to comply with this requirement may prove costly and require considerable time and effort. Such requests would also limit the level of data quality testing that the asset managers could apply to the ad-hoc data.

**Data delivery** – The absence of a common standard for data transmission between asset managers and insurers will greatly increase the complexity of data governance, management and transmission.

**Data exchange formats** – Much of the granular data supplied by an asset manager will be disclosed directly via an insurer’s Quarterly Reporting Templates (QRTs), however the format and content of these QRTs have yet to be finalised by the European Insurance and Occupational Pensions Authority (EIOPA) and organisations have little choice but to design their solutions around current QRT versions.

**Data licensing** – The current structure of data licences and the diversity of data required to support Pillars 1, 2 and 3 of Solvency II, means that all data cannot be supplied within a single data licence and therefore insurers and the suppliers of their asset data will need to hold multiple licences with data vendors. Frequently, these licences allow for significantly more data to be provided than is required to fulfil Solvency II requirements.

**Data governance** – Asset managers will be required to implement data management processes that are at least equivalent to those at their clients, however the standards will vary across insurers and it may prove challenging for asset managers to demonstrate that their processes are adequate for all their clients.

**Data quality** – The Solvency II Directive requires insurers to demonstrate that the data they use are accurate, complete and appropriate data, regardless of whether the data were sourced internally or externally to the insurer, and insurers are looking to their asset managers to assure them that the asset data they receive meets these standards. This poses several challenges to asset managers and third party administrators, in particular the tight timescales to perform quality testing and remediate errors, the frequency of such testing and the additional costs that this will bring (including implementing tools to automate quality checking).

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# Executive Summary

**Asset allocation** – The capital charges set out in the Solvency II Directive rely on accurate and granular data, and in some cases are increased if the data are not provided. For example, a fully defined equity attracts 39% capital charge but that charge can potentially increase significantly if the equity is not fully defined. Insurers may decide that certain assets should not be held if the data are impractical to assemble.

**Asset valuation** – Solvency II imposes market based valuation of assets and liabilities as well as the capital requirements. However, the interplay between Solvency II and local Generally Accepted Accounting Principles (GAAP) rules may lead to conflicting views on the measurement of risk and return. Differences with accounting rules may also lead to conflicting key performance indicators (KPIs), making optimal asset allocation less straightforward, as certain trade-offs will need to be made. The International Financial Reporting Standards (IFRS) 4 Phase 2 will go some way to increase convergence between the Solvency II framework and accounting standards since it is generally expected to be more market-consistent, although much is still to be decided.

## Conclusion

Although Solvency II programmes have been running in insurers for the past two years, and in many cases have begun migration into business as usual, engagement between asset managers and insurers has been relatively slow and therefore asset managers are typically not well-progressed.

The lack of certainty around key issues such as the finalisation of the QRT content and the degree of look-through that will be required and achievable continues to add further complexity to the Solvency II challenge.

The detailed data requirements, together with the very short data delivery timescales, will require much greater interaction between asset managers and their insurance clients than is usually evident. Accordingly, relationships between asset managers and insurers will need to be significantly strengthened to meet this challenge and ensure that the asset manager does not jeopardise an insurer's ability to comply with Solvency II.

Solvency II is only one of a 'perfect storm' of regulations impacting, directly or indirectly, the asset management community and many of these regulations have a number of shared data requirements. Organisations that can take an holistic view of the regulatory landscape and convert that view into integrated and flexible solutions will be best placed to service their clients.







$$\begin{aligned} \log_3(x+2) + \log_3(x-4) \\ \log_3(x-2)(x-4) &= 3 \\ (\text{Solvency II}) &= \text{SOLVED} \\ 27 &= x^2 - 4x + 2x - \\ x^2 - 2x - 35 &= 0 \end{aligned}$$

## 3

# Introduction

## 3.1 Objectives and Approach

The European Fund and Asset Management Association (EFAMA), in conjunction with Aviva Investors and KPMG, created a working party of representatives of EFAMA members and KPMG to consider the implications of Solvency II on the investment management industry. The primary focus of the working group was to consider the data implications of the Solvency II Directive.

The working party met in a series of workshop sessions to assess various topic areas, identify challenges and impacts, and propose potential solutions based on their expertise and experience of Solvency II to date.

This report is the product of the workshops sessions and other published material from EFAMA members and KPMG. It is intended to provide practical guidance for members of EFAMA on the data impacts of Solvency II.

## 3.2 Topics of interest

### Gathering of Solvency II data

This workshop considered the totality of the asset data set required under Solvency II and the various issues that arise from identifying, collating and delivering that data. Specific focus was given to the granularity of data, the need to 'look-through' investment structures to identify ultimate assets and the timescales for delivering the granular data to clients both for periodic reporting and for ad-hoc requests. This session also assessed the Directive's Complimentary Identification Code (CIC) requirements and the impacts of this new coding convention on asset managers and insurers alike.

### Data Management

Asset managers must be able to demonstrate data management processes that are at least equivalent to those of their insurance clients. The workshop considered the implications of this need, as the standard of data governance to be applied to Solvency II data will vary by insurer. Specific focus was given to the standardisation of delivery formats, the volume and costs of the data transmission and the issue of assessing the quality of data from data vendors which is then used to derive data for transmission to the insurer. The workshop also considered how the security and quality of the data can be assured, and how that assurance may be communicated to insurers.

### Asset Allocation

The Directive allocates capital charges to each asset class and this may influence insurers' asset allocation strategies. A number of other papers have been published on this topic and the intention of this workshop was not to re-visit the entirety of the topic but rather to assess the impact that data, or the lack of it, may have on an asset allocation strategy, given that capital charges may vary depending on the availability of data or that the difficulty of obtaining data may make certain assets impractical to hold.

### Other Regulations

Solvency II is just one of a raft of regulations with which asset managers must comply. The final workshop considered the broader regulatory landscape for asset management from a data perspective.

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# Working Group Findings

## 4.1 Data Provision

### 4.1.1 Data Granularity

#### Requirements

A fundamental requirement of Solvency II is the ability of the insurance entity, and regulator, to monitor their risk exposures associated with their entire activities. This 'whole company' view firmly brings the assets of the insurer under the same level of risk management, governance and reporting as their insurance activities.

Having the appropriate granularity of asset data to fulfil their Solvency II obligations is a vital requirement for the insurers. Whether this is for their Pillar 1 Solvency Capital Requirement (SCR) calculations, the ongoing Own Risk and Solvency Assessment (ORSA) under Pillar 2 or the extensive regulatory reporting outlined in Pillar 3.

EIOPA has stressed the importance of ensuring that the asset data is provided at the detailed level, as stated in the supporting documentation to the Pillar 3 Quarterly Reporting Templates (QRTs):

“Enables supervisors to have quick and easy access to specific information regarding valuation and risks on a specific class or type of asset and also on the entire investments portfolio. In a prudent person principle regime, this information is considered to be of great importance for proper risk-based supervision, both on an entity specific and market wide basis. Collecting asset information on a security-by-security basis will enable a greater scope to meet multiple requirements, benefiting the users of the information by offering complete flexibility in compiling aggregates that can change over time.”



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# Working Group Findings

## Challenges and Impacts

The granularity issue has two primary elements:

- **Individual Asset Disclosure:** The need to provide data for each asset held on a security-by-security basis will represent a significant challenge for insurers, particularly where they hold large, diverse investment pools across multiple service providers. The logistics of gathering this volume of data from multiple sources, and ensuring its consistency and accuracy, will undoubtedly see increased demands from insurers on the asset service providers.
- **Data Elements Required:** The use of the term 'granular' is also apt for the level and nature of the data elements required for each asset line held. Even on standard asset types there is a significant array of data elements required under the Pillar 3 QRTs, including but not limited to:

<b>ID Code and Type</b>	Participation
<b>Duration</b>	External rating and rating agency
<b>Assets pledged as collateral</b>	Quantity
<b>Issuer name, sector, group and country</b>	Solvency II Unit price, valuation method and total quantity
<b>CIC</b>	Acquisition cost
<b>Country of custody</b>	Maturity date

Add to this the information required on more complex asset types such as:

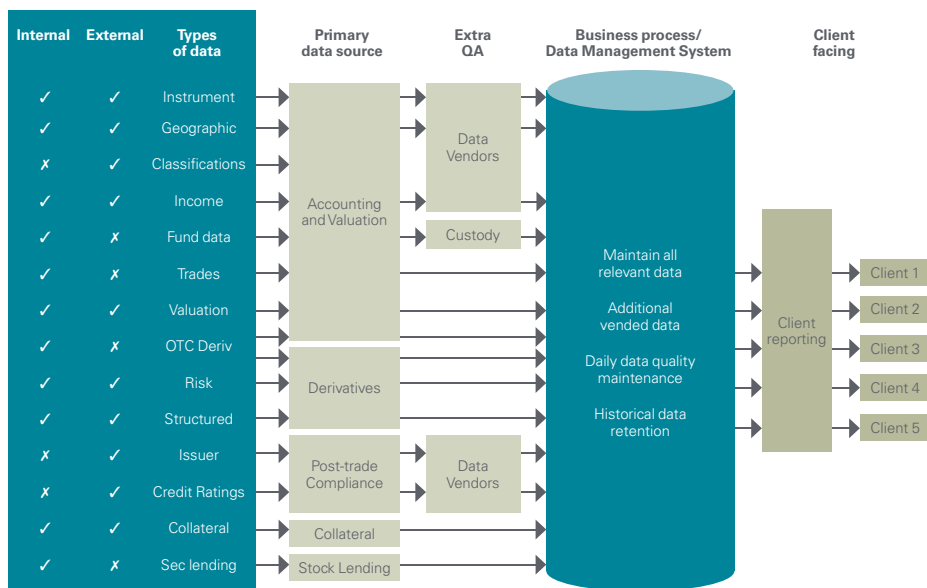
- Attachment/detachment points
- Loss given default for structured products
- Unwind trigger
- Maximum loss under unwinding for certain derivatives

and the extent of the data challenge becomes apparent.

Whilst some of the asset QRTs present positional information as at the date of the report, others require transactional information to enable the regulator to assess the insurers' risk exposure during the reporting period. This particularly applies to derivatives, securities lending and repurchase agreement activities.

There are some 82 data elements required across the asset QRTs, and this number does not reflect any additional data elements that an insurer might consider necessary to meet the other Solvency II requirements under Pillars 1 and 2. Other such data points are likely to vary from insurer to insurer due to factors such as their interpretation of the Pillar 2 ORSA or whether they are applying an internal model for the SCR calculation.

**Figure 4.1.1.a – Types of data required for Solvency II**



Source: HSBC Security Services  
Chris Johnson, chris.johnson@hsbc.com

Note: These measures represent a subjective industry interpretation. The ratings do not represent HSBC's business.

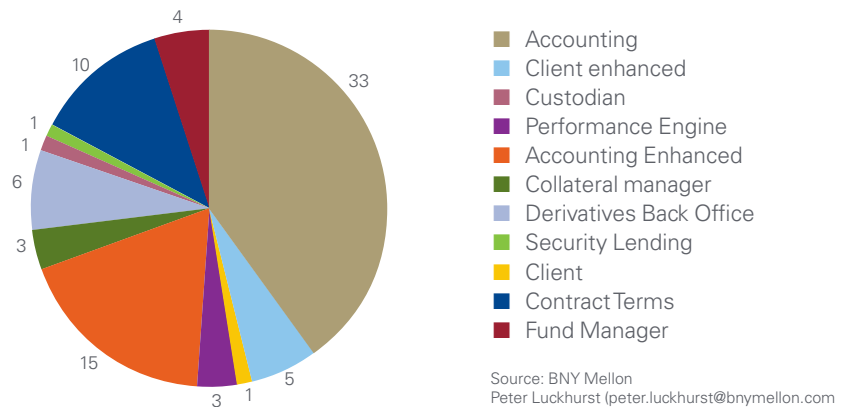
The diversity of the data elements required for Pillar 3 reporting alone means that the source will not be limited to one application or storage system within the asset servicing providers. The major proportion will most likely come from an accounting system, with some enrichment or transformation, but there is also a significant amount of data required for the asset QRTs that will need to come from other sources.

Figure 4.1.1.b shows a potential source analysis for a representative insurer. The distinction made between a standard and 'enhanced' source is that the data elements referred as 'enhanced' require some form of enrichment or transformation, for example automation of the Complementary Identification Code (CIC) being based upon an asset's characteristic.

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# Working Group Findings

**Figure 4.1.1.b – Summary of data elements by representative sources**



Insurers will look to their asset service providers, whether the asset manager or their administrator, to support the asset data requirements. Identifying where within the asset servicer's organisation a particular piece of data is held, ensuring quality and providing it to the insurer in an electronic format will require development effort.

There are some finer points to the Solvency II data that fund administrators need to be aware of when establishing their asset data solutions. These include, but are not limited to, the following:

- **Valuation basis:** this is required to be the Solvency II basis, i.e. fair value, which may differ from the current valuation basis and require fund administrators to re-engineer their systems/processes
- **Credit rating:** the selection basis for which credit rating to utilise is likely to differ by insurer. In addition the credit rating within the entity's QRTs must be the same as that used within the Pillar 1 SCR calculations
- **Derivative profit and loss:** the amount realised that is disclosed on closure of a derivative is required to be the profit and loss since inception of the derivative

A final observation on the impact of the granularity of the Solvency II asset data requirements is that the volume of data to be exchanged with the insurer is considerable. The security-by-security level of disclosure, the number of data points required and the need for transactional information on derivatives and security lending/repurchase agreements combine to represent a challenge in terms of delivery, format and security.

### Potential Solutions

A key step in addressing the issue of granularity is for there to be an appropriate level of open and practicable communication between the insurer and their fund administrators. In particular:

- The insurance industry, in collaboration with the fund administrators, need to define a core/standardised set of data designed to meet the needs of the three Solvency II pillars
- Fund administrators need to define the data points that are currently available and identify the gaps and any associated development efforts

In addition, both asset managers and administrators need to recognise that the asset related data represents only part of the insurer's overall data needs



## 4.1.2 Complementary Identification Codes

### Requirements

Complementary Identification Codes (CICs) are a four position code used to classify assets for Solvency II Pillar 3 reporting. The first two positions are used to classify the asset by country of listing using the ISO 3166-1-alpha-2 country code or XL/XT for assets that are not listed on the stock exchange and assets that are not traded respectively.

The third position is used to categorise the assets into invested asset types, such as government bonds, corporate bonds, equity etc. The fourth, and final, position is used further to categorise the assets into sub-risks for each of the types detailed in position three.

Figure 4.1.2.a – Sample extract of the CIC guidelines

First 2 positions	Asset listed in	ISO 3166 - 1 alpha -2 country code						
Third position	Category	1	2	3	4	5	6	7
Fourth position	Sub-category or main risk	Government bonds	Corporate bonds	Equity	Investment funds	Structured notes	Collateralised securities	Cash and equivalents
		1	1	1	1	1	1	1
		General Government bonds	Common bonds	Common equity	Equity funds	Equity risk	Equity risk	Cash
		2	2	2	2	2	2	2
		Supra-national bonds	Convertible bonds	Equity of real estate related corporation	Debt funds	Interest rate risk	Interest rate risk	Transferable deposits
		3	3	3	3	3	3	3
		Regional government bonds	Commercial paper	Equity rights	Money market funds	Currency risk	Currency risk	Other deposits short term (less than one year)
		4	4	4	4	4	4	4
		Municipal government bonds	Money market instruments	Preferred equity	Asset allocation funds	Credit risk	Credit risk	Other deposits with term longer than one year
		5	5		5	5	5	5
		Treasury bonds	Hybrid bonds		Real estate funds	Real estate risk	Real estate risk	Cash deposits to cedants

Source: EIOPA

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# Working Group Findings

## Challenges and Impacts

Guidance on the use of CICs has been provided by EIOPA, but there remains room for interpretation in the application of CICs to invested assets. For example, it is not strictly clear when the country code XL (for non listed assets) should be used instead of XT (for non traded assets) as any asset that is not listed on the stock exchange is also, by definition, not traded. Furthermore, codes XL and XT are listed in the ISO 3166-1-alpha-2 country code classification as user defined codes.

There is also the possibility of overlapping asset types in the categories defined for position three of the CIC. For example, certain invested assets can be both a collateralised security and a structured note so it is unclear whether code 5 or 6 should be used. Under the existing classification it is possible for a single security to change its CIC during its lifecycle.

Finally, categories defined for position four are not unique identifiers and are meaningless without referencing the third position of the code as well. For example, the number '8' in the fourth position is used to categorise assets as infrastructure funds or mortality risk, depending on what category is referenced in the third position. As long as the combinations of characters 3 and 4 remain not mutually exclusive, there is the risk of a single security needing to be mapped to multiple CICs depending on the specific usage.

It is the responsibility of each insurer to assign the CICs to their invested assets in order to accurately reflect their risk portfolio. However, as a significant number of insurers outsource asset management and administration services, they are increasingly outsourcing the provision of CICs to their service providers.

From a consistency perspective, the current level of guidance leaves room for interpretation which will result in non-standard application and variations of CIC classifications across the insurance industry. In addition, some insurers and service providers may already use the XL/XT ISO 3166-1-alpha-2 country code classifications for their own, user-defined purposes which may not be aligned to the Solvency II definition. The potential for misclassification is magnified for non-vanilla assets and unlisted assets where the underlying information is more challenging to attain.

From an operational perspective, asset service providers will apply CICs based on the available underlying information for each asset. The CIC mapping and maintenance over time will require significant effort, unless the process can be reliably automated.

However, CICs cannot simply be concatenated from the four individual positions due to the interdependency of positions three and four. This will inhibit automation and furthermore will result in duplicative storage of the same information, which is fundamentally at odds with data governance and management best practice and is usually costly to implement and maintain.

From a risk categorisation perspective, the CIC classification assumes that each asset only mitigates one main risk, whilst in reality an invested asset could mitigate a range of risks. In addition, the code alone does not sufficiently reflect the risks associated with the portfolio. For example, a Greek government bond listed in London will be classified using the same CIC as a UK government bond, yet these may have significantly different risk profiles.

Different insurers may also classify the same security differently, requiring the asset manager to keep multiple client specific maps and thus further increasing effort and reducing the ease of automation.

### Potential Solutions

Insurers and asset managers require clearer guidance for CIC classifications, especially where inconsistencies and overlaps have been identified.

The appointment of a single industry supplier for CICs through a tender process could provide this guidance and consistency, however it will be important to ensure the supplier is reviewed and regulated frequently.

Alternatively, an industry guidance committee could be convened for CICs to ensure the consistency of coding and application of CICs across the asset portfolio.



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# Working Group Findings

## 4.1.3 Look-through

### Requirements

The term 'look-through' represents the need to obtain additional information on a security position so as to enable a fuller assessment of the risks associated with holding the security position. Under Solvency II there are two main groups of securities where look-through is effectively required: complex instruments such as structured products and collect investment vehicles.

Whilst the remainder of this section focuses on the industry challenges associated with the look-through on collectives, fund managers and their providers should not overlook the need to provide certain look-through information on other instruments where the underlying information is required to assess, and potentially report on, the risk profile - for example looking into the assets supporting an Asset Backed instrument.

The regulatory reporting for look-through on collective investments requires the following data items, as defined in the Pillar 3 QRT AS-D4:

- Fund ID Code (eg: International Securities Identification Number - ISIN code)
- ID Type (eg: ISIN, Bloomberg etc)
- Fund Number (applicable to assets held in ring fenced or other internal funds)
- Underlying Asset Category (per CIC table)
- Geographical Zone of Issue (European Economic Area - EEA, Organisation for Economic Cooperation and Development – OECD, Rest of the World - RoW)
- Currency (Local i.e. currency of financial statements or Foreign)
- Total invested amount
- Level of look-through

The level of look-through on investment funds to be reported must be performed as follows:

- Standard (S): For funds of funds, to perform as many iterations as necessary to ensure that all material risk is captured
- Mandate (M): For collective investment schemes that are not sufficiently transparent, to use the mandate as reference
- Other (O): Split using the 'global equity' (if fund invests only on EEA or OECD) or the 'other equity' approach as prescribed by the Quantitative Impact Survey (QIS) 5 exercise

### Challenges and Impacts

Insurers have yet to define the totality of the data set required for all three pillars of Solvency II and so, in some cases where requirements have been communicated, they have asked their service providers for all possible data points to determine look-through. These may not be available or easy to source, for example:

- For standard formula purposes, the requirements are clearly defined but the service providers have not been engaged by the insurers to provide the required information
- For fixed income, the data is available via ISINs and vendor relationships but there are concerns for small and medium sized firms
- For Over The Counter (OTC) traded assets, the fund manager is the only source of look-through information

A single asset manager or third party administrator will not have all the underlying information available to define the level of look-through required by the Directive. Due to the nature of servicing relationships in the industry, the data are likely to be sourced from multiple vendors, providers and asset managers. In fact, a fund manager may not have any direct insurance clients but may still receive look-through requests due to an involvement in a fund platform or fund of fund structure.

This is likely to lead to an increase in the need for legal non-disclosure agreements (NDAs) and licences between providers, and one of the challenges the industry will face is the sensitivity of providing what is effectively commercial and intellectual property not only to insurers but also other fund managers where fund of fund involvement is present.

In addition, the look-through information is required to be the most recent available and therefore there is no scope for mitigating the above issue by providing historical information.

In most service providers, the data required to define the level of look-through is not stored on a single platform or system. In addition, the level of automation of data extraction varies wildly and in many cases, the data may not even be held electronically. The collection of look-through data needs to be completed within what are already very tight deadlines.

These rigorous and ultimately costly look-through requirements for fund of funds may result in insurers changing their investment strategies and divesting in these types of asset structures.

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# Working Group Findings

## Potential Solutions

The issue of look-through is a challenge to the whole fund industry and it would be logical to propose an industry wide solution, but the complexity and scale of establishing such an industry solution in the time frames currently proposed is remote. External data vendors may look to establish a service but this may not represent a universal solution, particularly across multiple jurisdictions.

Any solution is likely to include:

- Clearer, standard data set definition from the insurance industry to enable a base level of data to be defined and agreed
- Similarly, where viable, a standard format for the data exchange should also be established by the fund management industry
- Defined responsibility and time frames to be agreed in service level agreements. This requires the insurer realistically to assess the data requirement and time frame for delivery of the information

Finally, there may be some potential in considering proxy constituents and weightings instead of actual look-through if some acceptable, eligible criteria for collectives can be agreed, for example Exchange Traded Funds (ETFs) and other trackers.



## 4.1.4 Ad-hoc Data Provision

### Requirements

Former Solvency II Consultation Paper 56 states that

“...in abnormal circumstances, especially in a crisis, it might be essential for both the undertaking and supervisory authorities that updates of data used in the calculation of the probability distribution forecast be performed at shorter notice and more frequently by the undertaking.

Undertakings may benefit from identifying events which they consider to be severe enough to warrant their performing non-regular, unscheduled data updates.

Furthermore, undertakings should define circumstances under which they regard a prompt recalculation of economic capital and (parts) of the Solvency Capital Requirement (SCR) as necessary.”

These data updates at the insurer would require additional unscheduled data from the invested asset manager or third party administrator.

### Challenges and Impacts

The responsibility for defining the events and the required data set for an unscheduled data update lies with each insurer and, as a result, is not standardised across the industry. The turnaround time currently requested by insurers for the provision of this data varies between 48 hours and one week.

Any model data, internal or external, must also meet the data quality requirements set out in the Solvency II Directive so data required for unscheduled updates must be subject to the same degree of data governance as all other Solvency II data.

As the data set and trigger events remain non-standardised and, in many cases, undefined, the invested asset managers and third party administrators may be unable to agree contractual and legal obligations with the insurer to provide ad-hoc data.

The IT systems and business processes in place at the asset managers and third party administrators are not designed to accommodate this level of ad-hoc data refresh and reporting. The changes required to comply with this requirement may incur considerable cost, time and effort.

The usually limited turnaround time and unscheduled nature of these data requests will also limit the level of data quality testing that the asset managers and third party administrators can apply to the ad-hoc data. For example, quality checks such as

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# Working Group Findings

general ledger reconciliations are only to be performed at month end and would be challenging to apply to ad-hoc data requested outside the monthly data provision cycle.

Market data forms a significant part of the data set provided by asset managers and third party administrators. During events that are likely to trigger an unscheduled data update, the availability of refreshed market data may lag behind turnaround times for ad-hoc data provision. As a result, stale data may be provided to the insurer. The insurer would require multiple data feeds after the event to ensure that the market ripple effects are fully reflected in the ad-hoc data provided.

All of the challenges described above are more significant for small and medium sized service providers, who may find the cost of operation too onerous if these requirements become the normal practice.

## Potential Solutions

The definition of industry standards in the following areas would provide a level of consistency in ad-hoc data provision across insurers and asset managers:

- Industry triggers for ad-hoc data which may include the following events:
  - Large loss events such as natural or man-made disasters
  - Economic crises
  - Material breach of company limits on reserving or investment guidelines
  - Urgent request from the regulator
  - Material change in risk profile such as entering into a new line of business or a substantial portfolio or business acquisition
- A core data set for ad-hoc data provision
- A turnaround time for ad-hoc data provision to allow the asset managers to design their operational and business processes efficiently and effectively for their insurance clients
- The level and rigour of data governance to be applied to ad-hoc data to ensure data quality is assessed and reported in the limited timescales





## 4.2 Data Management

### 4.2.1 Data Delivery

#### Requirements

Solvency II requires insurers to deliver their Solvency Calculations and their Quantitative Reporting Templates (QRT's) within six weeks of each quarter end to their regulator. This is substantially earlier than required by current reporting regulations.

Consistent data must be utilised for Solvency calculation and statutory reporting; hence insurers will require comprehensive, enriched details of the assets managed on their behalf for both Pillar 1 and Pillar 3 much earlier than currently provided.

Given these timeframes and the significantly greater volume of data to be provided, asset managers are required to provide their insurance clients with more complex data at a more granular level and to a higher quality standard within a shorter timeframe.

#### Challenges and Impacts

Despite Solvency II requiring quarterly reporting to regulators, most insurers are intent on running their solvency calculations on a monthly basis to fulfil their Own Risk Solvency Assessment (ORSA) obligations under Solvency II. This will result in asset managers being required to supply insurers with the complete data information on a monthly basis.

The trend, already visible in the market, is for Solvency II asset data to be requested for delivery by business day three each month. Meeting these delivery timelines will have significant impact on the operating model of asset managers and their third party administrators (TPAs) as the information currently available on business day three may not meet the rigorous granularity and quality standards for Solvency II data.

In addition, the data required for Solvency II includes data relating to assets which are not traditionally valued until after month end (such as private equity, hard to price assets and collateral holdings) as well as funds which are not priced until the first or second day of each month (such as multimanager funds or overseas asset funds). There are also likely to be issues regarding the consistency of data being provided by different suppliers.

The lack of a uniform mechanism to transfer asset data between asset managers, TPAs and insurers is bound to lead to substantial development costs. Additionally, the lack of standard file formats and security infrastructure will increase the costs across all parties involved in the provision and receipt of asset data.

The legal impacts of supplying confidential data between parties also need to be fully aligned. Parties need to ensure that all necessary legal agreements including non-disclosure agreements (NDAs), service level agreements (SLAs) and data licensing agreements with data vendors are in place prior to the commencement of test data transfer. These agreements may vary across the insurance industry and are an urgent issue which must be addressed in the very near future given the lead times of getting such agreements in place.

## 4

# Working Group Findings

## Potential Solutions

Asset managers and TPAs must undertake continual data profiling to ensure that the asset data supplied to insurers for Solvency II reporting within two business days are complete, accurate and appropriate. This function will need to encompass on-going automated data profiling and quality review.

At an industry level, there is clearly a need for consensus on the asset data that will be provided by asset managers and their TPAs to insurance clients, which would cover the timing, scope and structure of data to be exchanged, as well as file protocols to be used.

This would avoid much of the likely cost of non-standard delivery and help to ensure consistency in the data. It would also clarify the information to be supplied, such as whether a credit rating should be short, medium or long-term.

Standard NDAs should be drawn-up to ease their adoption between parties and mitigate the likely legal cost of ad-hoc bilateral agreements.



## 4.2.2 Data Exchange Formats

### Requirements

The Pillar 3 QRTs that insurers must submit to the regulator are still to be finalised and current expectation is that final QRTs will be available in the autumn of 2012.

To date there has been no guidance on the format for data that need to be exchanged across the industry in order that the templates can be completed by insurers. This is particularly an issue with regard to template QRT AS D4, due to the requirement to look-through.

While standardisation could well take place over time, it would be better to establish this now and avoid the costs of creating costly processes which are subsequently reengineered.

### Challenges and Impacts

It would be operationally challenging for an asset manager to provide the QRT data in numerous formats and templates. It would also be challenging for an insurer or asset manager to receive QRT data in multiple formats and either scenario would be likely to result in impacts on data quality, as it is harder to complete quality checks on numerous bespoke requirements than a standard set of requirements.

Varied and numerous requests in different formats will also have knock on impacts on the consistency of definition across the industry, as there will be no consistent data exchange reference documentation.

### Potential Solutions

An industry standard format for data exchange across the insurer and invested asset industry would provide greater clarity for asset managers, TPAs, and insurers, as they would know what format to produce data in, and expect to receive it in.

For aggregate data, a standard data exchange template at the aggregated CIC, country and currency level would enable QRT AS D4 to be completed without the insurer needing to collect data at the granular holdings level. The aggregation would be done by the asset manager or TPA, and the data items would meet minimum Solvency II requirements for QRT AS D4. This method would also resolve the issue relating to the disclosure of granular holdings data.

Where firms require the individual holdings level data for Pillar 3 QRTs, a standard data exchange template at the granular, pre-aggregated level would enable consistency of definition and reporting of asset data across the industry.

Firms will also be collecting data for Pillar 1. Standardisation of data at this level would focus on core data items required for Pillar 1, and minimise requests for all data or 'nice to have' items.

The standard format would need to include standardised labelling to reflect the QRTs and create consistency of definition, so a data directory should therefore accompany the standard data exchange templates.

# 4

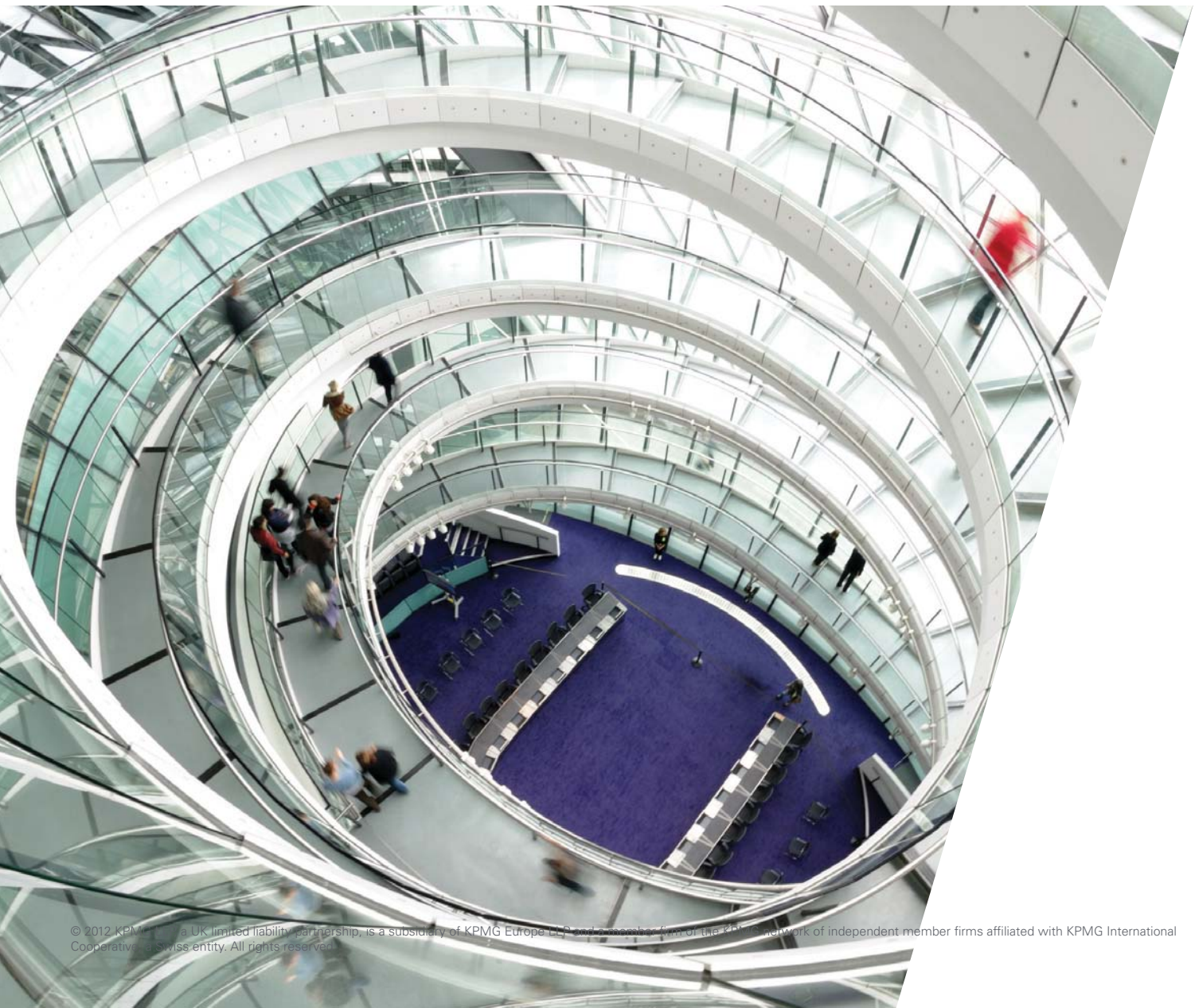
# Working Group Findings

The summary below is an example of the aggregate level Data Exchange Template for QRT AS D4 which is the primary QRT impacted by this issue

**Figure 4.2.2.a – Example data exchange format**

Fund Holding Company	Fund Asset Manager	Fund Name	ISO Currency Code of Fund	Fund Mandate	Date	Fund Identifier	Fund Identifier Type	D4 CIC levels 1 and 2	D4 CIC-level 3	D4 CIC-level 4	ISO Country Code	ISO Currency Code of Issuer	% TNA of Fund (to 8 d.p.)	Market Value in currency of Fund (Million)	Level of lookthrough	Mandate Description
Holding Company X	XYZ AM	UK Equity Fund	GBP	FTSE All Share	3/31/13	GB00012345678	ISIN	GB	3	1	GB	GBP	80.000001%	700	S	N/A
Holding Company X	XYZ AM	UK Equity Fund	GBP	FTSE All Share	3/31/13	GB00012345678	ISIN	DE	3	1	DE	EUR	10.000008%	700	S	N/A
Holding Company X	XYZ AM	UK Equity Fund	GBP	FTSE All Share	3/31/13	GB00012345678	ISIN	FR	3	1	FR	EUR	9.000001%	700	S	N/A
Holding Company X	XYZ AM	UK Equity Fund	GBP	FTSE All Share	3/31/13	GB00012345678	ISIN	XT	7	1	GB	GBP	1.0000000%	700	S	N/A

Source: Fidelity Worldwide Investments  
 Louise Margetts, louise.margetts@fil.com



## 4.2.3 Data Licensing

### Requirements

To allow completion of the proposed Quantitative Reporting Templates (QRTs) and the actuarial analysis required to perform solvency calculations, Solvency II requires significantly greater data on the assets held by insurers than has been traditionally utilised. Much of this data can only be sourced from commercial data vendors and rating agencies such as Bloomberg, Reuters, Standard and Poor's and Fitch.

The current structure of data licences and the diversity of data required to support the three pillars of Solvency II, means all data cannot be supplied within a single data licence and therefore insurers and the suppliers of their asset data need to hold multiple licences with data vendors. Frequently, these licences allow for significantly more data to be provided than is required to fulfil Solvency II requirements.

**Figure 4.2.3.a – Types of data sourced from external vendors**

Types of data	# data items	Examples
Instrument	11	Currency (ISO), Maturity date, Identifier, Name, Strike, CIC, Duration
Geographic	2	Issuer country, Geographical zone of issue
Classifications	1	Issuer Sector
Income	2	Dividends, Interest
Valuation	1	Asset Price
Risk	1	Notional for futures and options
Structured	7	Fixed annual return, Callable of puttable, Variable annual return
Issuer	4	Issuer name, Counterparty ID, Issuer Group, Counterparty Group
Credit Ratings	2	Name of credit rating agency, Actual external rating
Collateral	3	Collateral type, Underlying asset of securitisation, Group of debtor

Source: HSBC Security Services  
Chris Johnson, chris.johnson@hsbc.com

*Note: These measures represent a subjective industry interpretation. The ratings do not represent HSBC's business.*

## 4

# Working Group Findings

Under existing licensing terms and conditions, licences must be in place and fees paid by both the asset manager/third party administrator supplying asset data and the insurer receiving the data.

## Challenges and Impacts

Given these factors, the provision of the enriched asset data required by Solvency II will result in significant additional costs to both insurers and their data suppliers. It has been estimated that the cost for each investment held (whether held directly in a portfolio or as collateral supporting a derivative or security lending position or in the form of look-through), may cost the insurer and its asset data supplier in excess of Euro 7 per month each.

These costs are significant across the insurance and asset management industries and will result in multi-million Euro cost increases across Europe. It is likely the costs will be passed on to the end consumer which would result in either lower returns for, or higher fees being paid by, investors in insurance products.

**Figure 4.2.3.b – Sample costs of data licensing and management**

	Instrument		Entity		Credit Rating	Asset Type	Look through	Pricing	
	Quoted	OTC deriv	Counter party LEI	Issuer				Quoted	OTC deriv
Source	Vendor	Trade	Swift/DTCC	Vendor	Vendor	Vendor	Vendor	Vendor	Model
Licence constraints	H	M	–	M	H	L	H	H	–
Cost of data	H	M	L	H	H	L	H	H	H
Maintenance	H	L	L	H	M	L	H	H	H
Key									
H High impact		M Medium impact		L Low impact		– No impact			

Source: HSBC Security Services  
Chris Johnson, [chris.johnson@hsbc.com](mailto:chris.johnson@hsbc.com)

*Note: These measures represent a subjective industry interpretation. The ratings do not represent HSBC's business.*

## Potential Solutions

To contain the increases in data costs which may result from the introduction of Solvency II, it is recommended that negotiations take place with the commercial data vendors to introduce structured licences which would allow access to the specific data required by Solvency II at a reduced cost and without insurers and their supplier having to hold multiple licences and pay fees based upon the current structures.

Such an approach would help mitigate the costs increases associated with Solvency II whilst continuing to allow data vendors to be recompensed for the increased use of their services.

## 4.2.4 Data Governance

### Requirements

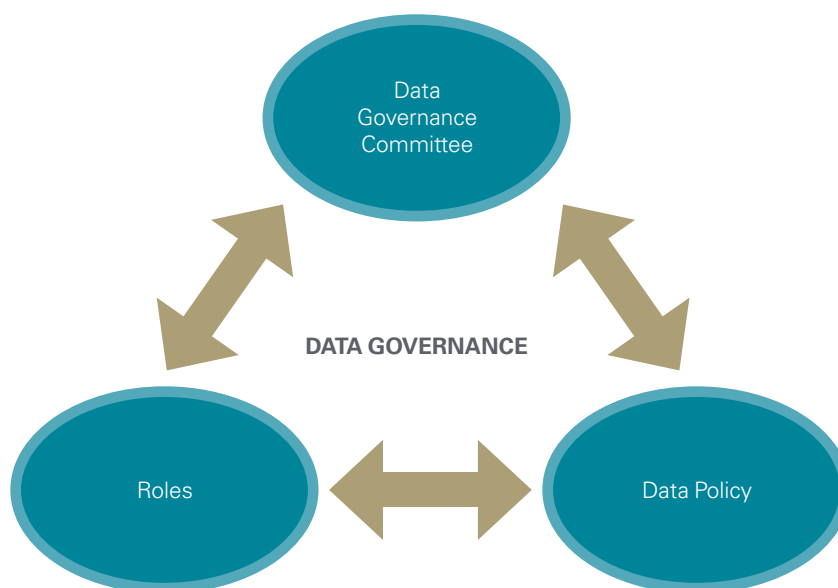
The Solvency II Directive poses new requirements for data governance and quality that have wide reaching implications for all insurance organisations. One of the core requirements of Solvency II is the need to demonstrate appropriate management over the data used to calculate the capital requirements. Insurers must ensure they have sufficient measures in place in terms of data governance and policy, definition of data, and data quality testing and remediation.

The data requirements of the Directive are expected to be applied consistently to internal and external sources of data. Consequently if external asset managers and TPAs are managing or administering assets on behalf of the insurer then, whilst from a Directive perspective they are not required to comply with Solvency II, the insurer's compliance requirements may directly affect them.

In addition to being an underlying thread running through the Solvency II legislation, establishing effective data governance is a cornerstone of running an effective organisation. However, working out exactly what is meant by the term data governance is not as simple as it may first seem.

Although there are many valid ways to view data governance, it can break down in to three main components. These are a decision-making body (Data Governance Committee), a collection of formalised roles (Data Stewards and Data Owners) and some common standards to enforce (Data Policy). The three parts can be pulled together in a single cohesive structure know as a Data Governance Framework:

**Figure 4.2.4.a – Example Data Governance Framework structure**



Source: Aviva Investors  
Graeme Sherrington, [graeme.sherrington@avivainvestors.com](mailto:graeme.sherrington@avivainvestors.com)

## 4

# Working Group Findings

## Challenges and Impacts

The overall design needs to be practical, challenging and yet pragmatic. With organisations investing significant effort in Solvency II programmes, the true challenge lies in implementation and embedding in the day-to-day process. An additional facet is the need to incorporate data governance alongside existing governance structures and policies.

The overall implementation will often require a cultural change in the organisation, but the challenge is to evidence the implementation and be able to show that it is well documented and well run with people in defined roles at the appropriate level of seniority.

## Potential Solutions

Establishing a fit for purpose data governance structure that is robust enough to satisfy the requirements of Solvency II is not a trivial task and planning a structured approach will pay dividends. The design of the overall structures must be simple to understand, the roles must be clearly defined and the data policy must contain data management standards set at a level that is challenging yet practical. However, to be truly effective the data governance must be implemented in a way where it can become embedded in the day-to-day running of 'business as usual'.

The solution is to follow good practice and adopt a structured approach to data governance, often combined into a single cohesive Data Governance Framework. As mentioned earlier, it can help to break this down into a decision-making body, formalised roles and a data policy.

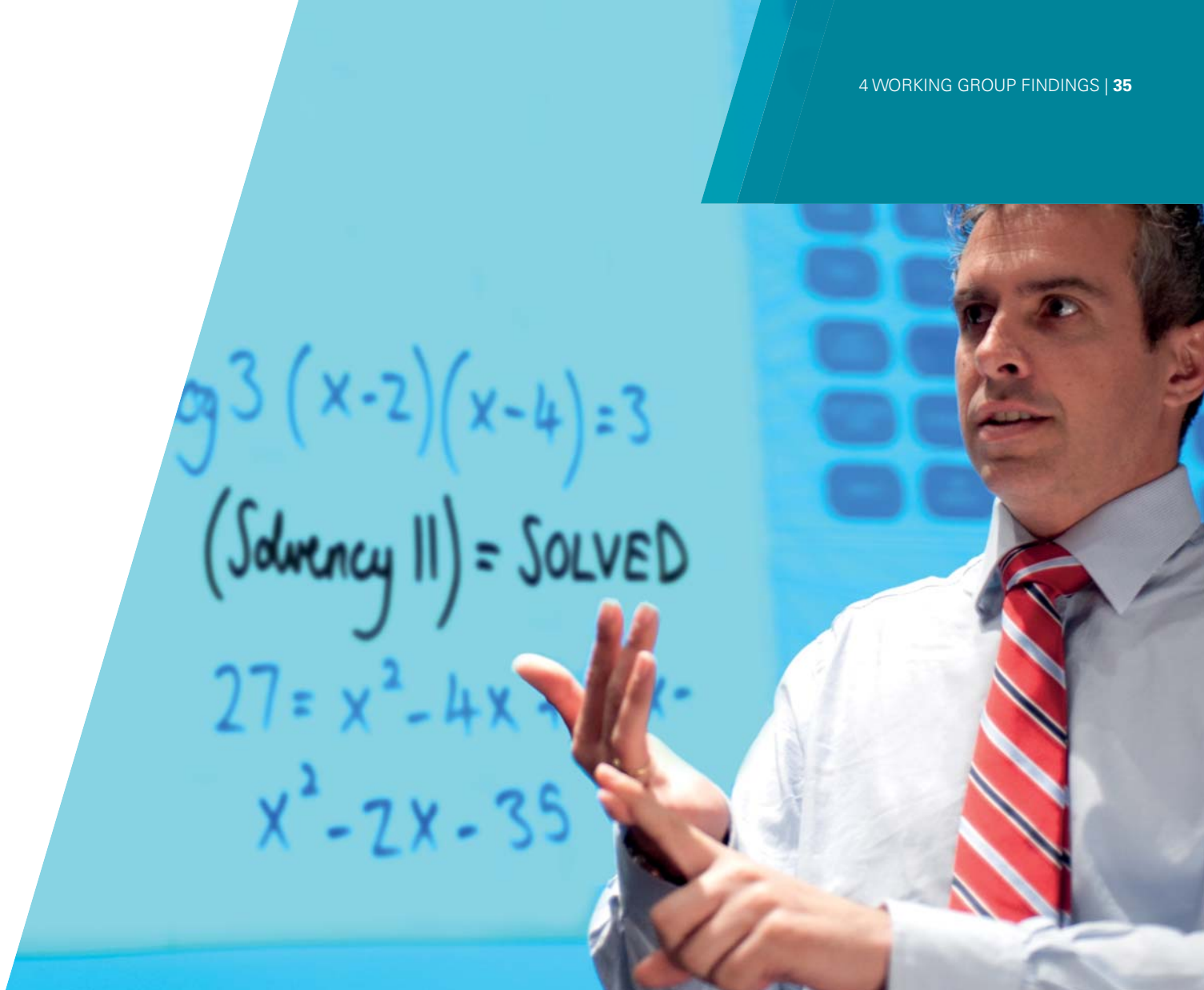
The decision making body would typically constitute a Data Governance Committee as the main authoritative decision making body supported by a Data Governance Practice as a working group to show a coordinated approach across the subject matter experts. For smaller organisations, these are likely to be rolled into one committee.

- **Data Governance Committee:** The Chairman of the Data Governance Committee should decide on all key issues affecting data and is responsible for ensuring that the organisation is compliant with the Data Governance Policy. It is recommended that a Data Governance Committee is formed to act as an escalation point for data issues with a direct reporting line to the Executive.

Once created, the immediate role of this Data Governance Committee should be to review and approve the introduction of additional business controls to address any data problems. If an element of data is continually out of date or incorrect, the Committee should review the impact of the data problem and agree that a business control should be designed to address that short-coming. The Data Governance Committee would ensure that involved parties employ the new process. The Data Governance Committee can also sponsor projects and initiatives proactively to improve data quality.

- **Data Governance Practice:** Establishing a Data Governance Practice formally underpinning a Data Governance Committee is an effective way to achieve coordination of effort and approach across the practitioners and experts in the management and use of data by the organisation. The practice could also be used as a design authority for all initiatives affecting data (which is almost all initiatives), particularly system initiatives.





This small group of experts could be widened to include any specialists in Data Procurement with a focus of researching effective means of obtaining or improving data. The practice should have a remit to include pro-active quality data auditing, wider data education and on-going data policy development alongside supporting and advising the Data Governance Committee and its members.

The successful implementation of an initiative such as data governance requires that all those working in the process understand what they need to do and what is expected of them. It helps to assign formal roles within the process. While the exact nature of each role will vary slightly from company to company, the key themes of Data Owner, Data Steward and Data Stakeholder are likely to feature in any implementation:

- Data Owners: Senior people responsible for the key decisions on an area of data such as “What quality of data do we really need?”, “Who should add or amend it?” and “How long should we keep the data?”
- Data Stakeholders: Senior people whose functional areas consume data and contribute to the strategic decisions taken by the Data Owner.
- Data Stewards: People responsible for the quality of data in established datasets. This is often already carried out for some data by those in existing Data Management teams.

The Data Governance Practice will typically lead the implementation of Data Stewards, Stakeholders and Owners in an organisation on behalf of the Data Governance Committee.

## 4

# Working Group Findings

- **Data Owner:** For a decision to be made about a data item it first needs to be owned and the responsibilities of the data owner defined. The owner of a type of data is responsible for the quality of that data wherever it occurs. The data owner controls who can create and update the data and has sign off of any business process that uses the data.

The data owner is responsible for defining the retention policy for a type of data and defining the target quality of that data. They may also measure the actual quality of the data compared to pre-defined targets. Where appropriate, the data owner may instigate a data improvement initiative which may include amendments to processes and the systems that support them. They should determine the appropriate level of investment in that data and which external data sources should be used.

They should ensure that everyone in the organisation knows of the data, understands what the data is (and what the data isn't) and how to use the data. The data owner may allow duplication of data, on a controlled basis but can also insist on data consumers using the authorised source for the data. The data owner is responsible for defining the security needs of the data. Security of data should cover protection from:

- Loss
- Corruption
- Damage (malicious or not)
- Theft
- Misuse
- Confidentiality Breaches

- **Data Stakeholder:** A Data Stakeholder of a specific item of data will typically be a user of a data items and can be seen as a client of the data owner. They will need to work closely with the Data Owner to help ensure that the data quality thresholds are appropriate to the value put on the usage of the data item by the client. It is often only the Data Stakeholders that truly understand how a particular data item is being used.
- **Data Steward:** The steward is the working practitioner that understands the content of particular datasets and manages them on a day-to-day basis. They will typically analyse the impact and effects of data quality targets on the dataset and maintenance of that quality. They will often have responsibility for maintaining data quality, which may be expressed as a service level agreement (SLA). The Data Steward should regularly audit the quality of their data and correct any material data errors. The Data Steward identifies and assists with data improvement initiatives, often needing to co-ordinate their effort with their peers.

Finally, a Data Policy is a combination of Data Processes and Data Standards embedded into the business, often forming part of a Data Governance Framework. The Data Policy must be agreed with the supervisory authorities as part of the initial model approval process and must then form the basis for supervisory analysis of data quality standards.

A review of the policy is part of the model validation process and any changes to the policy are subject to prior supervisory approval. In line with the Solvency II requirements, organisations should ensure that the requirements laid down in this standard are applied in a manner which is proportionate to the nature, scale and complexity of the risks inherent in the business.

## 4.2.5 Data Quality

### Requirements

The Solvency II Directive requires insurers to provide accurate, complete and appropriate data to the regulator, regardless of whether the source of the data is internal or external to the insurer. Insurers will expect asset managers to provide them with data that complies with these requirements, together with some form of assurance over the quality of the data.

### Challenges and Impacts

The requirements pose several challenges for asset managers:

- **Materiality:** Insurers need only to provide to the regulator data which are material to their business, and only material data needs to be quality assured. The principle of materiality must be applied to determine the criticality and risk that a certain set of data presents to an insurer in order to define the quality standards to be applied. However, the asset managers cannot know which data are material for which insurer, and therefore must be ready to quality assure all of the data it provides to insurers.
- **Data quality scope:** Asset managers and TPAs already perform a number of quality controls and checks on the data that are currently provided to insurers. Solvency II implies a large increase in data that the insurer needs to report to the regulator and, consequently, a large increase in the data that asset manager will have to deliver to the insurer. A gap analysis and subsequent process review should be performed to assess the impact that this will have on current data management activity.

The gap analysis needs to consider the changing nature of some key data sets that the asset manager currently supplies. For example, where an asset manager currently provides an insurer with a single credit rating (e.g. a Standard & Poors rating) and the direct legal issuer of a certain instrument, the insurer may now require multiple credit ratings and ultimate parent information for Solvency II reporting.

- **Timing conflicts:** Insurers need to process large volumes of data from different internal and external providers within very short deadlines to report to the regulator. This will increase the pressure on the asset manager to deliver holdings data and enriched data to the insurer very early after the quarter end (for regulatory reporting) or even after the month end (for monitoring purposes). This is generally expected to be by business day three after every month or quarter end.

There is an obvious conflict between being required to provide data sooner in the monthly cycle but at the same time needing more time to check that the data has sufficient quality for Solvency II purposes.

Further regulatory conflict may also arise from the fact that insurers will now demand information earlier than other types of institutional or private investors.

## 4

## Working Group Findings

- **Limitation of responsibility:** Some of the data that an asset manager provides to insurers will rely on data from data vendors. The extent to which the asset manager can be held accountable for the quality of this data is a key concern and, should a material error occur in the insurer that comes from information given by the asset manager, it will their duty to be able to trace the error back to the data vendor.
- **Remediation:** It is challenging for an asset manager or TPA to guarantee the provision of 100% complete, accurate and appropriate data to the insurer, especially where data are sourced from external providers.

Insurers will expect the asset manager to provide a short term correction to errors and a long-term data remediation plan. If the error comes from data provided to the asset manager by a data vendor, then the insurer may expect that the plan for remediation includes an action on the asset manager to liaise with the vendor to correct the data.

There are some 'errors' that cannot be avoided when timing is a factor. For instance, when a corporate action, on a stock that is part of a portfolio managed by the asset manager for the insurer, takes place the day before the asset manager's scheduled data delivery day to the insurer, it is very likely that this new information will not go through to the insurer. It is inevitable there will be timing errors in the delivered data due to time lags in information exchange and processing.

For these reasons, a detailed remediation process must be defined and agreed with the insurers to ensure a consistent understanding of the requirements, standards and timelines for data remediation.

- **Costs:** The increase in workload to meet each of these challenges is very likely to increase costs within the asset manager. There will be a material cost in ensuring that accurate, complete and appropriate data is provided to the insurer.



### Potential Solutions

Automation of the data quality process is almost mandatory if asset managers are to meet the short data delivery timelines and high quality standards. An investment in automation from the beginning in preparation for Solvency II can avoid potentially higher manual costs and incremental automation costs once the Directive is fully in place. Once Solvency II is in place, it is expected that insurers may become more demanding and benchmark against competitor asset managers or third-party administrators and automation may become a differentiator.

To resolve the issue of timing conflicts, it is possible to envisage a series of pre-checks, before the net asset value (NAV) validation, that could be performed before the month-end. Once those are completed, only some final checks will remain to be performed between the month end and the date of delivery.

A plan for remediation is an important step to prove to the insurer that the errors are dealt with in a systematic way. The proper channels of corrections, both short and long-term, must be identified and agreed between the insurer and the asset manager prior to the commencement of a Solvency II service provision.

To achieve an interim remediation solution for data errors from data vendors, an asset manager or third party administrator may consider implementing databases that allow for temporary overwrites of information while waiting for the vendor to correct the information. This kind of overwriting capability can usually be found in data management platforms used to deal with multiple clients.

A thorough description of the ownership of the data (asset manager or data vendor) provided to the insurer by the asset manager, as well as the extent of the work that is done by the asset manager on that data, would help clearly identify the limits of responsibility of the asset manager regarding data.

Clearly defined contracting with the insurer on the data that must be delivered, its purpose, the level of quality, the dates of delivery and the responsibilities of each party will provide clarity over the process to be following every time an incident occurs thus preventing any unnecessary delays, expectation gaps and misunderstanding between the asset manager and the insurer client.

The asset manager may provide statistical information on the data it delivers to the insurer, stating actions taken or actions to be taken to remediate errors, as well as statistics on past periods' incidents. This serves not only to reassure the insurer at the beginning of the reporting process but also puts the data delivery quality in perspective when incidents occur.

It is likely that each insurer would require their own independent assurance over data quality processes and controls, and numerous such reviews can have a significant impact on business operations. It is likely that assurance reporting similar to the ISAE3000 standard will be adopted by asset managers and third party administrators to reduce the burden of these reviews. Assurance reports will attest to the data governance and data quality processes and controls on a periodic basis and, having been performed once by an independent party, the reports can then be supplied to many insurers thus reducing the impact to business operations.

## 4

# Working Group Findings

## 4.3 Asset Allocation

### 4.3.1 Allocation Trends

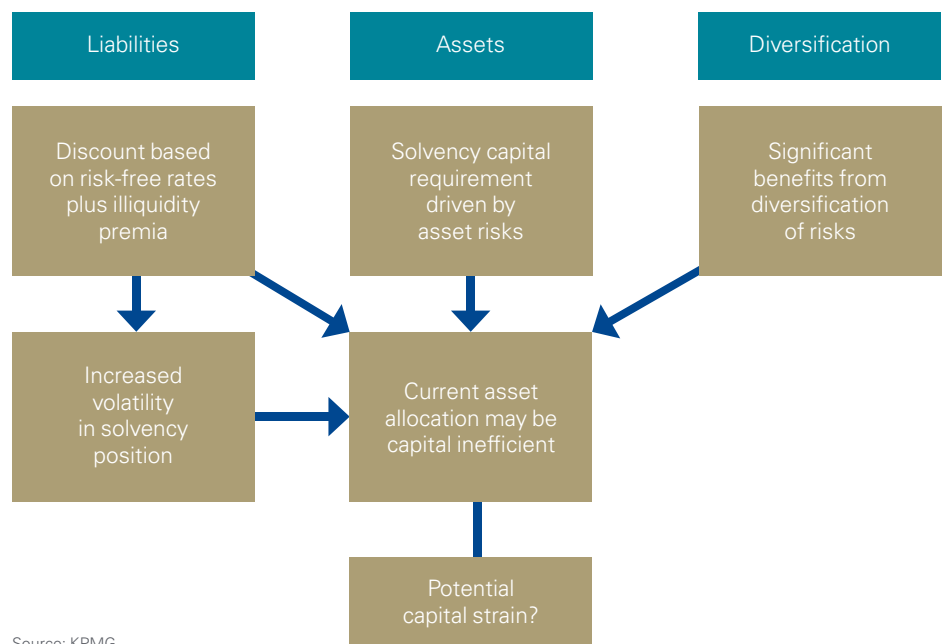
#### Requirements

The new European Solvency II regulation will trigger changes which may impact insurers' capital and asset allocation decisions. Insurers are also under ever-increasing pressure to improve profitability and return on equity, whilst facing a challenging environment for capital raising and ongoing competition for customers. Asset allocation will play an increasingly important role in insurers' overall strategy and capital management.

Solvency II is one of the key regulatory developments in Europe in which asset risks play a significant role in driving capital requirements. Solvency II introduces a number of changes which may lead to different asset allocation strategies:

- Capital requirements are impacted by risks related to investment policies
- Liabilities are discounted based on risk-free rates rather than the rate based on the expected return on assets
- Risk diversification is taken into account

**Figure 4.3.1.a – Asset allocation drivers**



Source: KPMG

As a result, under Solvency II future capital adequacy requirements, insurers' current asset portfolios may not be capital efficient, and some insurers may find themselves under greater capital strain in the near future. Solvency ratios are likely to be more volatile, with consequent adverse effects on dividend policy and share prices.

Insurers will need to be proactive in managing their asset allocation to achieve greater capital efficiencies and to reduce the volatility in their solvency ratios.

### **Challenges and Impacts**

Although there have been changes to allocations in response to the recent volatile market conditions, particularly for equity, it is generally expected that insurers will wait until Solvency II regulations are finalised before implementing major revisions to investment allocations.

However, many insurers are likely to have at least quantified the capital that would be required for their current investment strategy if the QIS5 proposals were carried through unchanged.

Allocation strategy is currently hindered by the different accounting treatments for different European jurisdictions. Until accounting treatment is harmonised across Europe, Insurers with the same underlying liabilities and the same Solvency II reporting framework might still seek to operate very different investment strategies for accounting, tax and profit reporting purposes.

Insurers operating internal models may be able to utilise the additional sophistication produced by the models to take advantage of certain asset classes which are treated inconsistently under the standard formula. For example, the Standard Formula approach for AAA-rated RMBS assets which are in their scheduled amortisation period requires the assessment of tranche losses based on the average tenure of the assets securitised, but the actual risk is much smaller, given the much shorter credit spread duration of the tranche.

Insurers have expressed concern about consistency within Solvency II. Possibly, in an effort to avoid complexity in the standard formula, simplifications have been applied which mean that certain assets with very different risk characteristics have been treated the same, and conversely, other assets with similar risk characteristics have been treated very differently.

For example, in QIS5, all forms of Asset Backed Securities (ABS) and structured credit are treated the same, which fails to reflect the different underlying exposures which have different probability of loss and expected loss characteristics.

In light of the recent developments in the Euro zone, another area of inconsistency involves the treatment of EU Sovereign debt, which is currently considered to be risk free under the current draft proposals. For many countries this does not properly reflect the implicit risks associated with their government bonds and is favourable when compared to the treatment given to similarly rated corporate debt.

## 4

# Working Group Findings

Some ambiguity arises regarding the treatment of derivatives for those which are imperfect hedges i.e. those for which basis risk arises – economically, there is clearly some benefit of introducing an imperfect hedge rather than remaining totally unprotected, although an extreme scenario could see significant diversion between the assets and an imperfect hedge. An extreme interpretation might require the imperfect hedge to be assumed to move the wrong way in a stressed scenario, further increasing capital requirements.

Where simplifications exist that do not fully reflect the true underlying risk, the insurer can make additional provision as part of their Own Risk Solvency Assessment (ORSA). However where the standard formula approach can be demonstrated to be unduly onerous within the ORSA, no credit is available for Pillar I. Furthermore, it is likely that country regulators will take different views on the appropriate risk add-ons to be included as part of the ORSA, increasing inconsistency between Insurers.

Overall, Solvency II does encourage asset diversification within the market risk module through the use of correlation factors between different asset classes. In terms of looking at the treatment of individual asset classes:

## **Equities**

Although equity has the highest capital charges (at least 39% under QIS5 and given current market levels, it is likely to be higher), due to the diversification benefits, the marginal capital cost of adding equities to a portfolio is much lower and, with higher expected returns, this asset class would remain attractive for those Insurers who are not capital constrained.

## **Government bonds**

Generally, the treatment of high credit quality government bonds is favourable which makes investment grade emerging market government bonds, with high interest rates, quite capital efficient. The inconsistent treatment of EU governments versus similarly rated non-EU governments continues to cause concern, due to the fact that, unlike non-EU government bonds, EU government bonds are exempt to spread and concentration risk charges within the market risk module.



### Corporate bonds

Under the proposed standard formula approach the capital requirement for corporate bonds is driven by the credit quality and duration of the bonds. Long-dated corporate bonds may become less attractive, as they attract higher duration-based capital charges, as illustrated below based on 5, 10, 15 year durations for each asset class

**Figure 4.3.1.b – Return on capital by asset class**



Source: KPMG

Although Solvency II will encourage a clear preference for short-dated, higher-rated credit to minimise capital requirements, the capital efficiency of these assets will depend on the shape of credit curves and how these curves evolve over time. If credit curves steepen considerably then there may be much greater appetite for longer-dated credit risk. Assets which can be used as part of the matching premium requirements for annuity funds will also be in greater demand.

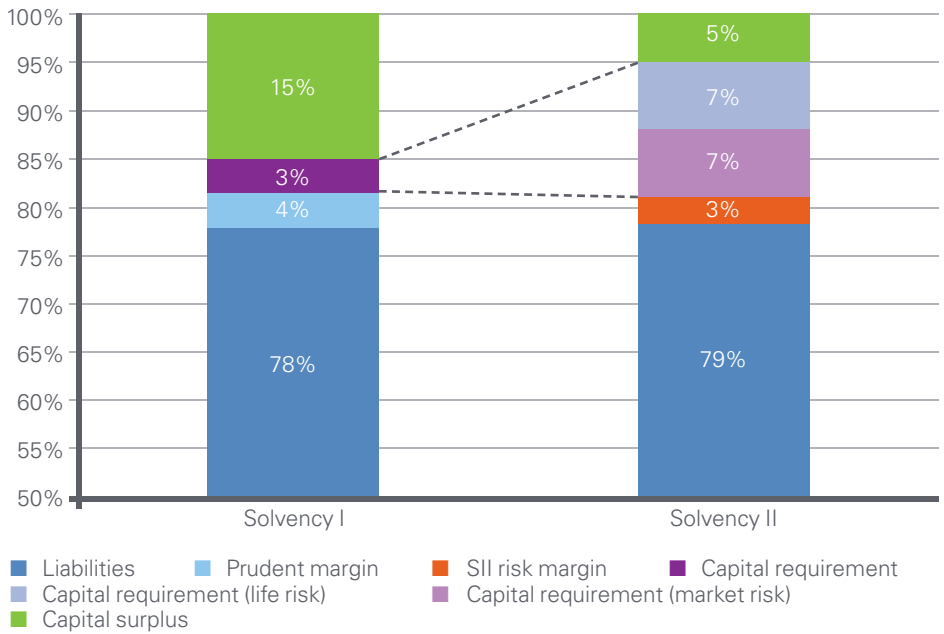
# 4

## Working Group Findings

### Annuities

Solvency II is likely to be a significant issue for annuity providers, which tend to hold predominantly long-dated corporate bonds to match their annuity liabilities. Annuity providers are therefore reconsidering their investment strategy to improve capital efficiency, including the use of longevity swaps, new investment strategies and new asset classes. In addition, those with low solvency ratios will need to manage the increased volatility in solvency ratios actively by hedging risk. Therefore, annuity providers' capital requirements are most likely to increase under Solvency II as illustrated below based on a 100% corporate bond portfolio.

**Figure 4.3.1.c – Illustrative impact of Solvency II on annuity providers**



Source: KPMG

### Asset Backed Securities (ABS)

QIS5 proposals for ABS assets were fairly consistent amongst different bonds with the same underlying risks and, in most cases, broadly reflected the true economic risk. The latest draft proposals (draft Implementing Measures for Solvency II issued by the European Commission on 31st October 2011) seem to treat ABS, particularly high quality RMBS, more severely - which could mean that this market becomes much less attractive for Insurers.

### Property

Property can attract 25% capital requirement but there is uncertainty regarding treatment of 'look through' and leverage for indirect investments.

### Alternative assets

This is a very broad definition which encompasses high risk 'hedge funds' and lower risk total return funds as well as less mainstream assets such as commodities and farmland. In order to achieve attractive capital treatment, the ability to look through these types of funds/assets, to ascertain the true underlying exposures will be essential and will need to be provided within timescales that comply with Solvency II reporting requirements.

The calibration of capital within different risk modules could lead to insurers making meaningful changes to their business strategies. For example, if underwriting risk were considered to be treated more favourably than market risk, insurers might seek to operate investment strategies which are much lower risk, freeing up capital to be used for underwriting risk or vice versa.

Insurers will need to consider how and when they hold capital intensive assets – this is likely to lead to more active asset allocation policies, where exposure to certain assets (e.g. equity) becomes more dynamic as and when market conditions appear conducive to out-performance of the asset class, rather than adopting a more 'long-term buy-and-hold' approach and holding the full capital requirement throughout.

Generally, Solvency II is likely to lead to an increased focus on Asset and Liability Management (ALM) with insurers seeking to hedge unrewarded risks where it is cheap and efficient to do so. However, there is still a considerable amount of uncertainty about the final regulations and insurers are unlikely to make significant changes to their investment strategies until rules are finalised. The exception would be for strategies which provide an obvious short-term benefit and which can easily or cheaply be reversed if required.

The wider market impacts are difficult to assess at this stage but potentially include:

- Reduced appetite for longer-dated bonds which may conflict with banks' intentions to increase the amount of funding from longer dated assets with longer-dated assets, although considerable overlap should still exist
- Pro-cyclicality risks remain unaddressed despite the existence of the symmetric adjustment mechanisms for equities and corporates. In particular, the amount of discretion provided to the regulator in determining whether market conditions meet the requirements for a period of stressed financial markets and hence when the counter-cyclical premium could apply leaves a lot of ambiguity and uncertainty for insurers
- A greater consistency among asset exposures where there is a reduced number of alternative assets that are suitable for insurers for reasons of capital efficiency or transparency

## 4

# Working Group Findings

## 4.3.2 Commercial Relationships

### **Insurer and Asset Manager Relationships**

An examination of the changes faced by insurers with the implementation of Solvency II makes it clear that there will have to be a change in the relationship between insurers and their asset manager(s).

A key driver for this change is the need for decisions to be made about the optimal asset allocation in a world where asset / liability differences lead to an increase in the capital charge, and conversely where reductions in available capital lead to a requirement for a reduction in risk (which will often be achieved most readily by changes to the asset allocation). Making good decisions in this environment requires a marriage of investment expertise with a deep understanding of the insurance risks and regulations and a more dynamic asset / liability management process, requiring a more efficient and more rapid decision making process.

Asset managers will need to invest time in understanding and engaging with the insurer's risk management framework, including their risk models and regulatory requirements.

Asset managers will also have to accept that the priorities for insurers will change. The pursuit of 'alpha' relative to a standard benchmark will likely take second place to management of risk against a customised, liability driven benchmark.



Insurers will be concerned about the risk they are carrying on balance sheet and there is likely to be a reduction in the level of discretion afforded to asset managers. Mandates may well become more granular and prescriptive; for example, the asset manager's ability to generate additional return by including off-benchmark assets may be restricted. Alternatively, mandates may delegate asset management decisions to be taken not in a traditional risk / return framework but in a way that is sensitive to the economic capital implications of the decisions as they are made.

Asset managers should consider whether they need to deploy specialist teams focused on the needs of the insurers. As well as understanding the Solvency II regulations, asset management decisions will be constrained by local accounting and tax issues, rating agency considerations and other factors. Some fund managers will simply not be equipped to manage asset portfolios when faced with such a complex array of constraints to be managed simultaneously.

The use of specialist teams will also facilitate closer working relationships between insurers and asset managers, so that decisions are made based on increased communication and transparency and taking into account the best possible perspective on investment opportunities. In an ideal situation, asset managers will be able to assess for themselves the impact of possible decisions on the insurer's capital requirements, and will have a good understanding of the insurer's risk management framework.

It would be sub-optimal for insurers to maintain these relationships with several asset managers; it is far more likely that they will wish to select one or two asset managers to act as strategic partners. These asset managers must be willing to invest time in developing advisory capability, more sophisticated portfolio construction and risk management tools, and customised reporting facilities.

Handled well, these changes will lead to longer-term relationships between insurers and their asset managers; performance may no longer be assessed on rolling 3 year performance relative to a standard benchmark but instead take into account the full range of services provided.

Smaller insurers are likely to simplify the range of investment strategies they employ, because there is no benefit in employing strategies that are outside the insurer's risk assessment capabilities. They may look to outsource their entire asset management requirements.

Larger insurers are more likely to find that there are returns on investment in more sophisticated strategies, for example those that rely on the pursuit of diversification benefits, those that impose a greater investment governance burden, or those that are more dynamic in nature.

Insurers both small and large may consider the use of third party administrators or platforms to simplify accounting and record-keeping, recognising the greater burden of data governance and the need for more rapid and complete reporting.

## 4

# Working Group Findings

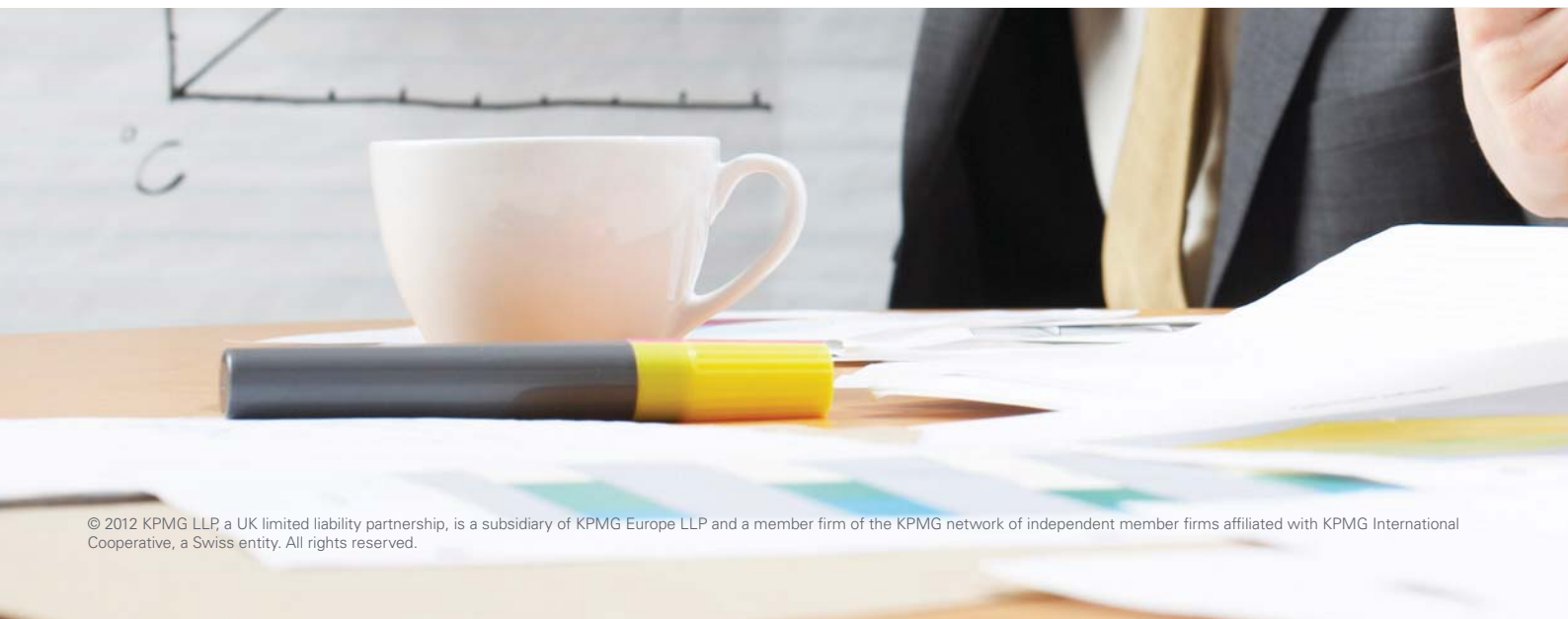
## Asset Management Mandates

In conjunction with the changes in relationship, mandates are likely to become more complex, allowing for any or all of the following factors:

- Bespoke liability profiles
- Outcome driven based on implied capital usage, monitored over time, or operating to a fixed risk budget
- Incentives, including performance fees, to optimise return against capital requirements and to reflect the need to remain within risk limits
- A wider range of risk limits and parameters, including for example duration and ratings targets
- Dynamic asset allocation, rather than fixed exposures to different asset classes
- A wider range of services, including advisory services, data governance and reporting
- More frequent changes and revisions to existing instructions
- Risk management at a total portfolio level giving an aggregated view
- Sub-advisory or other multi-manager arrangements
- Distinction between portfolios supporting new and in-force insurance business

Mandates will also need to change to meet the regulatory requirements for greater visibility, more granular reporting, 'ad-hoc' reporting and access to data and premises for the insurer and the insurance regulator. Further, care is needed over the asset manager's liability for data errors, actions of outsourced suppliers, data vendors or sub-advisors.

Agreeing a new set of mandates is likely to be a complex task and insurers and asset managers should allow plenty of time to reach a mutual understanding of the requirements and issues, and then to reach agreement.



### 4.3.3 Asset Valuation

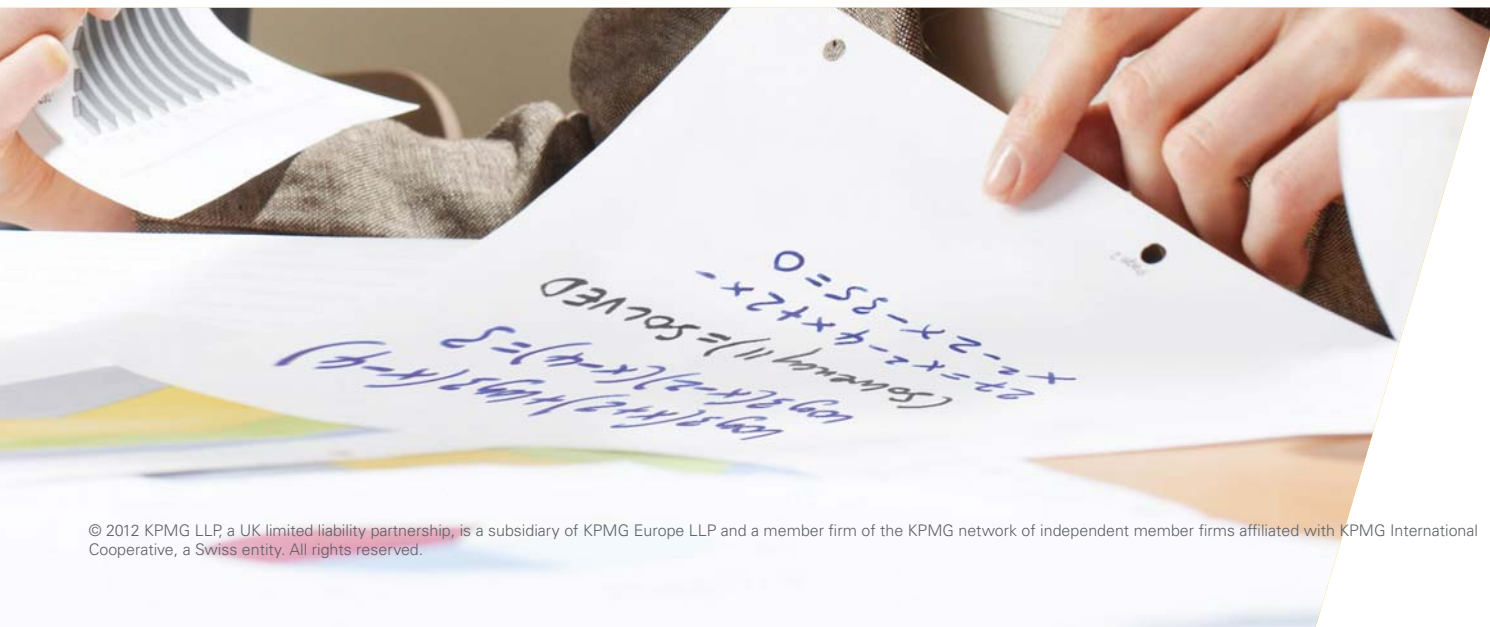
#### Requirements

Solvency II imposes market based valuation of assets and liabilities as well as the capital requirements. IFRS 4 Phase 2 will go some way to increase convergence between the Solvency II framework and accounting standards since it is generally expected to be more market-consistent, although much is still to be decided. Most market participants expect this will lead to increased volatility in reported results, leading to a shift away from long-term products with embedded guarantees towards products where the investment risk is born by the policyholder, and changes to re-insurance programmes.

However, when looking at the relation with local GAAP, Solvency II will have a different impact in different countries across the EU. In several European countries, including Belgium and Germany, local GAAP is not fair-value based, and so Solvency II will increase the gap between regulatory capital requirements and local accounting compliance. For other countries, for instance Spain and the UK, local GAAP is more market consistent. The interplay between Solvency II and local GAAP rules may lead to conflicting views on the measurement of risk and return.

Differences in accounting rules can lead to conflicting KPI's, making optimal asset allocation less straightforward as certain trade-offs will need to be made. Furthermore, for several EU countries, the current regulatory capital framework is not truly risk-based, but rather volume-based.

In these jurisdictions, asset allocation by insurers is currently not heavily impacted by capital requirements. The introduction of Solvency II will change this significantly for most insurers, as capital held against financial risks may account for more than 50% of their total SCR. For life insurers it is even expected that on average around 75% of the SCR will be due to financial risk. Clearly, this will have implications for the strategic asset allocation of insurers.



## 4

# Working Group Findings

## Challenges and Impacts

Two issues warrant attention regarding the capital requirements for financial risk: risk-reward trade-off, and legacy products. With respect to the issue of risk-reward trade-off, currently in some cases financial assets that have a different risk profile, lead to identical SCR charges in the Standard Formula approach.

If certain asset classes would get penalised 'highly' this could mean that insurers would lose their appetite for this type of asset. Secondly, on the liability side, the typical life insurer has legacy products and grandfathered liabilities on its books, products on which policyholders often enjoy high guaranteed returns.

Finding a feasible risk-return trade-off could become problematic with these classical life insurance products. Some level of risk-taking will be required in order to generate high enough yields to match the guaranteed returns and this could lead to 'high' capital charges (particularly for credit & spread risk), thereby locking considerable amounts of capital into the run-off of such typical life books. Clearly, such a book of business can require a tailored asset allocation strategy designed to get the right balance between risk and return.

The interplay between Solvency II and local GAAP, as well as the importance of legacy products, will require asset managers to develop country-specific knowledge and to develop tailored services for different jurisdictions. It is also generally expected that the relation between asset managers and insurers will intensify; asset management will become more tailored to the specific requirements of individual insurers.

Equivalence is an important concept for insurers based in the EU with activities outside the EU. If the regulatory regime of a non-EU jurisdiction is not granted equivalence by the Commission, then an EU-based insurer would need to recalculate the balance sheet and capital requirements for its activities in that jurisdiction. This is of particular importance in the United States, given the importance of the activities of several European insurers there. Some globally active European insurers are currently working under the prudent assumption that equivalence would not be granted to the US, and they are assuming the higher of Solvency II and local US capital requirements for their US activities.

However, if the US were not to be granted equivalence, then EU-based insurance groups would face a competitive disadvantage in the US market relative to non EU-based insurance groups. It is expected that the Commission would want to avoid creating such an uneven playing field. One likely outcome is the granting of 'temporary equivalence', as proposed on March 21, 2012, by the ECON Committee of the European Parliament.



Recently, pressure has been mounting on the Commission on the issue of granting equivalence, with the suggestion by some insurers that they would move their holding company outside of the EU in case equivalence would not be granted to the US. Such a move would remove all non-EU-based activities from the scope of Solvency II requirements.

However, the idea of international regulatory convergence has recently gained momentum, with the International Association of Insurance Supervisors (IAIS) having endorsed their Insurance Core Principles (ICP) at their annual conference in Seoul on October 1, 2011. These new ICPs herald a new regulatory environment for insurers and supervisors, essentially requiring supervisory regimes worldwide to establish risk-based solvency requirements, which may, in time, level the playing field.



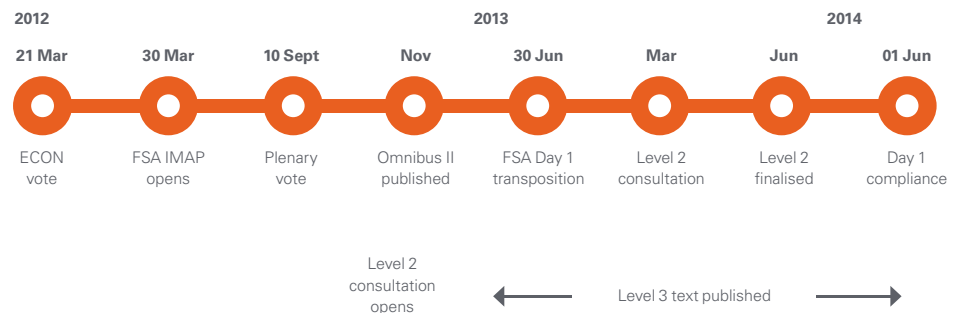
## 4

# Working Group Findings

## 4.4 Timelines

The uncertainty surrounding the finalisation of the Solvency II regulations and the delay in the Solvency II implementation date has forced insurers to concentrate their efforts on building their capital models, developing their Own Risk and Solvency Assessment (ORSA), enhancing their risk and governance frameworks; and improving disclosures relating to their capital positions. The current expected timeline for Solvency II is shown below:

**Figure 4.4.1.a – Illustrative Solvency II timeline**



Source: KPMG

Insurers are currently reviewing the impact of Solvency II on their asset allocation and assessing the benefits of their current hedges and derivative holdings. This entails investigating the feasibility of investing in assets that they have previously not invested in through the consideration of alternative investment strategies and altering their current asset allocation to a more capital efficient holding.

This is particularly relevant for annuity business, which has attracted considerable focus and has been subject to extensive lobbying and debate. As further clarity is gained on the final Solvency II regulations, insurers will focus more of their attention on determining the most appropriate method and timeframe for making changes to their asset allocation and hence, optimise their capital position and adopt their optimal investment strategy.

Changing asset allocation is far from simple for an insurer and requires careful planning. This will involve extensive engagement with asset managers to ensure that the asset allocation changes are completed in an efficient, cost-effective and strategic manner. Asset managers have a key role to play in assisting insurers with altering their asset allocation and managing the volatile economic balance sheet in the new Solvency II world.

Effective communication and ongoing engagement between asset managers and insurers will be vital in this new dynamic environment. It is never too early to initiate

discussions and it is important that the asset management industry highlights any potential obstacles that they foresee to insurers so that adequate planning and preparation can be undertaken in advance of the required changes in asset allocation.

Making the appropriate decisions to change asset allocation requires an adequate lead time such that an insurer satisfies all of its internal governance procedures. This task should not be underestimated. For asset managers, implementing these changes depends on the type of asset and the complexity of the portfolio that needs to be altered. Timeframes for making asset allocation changes could range from a few weeks to a number of years. Overlying all of this are market conditions and local accounting rules, which will dictate the key timing of when changes in asset allocation will occur.

For now, insurers are typically adopting a 'wait and see' approach with regards to changing their asset allocation. They are concentrating on reviewing their hedges and derivative holdings and assessing their capital positions as new Solvency II regulatory updates become available. Lobbying continues on certain key aspects of the Solvency II regulations.

There may be a 'first mover' advantage for some insurers in altering their asset allocation in the short-term but this is risky given the important features of the regulations that are currently being debated and the continued uncertainty that is prevalent. Any changes in asset allocation that are undertaken in the short-term before the introduction of Solvency II will need to be effective under Solvency I and Solvency II for European insurers, whilst UK insurers will also need to consider the impact on their Internal Capital Assessment (ICA) position.

Given the expected lead time that will be required by insurers before they can implement their changes in asset allocation, it is important for asset managers to initiate their interactions with insurers now. Some discussions regarding asset data will already have taken place with insurers but altering asset allocation, changing investment mandates and adapting investment strategies are more complicated activities and require considerable dialogue and interaction between insurers and asset managers.

The effort and time required to agree and implement these changes should not be underestimated. Insurers and asset managers will need to communicate with each other more frequently and this will require some initial investment from both parties to ensure that an appropriate process is developed such that the volatile economic balance sheet can be managed and optimised to the benefits of both shareholders and policyholders.

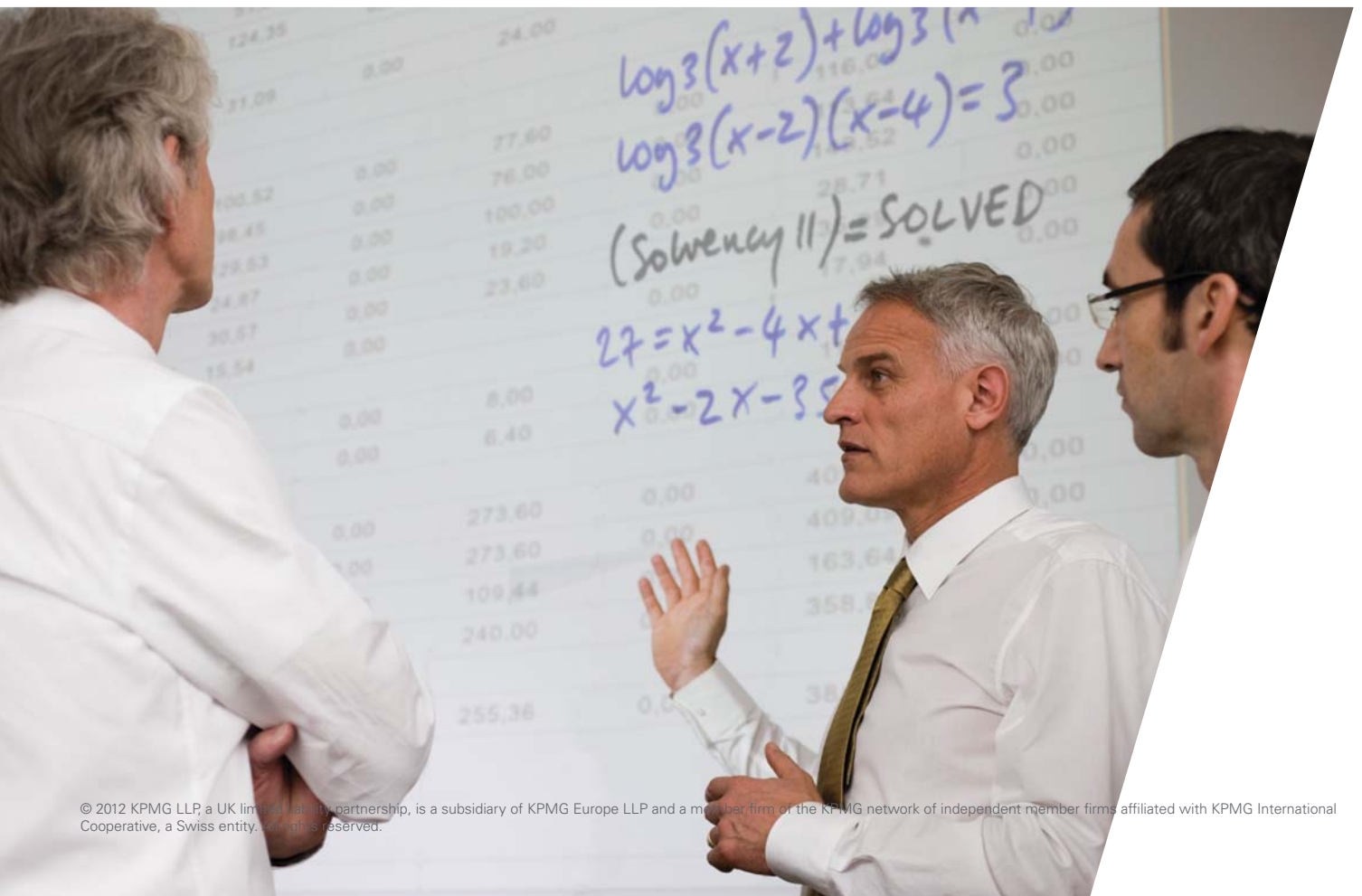
## 4

# Working Group Findings

The transitional arrangements that will be introduced with the implementation of Solvency II will affect when insurers implement changes to their asset allocation and investment strategy. These measures will assist insurers in adapting to Solvency II but there is still considerable uncertainty surrounding the exact details of these arrangements. The capital position of the insurer on a Solvency II basis will be the key driver of the timing of when asset allocation changes will occur.

As discussed previously, the introduction of Solvency II will also result in changes to the relationship between insurers and asset managers. Some insurers will adopt a new business model for their investment management function, potentially with an increased use of specialist asset managers or potential in-sourcing of the investment management function. Changes to investment mandates, service level agreements and benchmarks will also be required. In the meantime, asset managers will need to continue to manage assets under their current investment mandates but discussions should be initiated with insurers to ensure that appropriate agreement is obtained with any new or amended legal documentation in an efficient manner.

It will have taken insurers a considerable period of time to achieve Solvency II compliance and this is evident through the extensive effort that insurers have expended over the past few years in getting to this stage of their preparation for Solvency II. A considerable part of the journey has been completed to date but there is still a significant amount of work to do for both insurers and the asset management industry.



## 4.5 Other Regulations

In addition to Solvency II, the investment management industry is grappling with wide-ranging regulatory reform addressing issues from systemic risks to investor protection, transparency, governance, shadow-banking and taxation. Balancing the competing demands of various regulatory agencies is a huge challenge.

This is especially the case for globally diversified firms who need to make sense of those demands and bring them together in a comprehensive and cost effective way. While technology has been an enabler for global expansion, the many overlapping regulatory initiatives including the revision of Undertakings for Collective Investments in Transferable Securities (UCITS), review of the Markets in Financial Instruments Directive (MiFID), the Dodd-Frank Act, Packaged Retail Investment Products Directive (PRIIPs) and Foreign Account Tax Compliance Act (FATCA) among others, could create barriers to growth. Addressing these initiatives and making the requisite changes to the business, will likely add more cost and complexity to the manufacture and distribution of investment products.

How to protect consumers from unnecessary risk by enhancing transparency has been at the heart of regulatory change since the crisis. This has resulted in a variety of initiatives some of which focus on improved disclosure (PRIIPs) across institutional and/or Retail Distribution channels (e.g. the adviser registration requirements under the Dodd-Frank Act) and others such as the Alternative Investment Fund Managers Directive (AIFMD), focus on bringing previously unregulated or 'light touch' sectors (private equity and real estate) into the regulatory net.

There has also been a shift, more so in Europe than other areas, towards giving regulators the ability to ban Products, which is a theme in the update of MiFID, giving the European Securities and Markets Authority (ESMA) the power to step in at a national and European level. Adapting to the requirements of UCITS is a major focus for all investment managers and funds from a European perspective this year, with further work on strengthening and harmonising the framework.

## 4

# Working Group Findings

A key focus of the regulations will be the internal framework for risk management and liquidity management. This could represent a culture shock especially for those private equity and real estate funds that have not had comparable experience as more traditional funds under UCITS. In all cases, the Directive will impose a structure of discipline and rigor which discerning firms should welcome.

This large number of regulations will impact a common, or at least highly overlapping, data set. The data requirement heat map below shows the expected high-level interaction of these impacts.

**Figure 4.5.1.a – Illustrative data requirement heat map**

Impacted Data	Instrument		Entity		Credit Rating	Asset Type	Look through	Pricing		History
	Quoted	OTC deriv	Counter-party	Issuer				Quoted	OTC deriv	
Dodd Frank	Systemic	–	H	H	–	–	–	–	–	–
	CCP	–	H	H	–	–	–	–	H	–
EMIR	–	H	H	–	–	–	–	–	H	–
FATCA	H	H	H	H	–	–	–	–	–	M
MIFID 2	M	M	M	–	–	H	–	H	M	L
UCITS IWW	L	L	L	L	L	H	H	H	H	H
AIFMD	L	L	L	L	L	H	H	H	H	H
Solvency II	H	H	M	H	H	H	H	H	H	H

Key			
H High impact	M Medium impact	L Low impact	– No impact

Source: HSBC Security Services  
Chris Johnson, chris.johnson@hsbc.com

*Note: Initial interpretation based on consultation papers and regulatory updates. These measures represent a subjective industry interpretation. The ratings do not represent HSBC's business.*

As the diagram shows, Solvency II is likely to have the greatest effect on data and therefore it is likely that an organisation's approach to this regulation will determine its success not only in accommodating Solvency II but also in meeting the other key regulations in the most efficient manner. Those that can take an holistic view of these requirements and deliver strategic solutions that meet multiple regulations will undoubtedly have an advantage. However, the requirements are complex and in many cases yet to be finalised, which makes the design of strategic solutions extremely challenging.



## 5

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## 6

# Glossary

ABS	Asset Backed Securities
AIFMD	Alternative Investment Fund Managers Directive
ALM	Asset and Liability Management
AM	Asset Manager
CIC	Complementary Identification Code
ECON	Economic and Monetary Affairs Committee of European Parliament
EEA	European Economic Area
EFAMA	European Fund and Asset Management Association
EIOPA	European Insurance and Occupational Pensions Authority
ESMA	European Securities and Markets Authority
ETF	Exchange Traded Fund
EU	European Union
FATCA	Foreign Account Tax Compliance Act
FSA	Financial Services Authority
GAAP	Generally Accepted Accounting Principles
IAIS	International Association of Insurance Supervisors
ICA	Individual Capital Assessment
ICP	Insurance Core Principles
IFRS	International Financial Reporting Standards
IMAP	Internal Model Application Process
ISIN	International Securities Identification Number
ISO	International Organisation for Standardisation
MiFID	Markets in Financial Instruments Directive
NAV	Net Asset Value
NDA	Non Disclosure Agreement
OECD	Organisation for Economic Co-operation and Development
ORSA	Own Risk and Solvency Assessment
OTC	Over The Counter traded assets
PAQC	Pre-Application Qualifying Criteria
PRIPs	Packaged Retail Investment Products Directive
QIS 5	Quantitative Impact Survey 5
QRT	Quarterly Reporting Template
RMBS	Residential Mortgage Backed Securities
S&P	Standard & Poor's
SCR	Solvency Capital Requirements
SLA	Service Level Agreement
TPA	Third Party Administrator
UCITS	Undertakings for Collective Investments in Transferable Securities



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