White paper

Preparing for Solvency II: three key questions insurers need to address early

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SUMMARY

Addressing Solvency II, and especially its qualitative and reporting requirements, remains an important focus for European insurers. How can insurers find the right balance between leveraging their internal IT resources and applications and the technology offered by expert system providers? How can they assess vendor capabilities to ensure continuous compliance in the long term? Following a quick update on the Solvency II roadmap and recent implementation work, this white paper provides key perspectives on these questions.

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1. INTRODUCTION

Addressing Solvency II remains one of the most important preoccupations of European insurers. According to research published by Celent in the first quarter of 2012, reflecting discussions with insurance CIOs in France and in the United Kingdom during the last quarter of 2011, insurers are deeply occupied with all aspects related to Solvency II, especially the qualitative and reporting requirements specified in Pillars 2 and 3 of the framework. In all cases, insurers need to evaluate how they can leverage existing IT infrastructures and tools but also how they can find the right balance between their internal IT resources and applications and specific technology offering from expert system providers available on the market. Among the important questions insurance companies need to address are the following:

- How will insurers fill in the gaps in terms of systems?
- Will they need to outsource some development of required components or features?
- Will they leverage infrastructure from IT vendors to run calculation or data aggregation processes?
- How they will assess vendors' capabilities to help them be in continuous compliance with legislation changes and requirements in the long run?

After a quick update on the Solvency II roadmap and recent implementation works, the following sections will provide key perspectives on the above questions.

Figure 1. Solvency II roadmap. Source: EIOPA, European Commission, Morgan Stanley Research, Oliver Wyman.

	2009	2010	2011	2012–2013	2014–2015
Quantitative Impact Studies (QIS)		QIS 5 study in H2 10, published Mar 11			
Level 1 Formulating basis of Solvency II in European Law	Adoption by European Parliament in Apr 09 and Council of Ministers in May 09. Published in Official Journal Oct–Dec 09 with implementation planned for Oct 2012		CEIOPS becomes EIOPA: back to drawing board on 32: private consultation on 82 to address industry criticism in wake of sovereign crisis. Omnibus 2 drafted to allow a delay in implementation of Solvency II deadline and empower EIOPA		
Level 2 Defining and implementing technical standards and rules behind Solvency II	CEIOPS consultation period on technical rules (e.g. technical provisions, SCR, own funds, etc.) in 2010	CEIOPS 'final advice' early 2010, which helps define QIS5		Vote on Omnibus 2 expected in H2 2012 to allow a delay in implementation of Solvency II deadline and give powers to EIOPA – but timing uncertain Final rules to be published in 2012/2013?	Solvency II comes in to force 1 Jan 2014, or 1 Jan 2016? Timing uncertain
Level 3 Reporting requirements, additional pillars and practical implementation			Level 3 process will track Level 2: final Level 3 guidelines on Solvency II expected to be announced on a similar timescale to Level 2 process		

January 2011	The European Commission adopts its Omnibus 2 draft and transmits to European Parliament and Council. Includes the concept of the 'countercyclical premium', but no matching premium or spread adjustments.
July 2011	Draft report by Rapporteur (Burkhard Balz) with proposed amendments reducing the scope of the countercyclical premium (CCP) and removing the matching premium. Proposal to introduce formulaic CCP, leave it to member states to decide on the use of the CCP and limit its application to 'illiquid liabilities'.
September 2011	Council publishes Omnibus 2 'Compromise Text', which contains the term 'countercyclical premium' in place of 'illiquidity premium' for stressed markets. Requires the European Commission to ensure that the new regime avoids undesirable effects in its treatment of insurance business with long-term guarantees. Amendments tabled by Parliamentarians including a request for a 'matching premium'.
October 2011	European Commission circulates 'Level 2 Implementing Measures' to European Parliament; not based on official Omnibus 2 draft but on a new proposal for countercyclical premium and matching premium. Matching premium restricted heavily – to apply to illiquid, ring-fenced block of business with upfront premium (e.g. UK annuity).
March 2012	ECON meeting to discuss and adopt Rapporteur report with additional amendments and compromise proposals. Changes the countercyclical premium to refer to general 'financial markets', defines reference to a 'portion of the spread on representative assets' and confirms only to be used for 'illiquid liabilities'. Introduces 'matching premium' (MP) as a derogation (i.e. individual member states to decide on the use of the MP). Insurers using matching premiums cannot operate outside of their home market in activities relating to the business that the matching premium applies to without authorisation. Introduces a 'dampener' for bond spread risk (as 'symmetric adjustment mechanism' as is already available for equities) based on a weighted average level of an appropriate bond price index calculated over an appropriate period. Includes a sunset clause for the countercyclical premium and matching premium; the EC must review and report after 5 years.
September 2012	Plenary session of the European Parliament to discuss Omnibus 2 to adopt ECON proposal. After the hearing in Parliament, there will be three texts: the original European Commission text, the Council compromise and European Parliament amendments. Accordingly, a phase of negotiations needs to follow until a compromise is reached. Until then, the Commission cannot circulate an 'official' Level 2 draft.

Figure 2. The recent timeline of Solvency II legislative developments. Source: Updated by Celent from Morgan Stanley Research, Oliver Wyman.

2. A SOLVENCY II UPDATE

The Solvency II regulation definition has experienced many changes since its initiation back in 2001. Today, there are still question marks in the Solvency II roadmap as shown in Figure 1 on page 4.

Recent research as well as the legislative developments to be expected in 2012 demonstrate that Solvency II remains highly political and a work in progress surrounded by uncertainties making the preparation of insurers difficult (See Figure 2).

It is in this context that European insurers are preparing for Solvency II and trying to answer critical questions related to their IT alignment.

3. BEST-OF-BREED VS. ENTERPRISE SOLUTIONS

Even though there is no one approach that fits all situations, the preparation for Solvency II has some similarities across insurance companies. From discussions with European insurers, it appears that the methodology used to align information systems to meet the new solvency regulation cannot escape the difficult dilemma of prioritising a best-of-breed solution over the enterprise solution approach. The best way to answer this question could be to tackle the problem from two different but equally valuable angles.

3.1 From the supply side

Celent started to look at Solvency II IT vendors and solutions back in 2008. At that time, there was not much activity in the Solvency II system area. Some vendors were still thinking how they would shape an offering, and others were focusing on hotter regulatory topics in other industries, such as Basel II in banking. The first report profiling Solvency II IT vendors was published in 2010 ('Solvency II IT Vendor Spectrum', Celent, June 2010). This report included 17 system providers. Less than two years later, many of these vendors have merged or been purchased by other IT vendors, often vendors also active in the Solvency II space. Figure 3 summarises some of the merger and acquisition activities that have shaped the Solvency II IT vendor landscape.

Date	*Deal*
June 2009	Towers Perrin and Watson Wyatt combine to form Towers Watson
September 2010	Wolters Kluwer Financial Services (WKFS) acquires FRS Global
November 2010	Towers Watson acquires EMB
September 2011	IBM buys Algorithmics
December 2011	Moody's Corporation acquires Barrie & Hibbert

Figure 3. M&A activity. Source: Company press releases.

Even though the mergers and acquisitions deals listed in Figure 3 are not just related to vendors' Solvency II offering, the concentration taking place in this market demonstrates the need for vendors to complement their Solvency II intellectual property in areas where they have identified weaknesses. This trend shows the difficulty of offering IT solutions that can fulfill all elements related to Solvency II, confirming the predominance of the best-of-breed approach.

3.2 From the demand side

Complying with Solvency II requires insurers to align various elements of their IT application landscape, and many of them relate to specific core activities and business processes that are not always related to the same system environment. In a report published in 2010 ('Leveraging Technology to Improve Risk Management: A Solvency II Update', Celent, January 2010), the high-level Solvency II technology layers are defined, emphasising the need for insurers to align their IT application landscape around four elements: data source, data model, risk management, and business analytics. It goes without saying that all applications enabling compliance to Solvency II requirements need to be integrated properly to ensure efficient and frictionless communication data flow. Figure 4 on page 7 describes the Solvency II technology layer framework.

At each of the layers, there are specific functions and features that are needed to perform well, all elements required by the regulator. When starting their preparation programme, every insurer applies a simple analysis consisting of evaluating their existing system landscape to identify the gaps that need to be addressed to fully meet the Solvency II regulation. In a majority of cases, insurers use a bottom-up approach, starting with the data source and finishing with the business analytics layer when performing this analysis. Others try to evaluate their current capabilities to generate the necessary calculations, optimal control procedures, risk category mapping, etc. However, in all cases, there is the preoccupation to evaluate how to improve the existing system landscape. In the frame of discussions with European insurance company CIOs, it appears that this methodology leads them almost automatically to a best-of-breed approach. When gaps have been identified, the alternative consisting in making the most of existing systems and investing in the missing pieces is the preferred approach.

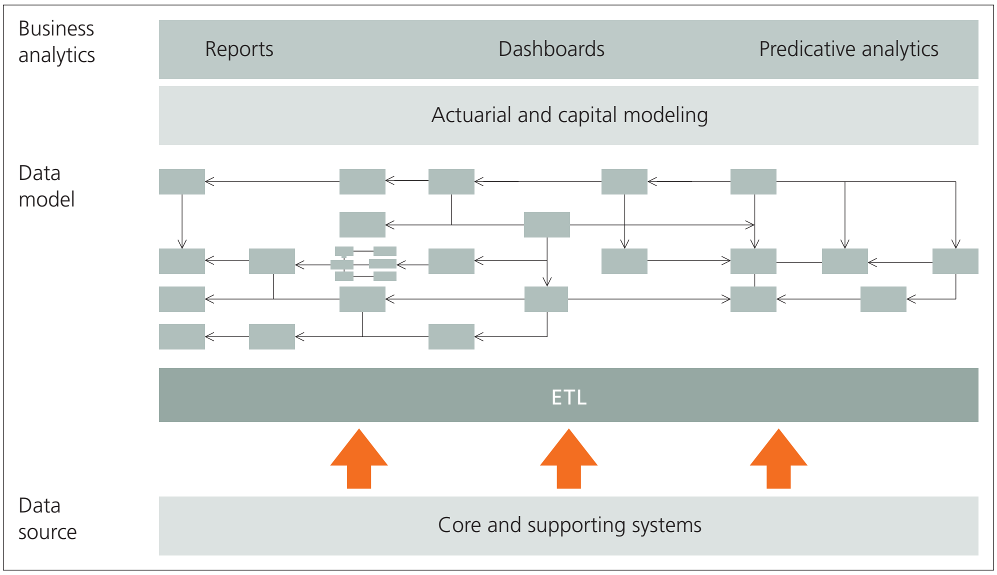

Figure 4: Solvency II technology layers. Source: Celent.

In summary, the analysis of both the supply and demand sides demonstrates that the best-of-breed approach is preferred by European insurers when adapting their information system landscape to meet Solvency II requirements.

4. INSOURCING VS. OUTSOURCING

After identifying the gaps they need to fill, insurers need to answer the 'how' question: Is it better to build or to buy applications? The common arguments supporting the approach to develop specific components or features are various, and in almost all cases they can be perceived as misleading.

4.1 Meeting specific needs

Insurers prioritising internal development of IT systems often consider it important to keep the solution design in the hands of the people who know the business and the company best: the internal staff.

Although it can be agreed that insurer staff have a deeper understanding of the operations conducted by their company, Solvency II could be viewed as an attempt to define a regulatory framework whose objective is to generate common outputs. For instance, the risk categories relevant for Solvency II are similar for the industry. In this context, IT vendors providing Solvency II solutions seem to be well positioned to offer valuable systems to insurers, since they have a deep understanding of all types of risks and the regulator's requirements.

4.2 Leveraging past investments and spared resources

The same concern (to make the most from existing systems) leads a majority of insurers to prefer the best-of-breed approach, but it can be argued that the build approach would allow insurers to tailor their solution to existing IT infrastructure (hardware and software) and to maximise existing investments. Many insurers have been developing and maintaining their IT application landscape internally for many years, so using otherwise underutilised internal staff may be a lower-cost alternative.

Maximising existing hardware and software is an advantage of the build approach, but doing so may well encourage suboptimal decisions in the design of the application. Buying can also free up internal resources during implementation for other projects (versus in-house build) and upgrades, while costly, may involve limited effort and time. In addition, it is well known that internally developed solutions tend to be poorly documented. Finally, the internal staff may lack development skills for the modern toolset or code base and require the support of external development firms.

4.3 Promoting simplicity

The simplicity of the pricing structure and the investment calculation is certainly an important factor explaining why insurers prefer developing systems. There are typically fewer or no formal license or maintenance fees in case of internal

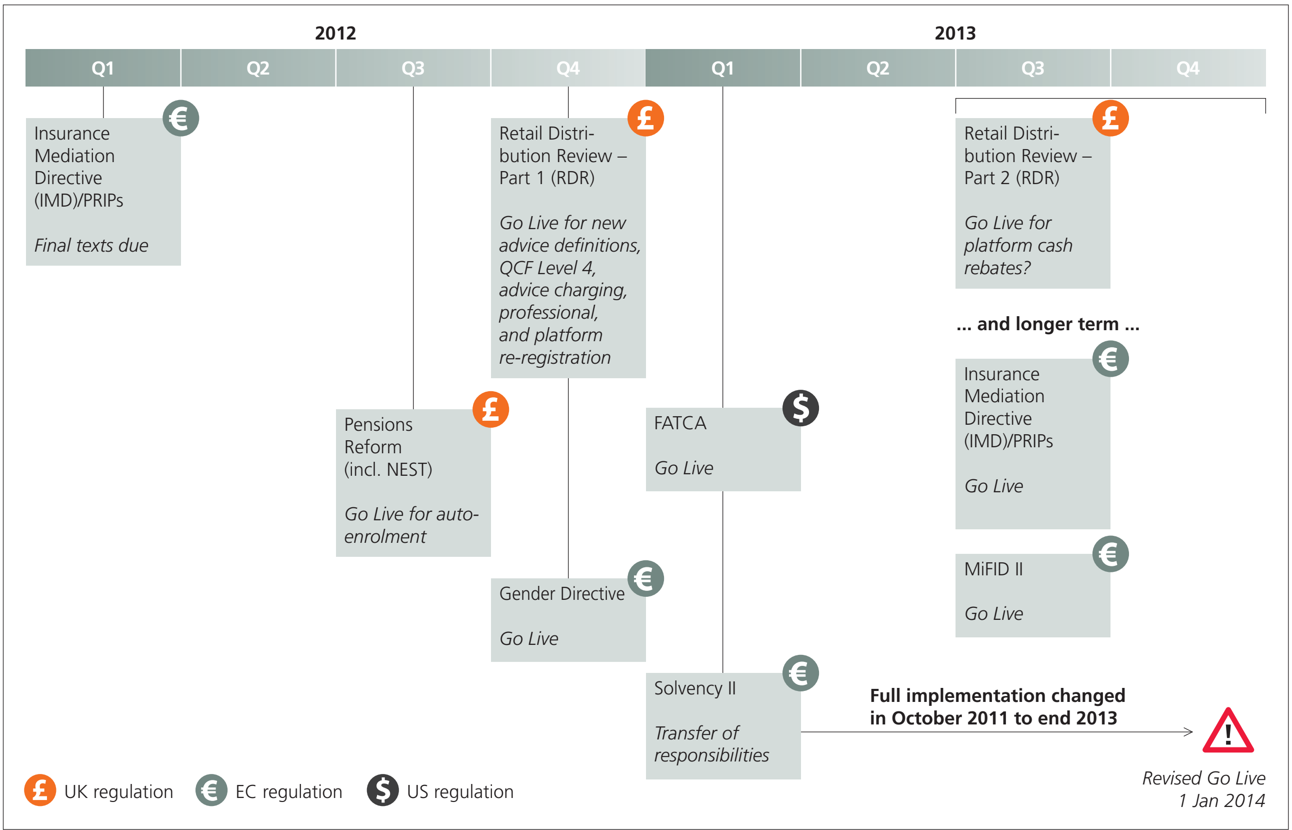

Figure 5. UK life insurer's typical regulation roadmap. Source: Celent.

development. In addition, legal procedures and questions can make the buying approach complex.

On the other hand, simplicity in terms of pricing structure is not always a good friend. Maintenance costs with an internal development approach can prove to be higher, because there is no economy of scale. Even though procedures are simpler, it is crucial to understand that the responsibility of keeping up to date with the latest technology is the insurer's burden.

4.4 Managing a vendor relationship

In many cases, steering a vendor relationship can be a challenge. Appropriate relationship management is not only required for the implementation phase but also crucial for post-implementation to ensure knowledge and future updates of the system, including regulatory changes, are installed on time and on budget.

Managing a vendor relationship can be difficult for an insurance company with limited experience in this area. However, experience shows that a customised solution typically has a longer implementation time and greater risk of failure. Another downside is that internally developed systems cannot benefit from innovation driven by a vendor or a larger user community. Keeping the solution updated with the latest regulations is entirely the burden of the insurer if Solvency II components are developed internally, not to mention that support is available from IT vendors, sometimes 24x7.

4.5 Summary

In summary, insurers need to weigh and prioritise these factors before making their case for the build or the buy approach. In addition, there is another critical aspect insurance companies also have to consider. Because Solvency II is dependent on a massive quantity of data, insurers frequently need extra processing power to perform the necessary calculations. In this context, component software has to be implemented on commodity hardware to leverage extra hardware capacities (grid computing, for instance). A majority of IT vendors active in the Solvency II area have already implemented this type of infrastructure in the frame of dedicated partnerships. Therefore, it is convenient for insurers to leverage their capabilities and expertise in addition to implementing their solutions.

5. ADAPTING SOLVENCY II SOLUTIONS TO REGULATORY CHANGES

One argument in favor of the purchase of components or Solvency II solutions is certainly the support IT vendors can offer in terms of adaptation to changes to the regulation. Also, there are important reasons why IT vendors need to demonstrate their ability to keep their solutions up with potential Solvency II regulatory changes and ensure these are incorporated in future releases.

5.1 Insurers are overwhelmed with regulatory constraints

Insurers are not only working on complying with Solvency II. Insurance companies in certain European countries are rethinking their business model and IT operations to reflect new regulations. Figure 5 on page 8 provides an example of regulations UK life insurers with cross-country activities need to address within the next couple of quarters.

The UK example is just one among others in Europe. However, in this case, it must be emphasised that efforts required by insurers are particularly consequential. Beside the heavy investments and adaptation efforts Solvency II programmes imply, the Retail Distribution Review (RDR) presents an additional concern - monopolising money and resources and prompting new strategic thinking around distribution.

5.2 The ever-changing Solvency II roadmap

The roadmap for Solvency II has undergone many changes. As mentioned in Figure 1, the new effective implementation of the European prudential regulation is now planned for January 2014, but new clarifications are expected from the regulator prior to this date, notably around regulatory reporting.

This does not even refer to the impact of the economic situation on Solvency II implementation phases, such as the Quantitative Impact Studies (QIS). The interactive approach, involving various insurance associations and political and government bodies in the Solvency II implementation process, has generated delays and confusion for insurers over the past five years. In this context, insurers preparing for Solvency II need to make additional efforts to keep pace with changes. As a result, a growing number of them are asking for support from specialised actuarial firms who stay informed about the latest news and updates surrounding Solvency II.

5.3 Data management complexity

Solvency II requires not only that insurers meet capital requirements, but also prove they have a sound and efficient enterprise-wide risk management framework in place. The raw material that feeds the risk management framework is data and, therefore, conditions its results and its efficiency. Taking into consideration the comprehensiveness of risks included in the solvency regulation, insurers must identify, manage, and monitor all risk categories. Figure 6 provides an example of the sets of risks and subsequent data needed.

The quantity and quality of data needed to monitor the risk categories listed in Figure 6 add to

Insurance risk	Market risk	Default risk	Operational risk	Other risk
Risk categories				
– Premium risk	– Equity risk	– Default of reinsurance	– Process risk	– Liquidity risk
– Reserve risk	– Interest rate risk	– Default of investments	– Communication	– Strategic risk
– CAT risk	– Property risk	– Default of broker	– Staff risk	– Reputation risk
– Mortality risk	– FX risk	– Default of policy holder	– IT system risk	
– Longevity risk	– Spread risk		– External risk	
– Lapse risk	– Concentration risk		– Outsourcing risk	
– Expense risk	– Diversification			
– Disability risk				

Figure 6. Risk categories. Source: Celent

the complexity of the risk management framework insurers need to implement and maintain. This complexity leads insurance companies to seek external support, including IT vendor consulting skills.

5.4 Relying on competent and informed partners

The flood of regulation to address, the continuous changes of the Solvency II implementation roadmap and the complexity of the regulation, especially regarding risk data, make insurers' work difficult. In this context, it is recommended that IT vendors demonstrate:

- **Capability in understanding insurers' preoccupations and feedback.** Without solid understanding of both regulation and business challenges faced by insurance companies, it is difficult for IT vendors to deliver high-quality services. In addition, it is recommended that Solvency II IT vendors frequently gather insurance business user feedback about their solutions in order to include valuable improvements in new releases.

- **Ability to quickly adjust their Solvency II solution.** IT vendors should have people involved in discussions with the parties playing a role in the Solvency II regulation implementation, such as the European Insurance and Occupational Pensions Authority (EIOPA). This allows them to demonstrate their knowledge of what is going on when talking to their insurance clients, and to adapt their solutions quickly to regulation changes. At times where clarifications are needed, notably around regulatory reporting, being able to demonstrate a solid understanding of the latest discussions increases the trust insurance clients place in their IT vendor partners.

- **Ability to implement new releases.** It is important for IT vendors to demonstrate that they have an efficient and transparent release path. They need to update their system on time to allow changes required by the regulator to be taken into consideration. When possible, it is recommended that they issue detailed release implementation procedures to their insurance clients for the sake of transparency.

ABOUT THE AUTHOR

Nicolas Michellod, MBA, is a Senior Analyst in Celent's insurance practice, based in Zurich, Switzerland. He has 15 years of experience in the financial industry acquired in the banking and insurance sectors. During his insurance years, he held different C-level positions and has led a claims system replacement project. Nicolas Michellod's research has concentrated on continental European insurance markets with a specific focus on France and insurance systems including life policy administration, document automation and risk management systems. Solvency II, online insurance and IT strategy and document management in insurance are particular topics he has recently covered. Since joining Celent, Nicolas Michellod has advised multiple insurance companies and vendors on IT and business strategies including strategic IT programme alignment, partnership evaluation, conceptualisation of cross-country system implementations, and risk management IT strategy validation.

ABOUT CELENT

Celent is a research and consulting firm focused on the application of information technology in the global financial services industry. Celent's analyst teams are organised by vertical financial services industry sectors: banking, securities, investments and insurance. These same analysts engage in strategy and management consulting projects for both members and non-member firms. As research and consulting teams are one and the same, strategy consulting clients have direct access to the knowledge and expertise gathered as part of Celent's research practice.

Related Celent research:

'Solvency 2: The Long and Winding Road', April 2011

'Solvency II Quantitative & Strategic Impact: The Tide is Going Out', October 2010

'Solvency II Under the Bonnet: Building the Risk IT Architecture that Serves Your Business Strategy', July 2010

'Solvency II IT Vendor Spectrum', June 2010

'Leveraging Technology to Improve Risk Management: A Solvency II Update', January 2010

'Solvency II: Overview and Impact on IT", April 2008

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