Insurance Insights 2007

New issues and strategies in the global insurance industry

FINANCIAL SERVICES

AUDIT ▪ TAX ▪ ADVISORY

Insurance Insights 2007
New issues and strategies in the global insurance industry

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Contents

Industry introduction

8
Insurance companies look back on a successful year
The results of the top global insurance companies reported in February and March show that profitability increased across the board on the back of rising equity markets, hardening of the rates for non-life business, growing demand for life products and the welcome absence of the catastrophes we saw in 2005. But there are challenges ahead. It is not clear where growth in non-life can come from, other than further consolidation. Capital management is increasingly important, driven by changes in reporting and regulatory standards, and insurers face pressure to improve efficiency.

Growth and business development

14
Global insurance industry set for resurgence in M&A
The past decade has seen a strong trend towards consolidation in the insurance industry. Merger and Acquisition (M&A) activity has been high, due to rising stock markets, declining interest rates, industry deregulation and increased globalization.

22
Rapid change in the Indian insurance sector
Driven in part by market liberalization, in part by the rapidly-growing Indian economy as a whole, the Indian insurance sector is evolving rapidly. The potential has not gone unexploited by foreign investors. But success depends on developing a winning business proposition, finding the right partner and on effectively navigating the regulatory and approvals framework.

24
Islamic insurance: the growth of Takaful
Alongside the growth of Islamic banking, Takaful, or Sharia'a compliant insurance, has experienced rapid growth over the last 10 years.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Efficiency and cost management

30
Global structures for insurance groups – what does the future hold?
Bermuda's growth as an insurance market and the influx of new capital following WTC and Katrina mean that it has increasingly been seen as a holding location for international insurance operations. Established groups such as Ace and XL Capital have been followed by a number of more recently formed groups who have put their head office and primary capital base in Bermuda and insurance or reinsurance operations in the major markets around the world. This trend, together with recent developments in the EU, has prompted other insurance groups based in the major onshore centers to ask the question whether they should be looking afresh at the way they organize their international structures.

34
Finance of the future: towards a target operating model
Creating an explicit target operating model for the finance function is a valuable foundation for articulating and implementing a successful change program – and for improving the quality and strategic value of the whole finance operation.

Reporting and regulation

40
U.S. insurance industry faces major accounting challenges
The U.S. insurance industry faces a number of current accounting challenges that threaten to stretch both systems and resources.

42
Financial reporting for insurance: significant uncertainties remain
Over the next few years, the financial reporting regime for insurers will change significantly. Major initiatives including IFRS Phase II, Solvency II and further development of European Embedded Value will mandate changes in the way insurance companies report their results and, in many cases, impact further on underlying systems and management information. But as yet, there remains significant uncertainty over how these changes will play out. How should insurers respond?

50
Quantifying uncertainty in technical reserves
Greater attention than ever is being paid by regulators and other stakeholders to uncertainties in technical reserves. Insurance companies are developing highly sophisticated models to try to improve the quality of reserve estimates. But, the real issue concerns the clarity about how reserve estimates are arrived at and communication about the levels of risk inherent in any particular estimate.

Risk and capital management

56
What's in the regulatory cooking pot? A comparison of the U.S. and EU solvency systems and control
The time may well be right for the insurance industry to engage in a debate about the merits of a single global standard for insurance regulation of risk and capital adequacy.

62
A guide to model risk and control
With many insurance companies relying on models in a wide variety of business areas, the overall quality of these tools and the accuracy of their underlying assumptions are critically important. Board members and senior executives need to understand the risks their organizations face when they use such models and take steps to manage them appropriately.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Foreword

Insurance should be very simple – you pay a premium to cover a risk, or you put some money aside for the future. From the point of view of the consumer, nothing could be easier. This apparent simplicity, however, masks a highly complex industry, driven by a wide range of different issues.

The industry is competitive, cyclical and (by definition) exposed to every possible risk. These risks can often be long-term and hard to define, leading to challenges around pricing and reserving. The industry needs capital to ensure it can meet its obligations but exactly how much capital is dependent on changing regulatory and reporting requirements. In a competitive environment the industry must continue to reduce cost and improve operational efficiency, but at the same time the market is expecting growth. The industry is always looking for new opportunities in different products and geographies.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

There is plenty here then to keep hard-working insurance executives very busy. In this publication we have broken these issues down into a clear framework and provided some additional insight into each of these areas.

Under 'Growth and business development' we look at the M&A market in different regions, the emerging market in India and the growing opportunity for Sharia'a compliant Takaful insurance. Under the heading of 'Efficiency and cost management' we look at the tax implications of different business operating models and a target operating model for the finance function. Under the heading of 'Reporting and regulation' we consider the differing reporting regimes in the U.S. and Europe and the complexities of reserve reporting, while finally under 'Risk and capital management' we look at the developing EU solvency regulation in comparison to the U.S. standards. Our introductory article reviews the recent results of the main insurance companies and provides comment on their main initiatives and progress in these different areas.

We trust you will find this work useful and relevant to your role in the industry.

Dr. Frank Ellenbuerger
Global Head of Insurance
KPMG in Germany

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Industry introduction

P8 Insurance companies look back on a successful year

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Insurance companies look back on a successful year

The results of the leading global insurance companies reported in February and March show that profitability increased across the board on the back of rising equity markets, hardening of the rates for non-life business, growing demand for life products and the welcome absence of the catastrophes we saw in 2005. But there are challenges ahead.

These challenges can be summarized under the four key headings of:

- Growth and business development
- Efficiency and cost management
- Reporting and regulation
- Risk and capital management

Growth and business development

Growth, for the largest players in the industry, is an imperative. All the major players have a significant growth premium built into their share price and any signs of slowdown are greeted by downgrades and a market sell-off. This search for growth is particularly challenging in what is a very cyclical and competitive industry.

The abnormal number of storms in 2005 had one benefit. It prompted a general rise in risk awareness and a considerably higher assessment of the potential losses. As a result, in the Americas, renewals were dominated by high demand for catastrophe capacity.

Munich Re also reported that reinsurance negotiations in Latin America and the U.S. resulted in appreciable price increases, especially for property and offshore energy risks with natural catastrophe exposure.

Increased rates in this sector of the market have helped offset falling margins in other sectors like U.S. and U.K. liability and U.K. and German motor, where increased competition is leading to pricing pressures.

Given the continuing pricing pressures in mature and established markets, the growth of the top insurers has seen greater reliance on the availability of distribution channels. As a result, partnerships are becoming increasingly important. For example, Aviva has experienced growth across its global business in part due to its bancassurance partnerships. Aegon also entered into four joint venture agreements during 2006 to improve its global presence and availability to the end consumer.

As well as partnerships, acquisitions have also helped to grow the businesses of several of the top insurers, such as the acquisition of AmerUS (United States) by Aviva. As the review of global Mergers and Acquisitions (M&A) activity on page 14 points out, the bulk of acquisitions took place in the emerging markets. Aviva acquired 51 percent of Sri Lanka's third largest insurer, and Aegon made four acquisitions globally, as well as opening a new branch in China. There were also acquisitions and investments by several of the top global insurers in the Central Eastern European (CEE) region, which is expected to be a future growth market. The acquisition of the Winterthur Group by AXA was in part due to Winterthur's strong presence in the Eastern European region.

Increased competition in more mature markets such as the U.K. and the U.S. has heightened the importance of brand recognition for any player competing for personal business in the direct market –

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

AXA in the U.K. acquired Swiftcover precisely because of its strong brand identity as an insurer.

In terms of growth, life and non-life face very different challenges. Life has huge potential for growth – partly because of increasing individual wealth in emerging economies and partly because the markets for savings and retirement-related products in general are becoming more buoyant. It is less easy for individual insurers to see where growth in non-life is going to come from, other than through increased consolidation. Nor is there any agreement between the life and non-life sectors on the contribution the bancassurance model can make.

Efficiency and cost management

The top global insurers all reported improvements in combined ratios, driven largely by improved loss ratios. In 2005, of course, large increases in loss ratios were seen due to the high level of natural catastrophes.

The expense ratio has risen for several of the major insurers. In some cases, this is due to one-off events. In others, the expense growth reflects investments to support strategic ambitions in developing markets, or to launch new products in the more competitive mature markets.

Many of the top insurers had already put restructuring programs into place before 2006, but there has been continued commitment to these plans. The general trend suggests that the insurers are looking for cost efficiencies through the consolidation of support functions, as well as streamlining core operations. Allianz reports that it expects its ongoing reorganization to lead to €500–600 million of cost savings by 2009. Some firms in the U.K., particularly those operating in the Lloyd's market, are considering moving their headquarters to more tax-efficient locations, such as Bermuda (see article page 30).

Given the large losses incurred in 2005, the top insurers have been further focusing on their underwriting and risk-management discipline. AXA, for example, has brought together the underwriting functions from different lines into a standalone unit. Where expense improvements have been made during 2006, underwriting excellence is generally cited as part of the reason.

Reporting and regulation

Insurers with European businesses face continuing regulatory costs in relation to Solvency II projects. Several insurers have also entered new markets this year – notably Eastern Europe and Asia Pacific – incurring additional compliance costs.

For the top insurers regulated in the U.S., the National Insurance Act of 2006 proposes an optional system of federal regulation as an alternative to the current system, which operates using different regulations for each U.S. state. It will also enable the global insurers to market products profitably at a national level. In the long term, the new provisions are likely to lead to cost savings and increased revenues for the insurers, although the costs of moving to a new system are likely to affect profits in the short-term.

Those insurers who have reported on an Embedded Value (EV) basis (see article on page 42), have tended to show positive results. Ping An of China reported growth in its half-year results, which was a reflection of growth in both adjusted NAV and in VIF. ING also reported EV growth, which was driven by favorable investment performance in Europe and new business growth in Central Europe, to some extent offset by EV decreases in the Americas (in part due to a weaker dollar) and the Asia Pacific region, where economic assumptions were revised.

The current lack of global consistency in the way insurers are asked to report their results inevitably leads to a lack of transparency. Attempts are being made to improve the situation – as the articles on Solvency II, U.S. accounting challenges, IFRS Phase II and European Embedded Value in this publication demonstrate – but this is a significant task and progress is – not surprisingly – slow given the complexity of the subject. It is becoming ever more clear, however, that the huge strains these changes are placing on financial reporting systems and resources need to be addressed.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Risk and capital management

For global insurers, capital positions are generally strengthening and regulatory surpluses remain at high levels, in line with capital management policies which tend to support this objective to maintain credit ratings.

Given the difficult conditions faced by the top insurers recently, many are looking to maximize the risk-return trade off. Low credit exposure is part of the risk strategy for several of the insurers, with high quality ratings sought for invested assets. Some have also taken steps to reduce market risk by reducing levels of equity investment in comparison to other investment types.

Changes in the risk environment, particularly due to the increased probability and severity of weather-related catastrophe, mean that insurers are facing greater loss potentials. The approach has been to reassess risks after 2005 and reflect this in pricing models, in some cases canceling business.

In a move that the top insurers generally perceive as positive, the rating agency assessments of capital adequacy also shifted in 2006. There appears to be a move to including internal capital models as part of the assessment of capital adequacy, although it remains to be seen how much weight will be attached to these. Rating agencies have indicated that they will consider output from internal models. Furthermore, the significant growth in the use of economic capital models by insurance companies is likely to lead to rating agencies placing more weight on those models.

Challenges ahead

There are many challenges ahead for insurers. Some are technical, such as the introduction of Solvency II (see article page 56). Others are commercial, such as capitalizing on emerging growth markets like India (see article page 22) or exploring the rapidly growing demand for Islamic insurance (see article page 24). Still others are regulatory, as a number of national and global bodies strive for true comparability and transparency in the financial reporting of the world's insurance companies.

There is no doubt that insurers have a full agenda. This publication is intended to provide insights and help focus scarce time and resources on some of the key issues they face today.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Performance by region

Europe

Europe encompasses more mature insurance markets, such as Germany and the U.K., as well as the emerging markets of the CEE region. Many of the top insurers have seen a strong performance in the U.K. market in the life and pensions sectors, which is expected to be a continued growth market. Rising equity markets also benefited sales of bonds and investments.

Fiscal and regulatory changes in some Central European countries created difficult conditions for insurers. In Germany, investment bond volumes have been affected by the flattening yield curve. In Belgium, sales were generally lower following the introduction of a 1.1 percent insurance tax levy on life insurance premiums from the beginning of 2006. In Spain, there has been an overall decline in sales of savings products, which were adversely affected by uncertainty surrounding details of tax changes announced for 2007. The Netherlands have also been affected by competitive pricing and by regulatory and fiscal changes – for example, new legislation adversely affected the sickness benefits market. Interest rate changes, however, had a positive impact on guarantee provisions and related hedges, which helped increase operating earnings for several insurers in this area.

The Eastern European region has proved more promising. There has been significant growth in pensions in Eastern Europe, partly fueled by continuing regulatory reforms in several countries, including Poland, the Czech Republic and Hungary. A change to the tax regime in Hungary during 2006 led to a surge in sales for the top insurers in that region. Several of the top insurers have continued to build the size of their businesses within the CEE region during 2006, reflecting growth expectations.

Americas

Insurers in the U.S. delivered mixed results. Favorable claims experience and the comparatively benign catastrophe situation tended to improve accident and health operational earnings. Operating earnings also benefited from improved mortality experience in the traditional life and reinsurance lines.

However, sales of fixed income annuities have been affected by difficult market conditions associated with uncertainty over the regulatory environment. New business margins for some insurers fell, in part due to the effect of rising interest yields, which resulted in a higher discounting of future profits, but those insurers with innovative product offerings within variable annuities showed stronger performance. Latin America, in contrast to the U.S., is identified as a growth market for life insurance, and continued to perform well during 2006.

Asia Pacific

The Asia Pacific region has also generally proved to be a robust area for the top global insurers. Many report rapid growth in the region, particularly in China and India.

Two of the top global insurers are based in China – Ping An Group and China life. These have been beneficiaries of a 14.4 percent increase in the Chinese insurance market during 2006, according to China Insurance Regulatory Commission figures. The increase was due partly to China's economic growth, and partly to moves to dismantle the traditional welfare system. In particular, changes in Chinese health and pension systems designed to encourage consumers to spend more and save less have helped the insurance industry. Domestic insurers are not the only ones taking advantage of the growth. Several of the top global insurers have made investments in the region to create platforms for their business.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Growth and business development

P14 Global insurance industry set for resurgence in M&A
P22 Rapid change in the Indian insurance sector
P24 Islamic insurance: the growth of Takaful

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Global insurance industry set for resurgence in M&A

The past decade has seen a strong trend towards consolidation in the insurance industry. Merger and Acquisition (M&A) activity in particular boomed in the late 1990s due to rising stock markets, declining interest rates, industry deregulation and increased globalization.

With the equity market decline of 2000–2002, global M&A activity fell away. But there are now signs of resurgence as stock markets recover and interest rates remain at historically low levels. Business is improving for the top global insurance companies and, as insurers generally rebuild their capital base, they are increasingly looking to achieve economies of scale, secure appropriate distribution channels and boost their ability to cope with product complexity. Some major players are also looking for greater geographical spread to create a more robust business. And changing regulation, for example Solvency II in Europe, could trigger transactions involving smaller and less sophisticated companies.

With consolidation once more on the agenda, the obvious question is: ‘Where next for the global insurance industry?’ To answer it, Francesca Short* and Mike Ryan** discussed market conditions, and the implications for M&A activity, with their colleagues from KPMG member firms around the world.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

'Global players examine their CEE strategy.'

Roger Gascoigne
Partner, Insurance, KPMG in Central and Eastern Europe (CEE)

'German companies look beyond their borders.'

Vincenzo Braiotta
Partner, Insurance Transaction Services
KPMG in Germany

Roger, there's a lot of interest in Central and Eastern Europe (CEE) at the moment. What do you see as some of the trends in insurance M&A in the region?

The region falls into two main parts, the Western CEE (the Czech Republic, Poland, Hungary and Slovakia), and the developing countries further to the East. There are only two independent insurers of any size – Ceska Pojistovna and PZU, the former national insurers in Czechoslovakia and Poland. The other main players are all subsidiaries of global insurers.

M&A activity in the Western CEE will probably be driven by strategic market and territorial decisions by the global insurers – do we want to increase our presence or retrench? In effect, some territories may even be swapped so that each player gains sufficient presence in a country to make the economics work. Also, some late entrants are clearly keen to get into the markets. Many of the global players are still evolving their strategies for the CEE, but it is clear they include both greenfield start-ups and acquisitions.

Although life insurance businesses are some of the most desirable acquisition targets, most of the sales to date have been non-life. But with brokers starting to become a feature, the larger brokers on the life side could become interesting propositions.

If I were pressed to make a forecast, I would guess that the top 10 positions would consolidate into five major players in the sub-region.

Everyone will also be watching Ceska Pojistovna and PZU with interest to see if they move outside their home countries. If they do, the most likely direction will be east, into the Commonwealth of Independent States (CIS). The emerging markets in the Balkans and CIS present interesting long-term opportunities, and we are already seeing intense M&A competition in the Ukraine.

Vincenzo, Eastern Europe must be looking attractive to German insurance companies?

As you would expect, the global players are very active in the M&A market. But some large and medium-size mutual companies like Talanx/Gerling and Gothaer are now showing more interest in M&A. Talanx, for example, is planning larger acquisitions in Europe to offset its high exposure to the German market.

There are basically three approaches. The first is the opportunistic desire to grasp opportunities arising from consolidation in the German industry. The second is the search for acquisition opportunities outside Germany, especially, as you say, in Eastern Europe. And the third is bigger mutuals looking for cross-border opportunities, including the merger of equals. Smaller mutuals have shown only a limited interest in M&A, although steps towards demutualization will give them more flexibility and Solvency II may well provide the impetus to act.

As well as the global players and the mutuals, there is a third category of German insurance entities (Versicherungen öffentlichen Rechts (VöR)). Under the current rules, these regional organizations would have to stick to their region when they make acquisitions. However, there is also a tendency for them to use M&A to move outside Germany.

Distribution, especially on the life side, remains a key issue for German insurers. Further activity is expected in this sector as competition for profitable distribution channels persists.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

'In France, the environment is right, but there are few suitable targets.'

Rémy Boulesteix
Partner, Transaction Services
KPMG in France

So there's a clear trend with both large and mid-sized players in Germany for cross-border acquisitions. What about France, Rémy?

Listed French players, or those considering a listing, generally try to become European players in order to increase their visibility on the capital markets. Their strategy is usually to diversify their exposure by entering a number of countries at one go, with at least enough business in each country both to be profitable and to form the foundation to reach the top five through additional acquisitions of smaller local entities.

Due to their favorable financial performance in 2006, French insurers have profits available for acquisitions and the new pension market may prove an opportunity for ambitious players to increase their market share. So the environment is right. But there are few suitable targets, and high valuations have led some French insurers to focus on internal growth, for example, as AXA has recently announced.

As Vincenzo mentioned in Germany, the smaller French mutuals will also need to seek a solution to the issues presented by Solvency II.

'Opportunities exist for further consolidation in the Netherlands.'

Marcel Groenendijk
Director, Corporate Finance
KPMG in the Netherlands

Marcel, your market is mature, like France. Do you see any scope for future M&A activity?

The Netherlands is one of the most consolidated of the insurance markets, so overall M&A activity is limited, certainly compared to other countries in Europe. However, I do expect to see increasing M&A activity in specific sub-sectors. For example, the Property and Casualty (P&C) insurance market in the Netherlands faces price competition, especially in motor and health insurance, which is leading to falling profitability and creating the right conditions for further consolidation.

The Life & Pensions market, meanwhile, is experiencing further consolidation as a result of two major trends similar to those in the U.K. First, pension and insurance administration is being outsourced, increasing the importance of infrastructure players. And second, consolidation leaders such as AEGON, Eureko and ING are acquiring pension books.

'Mexican market still fragmented, but stronger regulation building confidence.'

Todd McClurkan
Partner, Transaction Services
KPMG in Mexico

Todd, the Mexican market is rather less developed than Western Europe. What impact is that having on M&A?

The Mexican market is still quite fragmented, with many small players. We have started to see some consolidation via acquisition in the last couple of years, but I would expect more in the next five years. As Mexican insurance legislation comes more into line with international standards, this should drive greater transparency of information and I would then expect more big players to enter the market, possibly through M&A.

I'd also expect companies to leverage their presence in one market to enter others. That said, the regulatory differences between countries are still fairly pronounced, so the challenges are not solely economic.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

‘Latin America a natural target for Spanish companies.’

Amparo Solis Calbacho
Partner, Corporate Finance
KPMG in Spain

‘Cash-rich U.K. companies look abroad.’

Jeremy Oakley
Director, Market Analysis and Transaction Services, KPMG in the U.K.
Mark Davison
Partner, Corporate Finance
KPMG in the U.K.

That’s a good point. Amparo, how do you see the involvement of Spanish insurance companies in Latin America?

Although Latin America has traditionally been seen as a natural expansion market for Spanish companies, in practice Spanish insurance groups haven’t been very active there, mainly because there aren’t enough companies with the critical mass to sustain an expansion plan in the region. There are three main exceptions – Mapfre, BBVA and Santander. But of these, only Mapfre is a true insurance company. BBVA and Santander are banking groups with insurance subsidiaries.

Mapfre is the sector leader in Spain and opportunities to improve its market share are limited. So it was no surprise that, following its recent demutualization, Mapfre announced its willingness to expand its foreign operations, especially in Latin America and Europe. Mapfre already enjoys a leading position in Latin America in non-life, covering the main countries like Mexico, Colombia, Brazil and Chile. And it has reinforced its position in the Dominican Republic through a joint venture with BHD, one of the country’s main financial groups.

BBVA is the most active Spanish bank in Latin America, where it holds a prevailing position. It currently has six insurance subsidiaries in Latin America. For Santander, Latin America is a core market, representing around 30 percent of consolidated net profit and it has insurance subsidiaries in Chile, Argentina, Mexico and Brazil. However, it has recently been more focused on expanding its European operations through the acquisition of Abbey in the U.K. and developing its consumer finance operations.

And what about M&A activity in Spain itself?

In the last 10 years, 22 percent of the companies in the Spanish market have disappeared, and the market share of the five main companies has been increased from 40 percent to 50 percent. Concentration is greatest in more specialized lines of business, like health insurance, but other insurance segments are still relatively fragmented. So, even if the Spanish insurance sector is now more consolidated than it was a few years ago, there are still opportunities for more M&A as smaller groups face family succession issues and, in common with others in Europe, Solvency II pressures.

We’ve seen the purchase of Abbey by Santander send ripples through the U.K. Financial Services sector. But, Jeremy and Mark, are U.K. companies themselves looking abroad for M&A opportunities?

Mark: Larger insurance players in the U.K. are generally strongly capitalized after making record profits recently and they’re under pressure from investors to deliver further growth. Their existing markets are generally mature, so there’s a strong willingness to explore acquisitions, particularly in high growth emerging European and Asian markets – or to take out costs through in-market consolidation. Overall, further consolidation seems likely, particularly on a cross-border basis, as the industry is under-consolidated globally.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

'U.S. sees M&A as one way to grow profits.'

Mike Ryan
Partner, Insurance Transaction Services
KPMG in the U.S.

In the U.K. P&C industry, we're seeing insurers buying distribution, as well as the emergence of hybrid underwriting/distributor models. The Internet and the growth of aggregators is causing price competition to rise and profitability to fall, which could well precipitate M&A. Niche motor insurers (non-standard risks) and life providers (impaired lives) are also provoking interest.

On the life side, we're seeing consolidation of infrastructure, namely Capita and Vertex trying to build and integrate straight through processing (STP) components. More rigorous examination of the capital base is influencing strategic decision making and could lead to divestures and reorganizations to drive capital efficiency. Distribution is migrating away from selling 'one size fits all' products towards more segmented propositions, such as fee based wrap services for mass affluent and high net worth individuals.

Another market feature is new entrants into the bulk annuity market. The concept is attracting many new players even though the market is yet to be proved. Some of these will look for a medium-term exit so expect consolidation in this area in three to five years.

Mike, compared to the U.K., it seems to have been quiet on the M&A front in the U.S. recently?

I'd agree. Over the past couple of years the U.S. M&A market has been relatively quiet. While the number of transactions has remained stable, there has been a lack of large transactions, although Swiss Re's acquisition of GE Insurance Solutions and the Lincoln National acquisition of Jefferson Pilot are two examples that come to mind. The industry has been predicting consolidation for the life segment, but we are still waiting to see significant activity. The environment seems right – lack of dominance by top companies; pricing pressures; and lack of product differentiation. You'd expect smaller to medium-size companies to have to merge to be able to leverage their infrastructure and remain competitive.

In P&C overall, pricing and profitability have been strong. But the P&C industry is very diverse, so it makes more sense to look at particular segments. For example, warranty (both underwriters and administrators) has shown increased M&A activity among the many small niche companies that have entered this space, driven by strong retail markets, manufacturing quality and product sophistication. Additionally, because there is less regulatory oversight of this segment of the industry, it has attracted more interest from financial investors.

The non-standard automobile segment, which focuses on providing automobile insurance to higher risk individuals, has been active; but underlying product pricing is softening, which is expected to lead to a weaker market.

Over the last couple of years, there have been a number of transactions in the agency/brokerage segment of the industry. Most of the transactions historically have been the acquisitions of smaller, agent-owned businesses. But recently we've seen activity in the larger retail agencies and wholesale brokerage. Much of this interest was sparked by investigations by New York State Attorney General, Elliot Spitzer, which forced some insurance companies and brokers to divest certain segments of their business. This segment has also caught the interest of financial investors.

So there is still a significant opportunity for consolidation across all segments of the market, but particularly in the life segments. With less differentiation between product offerings, and distribution channels continuing to open up through technology, M&A may well be a necessity for companies that want to grow profits.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

'Access to distribution drives South African M&A.'

Gerdus Dixon
Director, Insurance
KPMG in South Africa

Gerdus, distribution seems to be a key factor in the U.S. Is it the same in South Africa?

There's no doubt distribution is one of the main drivers. In the past two years, some large South African life insurers have acquired a controlling interest in medium-sized life insurers that have good access to the emerging/low income segment of the market – for example, Sanlam (the second largest South African life insurer) acquired Channel Life and African Life.

On the other hand, there has been very little recent M&A activity in the P&C market because all the meaningful P&C insurers are tied in with large financial services groups that wish to retain their P&C operations. That said, the local insurance regulator is implementing a new solvency basis for P&C insurers that is more onerous than the current basis. So there may be some small insurers that will not meet the new solvency requirements and they could become M&A targets.

Overall, I'd say there's limited scope for further consolidation in the South African P&C and life insurance markets. For one thing, our competition regulator is unlikely to approve any meaningful M&As. What is more likely to happen is that the larger South African financial service/insurance groups will look into Africa to extend their footprints.

'Consolidation more or less complete in Japan.'

Ikuo Hirakuri
Partner, Insurance
KPMG in Japan

Hirakuri-san, your market is also relatively mature, isn't it?

Yes. Consolidation is more or less complete. There are fewer than 10 significant P&C players, including four or five majors. And fewer than 30 serious life companies, including five or six Japanese firms as well as foreign entities like AIG and Aflac. In particular, life is currently dealing with policyholder and regulatory issues arising from 'non-payment' problems and I am not aware of any interest in M&A.

'Australian companies expand into Asia, U.S. and Europe.'

Kevin Chamberlain
Partner, Transaction Services
KPMG in Australia

Kevin, Australia is another mature market; do you see the same lack of interest in M&A?

The Australian market is already highly concentrated; and as a result, we're seeing only limited M&A activity in the general and life insurance markets. Although there was one very large transaction at the beginning of 2007 – Suncorp-Metway Limited, one of the leading banking and insurance businesses, is acquiring Promina, Australia's third largest general insurer, to form the second largest general insurer in Australia. As usual, the driver for the deal is economies of scale.

The main M&A activity involves the privatization/consolidation of the health insurance sector. Privatization of the government health fund (Medibank Private) is scheduled for 2008 and demutualization of the largest health insurer (MBF) may occur in 2007–2008. And we have seen some recent activity in the broking market, with a number of acquisitions and strategic stakes being taken as companies seek to secure their distribution outlets.

Overall though, I expect competition issues to limit M&A activity to niche acquisitions.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

'Global players look for Asia Pacific opportunities.'

Marco Kaster
Partner, Transaction Services
KPMG in Hong Kong

So are Australian general insurers looking offshore for opportunities? Geographically, the Asian economies must look very attractive?

Not just Asia! A number of Australian companies are continuing their overseas expansion into U.S. and European markets as well as Asia, as they strive to grow premiums above GDP growth. For example, IAG recently made two acquisitions in the U.K., QBE recently made a further acquisition in the U.S. And yes, IAG has made acquisitions in Thailand and Malaysia and is pursuing other opportunities in China, Thailand, Malaysia and Singapore.

Asian markets are particularly attractive because of the combination of low insurance penetration levels and high economic growth. Asian markets are typically not as sophisticated as Australia and therefore technical capability transfer can add significant value. In particular, Chinese insurers are looking to partner with Western insurers.

Marco, China's rapidly growing economy clearly makes it a desirable target for the global players. What's been happening in China and the wider Asia Pacific region?

As you would expect, M&A activity in China has so far been largely in-bound, with most of the global players entering the market setting up joint ventures with local partners. Some companies have taken equity stakes in Chinese (mainly life) insurance companies (HSBC, AIG, Fortis, IAG) and in many cases, this has been pre-IPO. A few banking/insurance groups have taken strategic stakes in Chinese banks aiming to develop bancassurance (ING, RBS).

Looking to the future, foreign ownership caps in Chinese insurers (currently 24.9 percent) are expected to be relaxed, but this may not happen for a number of years. Also, China out-bound investment – initially within the Asia Pacific region, possibly globally at a later stage – is expected at some point.

Within the wider Asia Pacific region, global players continue to expand and consolidate their footprint, with recent activity in Hong Kong, Korea, Malaysia, Thailand and Indonesia among others. There have, however, been cases of insurance companies realigning their portfolios in Asia, with AXA acquiring the Asian life insurance operations of Winterthur and MLC, Commonwealth Bank of Australia selling its HK life operations to Sun Life and its Philippine operations to Manulife and Aviva selling its non-life business.

In summary, Francesca comments, it's clear that different regions – and even different companies – face distinct pressures. But it seems equally clear that consolidation will continue in those countries whose insurance industry is early in the development cycle. For other countries, where the insurance industry is more mature, the pressure is on the larger organizations to look abroad for opportunities to grow the business, leverage the cost base and build a more sustainable enterprise; while smaller firms will have to face the challenge of increasingly stringent solvency requirements.

For more information please contact:

***Francesca Short**
Partner
FS Transaction Services
KPMG in the U.K.
Tel: +44 (0) 20 7311 5056
e-Mail: francesca.short@kpmg.co.uk

****Mike A. Ryan**
Partner
FS Transaction Services
KPMG in the U.S.
Tel: +1 214 840 2262
e-Mail: maryan@kpmg.com

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Some of the key drivers behind current M&A activity

- Price competition, particularly in P&C, is focusing attention in many markets on greater critical mass.
- The impact of new regulations like Solvency II could mean that smaller and less sophisticated companies will have difficulties in competing in a more demanding market unless they consolidate and diversify their risks. In France, in particular, mutual insurers, which are usually smaller, also face the expected cancelation of their favorable tax regime. As a result, consolidation is expected to reduce the number of French mutual insurers over the coming years.
- Regulation is also driving greater transparency, creating a beneficial environment for M&A.
- Global players are looking to secure a stake in emerging markets like China.
- In some less developed markets, like Mexico and parts of the CEE, increasing personal affluence is expected to have a significant effect on the shape of the insurance market.
- Distribution, especially on the life side, remains one of the key issues in the insurance industry in many countries, including Germany, Australia, the Netherlands, South Africa and the U.S. In Germany, for example, the bancassurance channel is clearly more profitable and less costly and acquisitions and cooperative ventures are happening to secure the best distribution channels. In the Netherlands, a key driver in the life insurance market is the development of direct distribution. In the U.S., KPMG firms have seen a desire to acquire unique distribution channels, particularly channels into specific segments in the market such as a particular company size or industry.
- In mature markets like the U.S., it is growing increasingly difficult to differentiate through products and services. This has driven a desire to leverage costs – particularly overheads – over a larger revenue base.
- Private equity has made its mark in some of the more mature markets and shows increasing interest in the sector, although entry into more 'traditional' European markets will be governed by the attitude of the regulators as well as the market. KPMG firms are already seeing private equity firms looking to take stakes in insurance companies in the Asia Pacific region.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Rapid change in the Indian insurance sector

Driven in part by market liberalization, in part by the rapidly-growing Indian economy as a whole, the Indian insurance sector is evolving rapidly. The potential has not gone unexploited by foreign investors. But success depends on developing a winning business proposition, finding the right partner and on effectively navigating the regulatory and approvals framework. Sudipto Ghosh* explains.

Liberalization

The insurance sector in India was liberalized in 1999. Prior to that, insurance provision had been state-controlled. In the case of general insurance, the 107 existing insurers were nationalized in 1973 and amalgamated into four groups. The life assurance sector had been state-controlled for over 40 years, since a 1956 Act nationalized 245 Indian and foreign insurers and provident societies. As a nationalized industry, Indian insurance displayed many predictable characteristics: lack of innovation, restricted product range, limited customer focus. Life assurance, in particular, was typically sold through a large network of agents[1].

The seeds of reform were sown in 1993, with the establishment of the Malhotra Committee, set up to advise on reforms to complement those under way in the banking industry. The Committee's key conclusions were that the insurance sector should be opened up to competition, but that this process needed to be adequately regulated and supervised to retain consumer confidence in the industry. These two themes have driven the development of Indian insurance over the last 10 years: a rapid growth in private sector entrants, coupled with significant controls over minimum capital requirements and an extensive licensing regime. The general insurance industry was detariffed in January 2007 – the effects of which are still to be seen in the industry. However, fire premium rates have gone down by around 30 to 40 percent and companies are also giving discounts on motor insurance. Health insurance premiums on the other hand are showing an upswing.

New entrants

Since being established in 1999, the Insurance Regulatory and Development Authority (IRDA) has licensed 15 life assurance companies and eight non-life companies. The reform process has led to rapid growth. Overall, the insurance industry is estimated to be growing at 15–20 percent per year, and the total market size was estimated in 2005 at Rs 450 billion (U.S.$10 billion)[2]. Life assurance is growing at an even faster rate, by some estimates at over 36 percent in 2005. Nevertheless, with only around 20 percent of the insurable population currently covered by life assurance policies, the future potential remains enormous. This potential is further magnified by the rapid growth of the Indian economy overall: with growth in GDP during 2006 of over 9 percent, it is one of the fastest-growing in the world, and already the third or fourth-largest[3].

The opportunities presented by this transformation of the Indian insurance sector have naturally attracted large amounts of foreign capital. Under the 1999 legislation, foreign direct investment in Indian insurers is limited to 26 percent of the total equity. Despite this, foreign investment since 1999 is nearing Rs 10 billion[4].

Making a success of the opportunity

New foreign entrants to the market face a number of obvious challenges. Careful preparation, research and planning are essential, as is establishing a relationship with a top-rank adviser who understands the complexities of the process. Because foreign investors are limited to a minority stake, the first challenge is finding the right partner.

In forming a joint venture with an Indian company, it is imperative that the two organizations have the same operating philosophies, long-term commitment and synergies to create product and service differentiation. While the foreign partner brings in the technical expertise, global processes and systems, it is also vital that the Indian partner has a strong domestic presence, distribution reach and brand image. Since life assurance is a capital intensive business, achieving breakeven can take seven to eight years: promoters will have to infuse

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

capital every year to maintain the stipulated solvency margins.

The second challenge is navigating the licensing process. IRDA is promoting foreign direct investment, but nevertheless is still cautious and thorough in considering applications. There is a three-stage process. In the first stage, known as R1, an overall business plan has to be submitted for approval. On average, this takes a minimum of three months. In the R2 stage, a detailed submission has to be made of all the proposed processes and systems the new business plans to adopt, its IT infrastructure, its reinsurance arrangements and, in effect, the entire strategy for turning its business plan into operational reality. This stage can take two months for approval. The final stage, R3, is a formality once a lawyer's affidavit confirms that all the necessary arrangements are in place. The whole approval process can easily take five to seven months.

Creating a competitive and successful market proposition requires thorough analysis and careful positioning. The Indian consumer is still conservative in buying insurance products and a deep understanding of consumer needs and insurance buying preferences is critical to developing a winning strategy.

The industry is slowly but successfully altering its distribution mix from the tied agent concept to alternative modes of distribution like bancassurance, corporate agents and brokers. It is difficult to find a partner who has a large customer database and distribution reach; managing these alliances is also a challenge. The pressure has increased with some banks changing their strategy from being distributors of insurance to becoming producers of insurance. With increasing entrants in the industry, the task of recruiting and retaining sales and functional talent is also becoming difficult.

Healthcare insurance

One final insurance sector worthy of special comment is health insurance. Public health care expenditure per capita in India is low by international standards, and the proportion of insurance in healthcare financing is extremely low. The distribution of healthcare insurance among the population is also uneven, with poorer citizens and those in rural areas hardly covered at all. Against this, the costs of healthcare are high. Doctors' fees, hospital charges and treatment costs can account for a significant proportion of a patient's assets. The market for health insurance is therefore particularly fertile, and a number of large foreign players are already entering the market, for example in partnership with hospital chains. As with life assurance, healthcare insurance looks set to be one of the most dynamic and rapidly-growing financial services sectors in the coming decade.

Like the insurance market as a whole, there is enormous potential, but the key to success is careful analysis, effective business positioning and distinctive product and distribution strategies.

For more information please contact:
***Sudipto Ghosh**
Manager
Advisory Services (FS Insurance)
KPMG in India
Tel: +91 (22) 3989 6000
e-Mail: sghosh@kpmg.com

1 Insurance Regulatory and Development Authority (IRDA)
2 Insurance Regulatory and Development Authority (IRDA), Swiss Re
3 India's economic growth unexpectedly quickens to 9.2 percent, Bloomberg, September 2005
4 Indian Insurance Industry: New Avenues for Growth 2012, www.researchandmarkets.com

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Islamic insurance: the growth of Takaful

Alongside the growth of Islamic banking, Takaful, or Sharia'a compliant insurance, has experienced rapid growth over the last 10 years. Anita Menon*, Samer Hijazi** and Hassan Jassim***, review the current position and future prospects.

The need for Islamic insurance

Conventional insurance poses similar challenges to Islam as does conventional banking, and adds a couple of specific issues of its own. One problem is that insurance clearly involves uncertainty and risk – or gharar – and it can also be interpreted as embracing an element of gambling – or maysir. On top of this, conventional insurers typically earn riba (interest) on some of their investments. Although Islamic scholars may disagree about the details, it is generally accepted that financial transactions with these characteristics are haram: they offend against Sharia'a. More subtly perhaps, the Qur'an teaches that there is a social and individual obligation on Muslims to care for the weak and unfortunate in society. For an individual to purchase insurance for self-protection can also be argued to be improper.

However insurance, especially life insurance, fulfils an important social role in providing protection against poverty, want and misfortune. For much of the 20th century, Islamic scholars and finance experts debated how and to what extent conventional insurance could be adapted to comply with the tenets of the Qur'an. As early as 1903, some prominent scholars declared conventional life insurance unacceptable. But it was only in 1985 that the Grand Counsel of Islamic scholars, majma al-fiqh, confirmed that decision. In its place, they approved an alternative form of insurance based on collective security, cooperative principles and charity, laying the foundation for Takaful.

The Takaful concept

Takaful means 'guaranteeing each other'. The concepts behind Takaful, Sharia'a compliant insurance, are not new; the term has its roots in the practice of shared responsibility and mutual help which have underpinned Islamic society for centuries. Over the last 10 years, Takaful insurance has been developed by the Islamic finance industry, in cooperation with expert scholars, to ensure that the Muslim community has access to halal – Sharia'a compliant – versions of insurance products.

In essence, Takaful is a pact between a group of people who agree to indemnify each other collectively against loss or damage that any of them may suffer, out of a fund donated collectively. Takaful therefore expresses the principles of donating for the benefit of others and mutual sharing of losses. Three business models between the Takaful fund operator and the participants are common in practice: mudharabah (profit and loss sharing)

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

which is commonly used in Malaysia and Asia Pacific, wakala (where an agency contract with a performance fee replaces profit and loss sharing) and a third model (wakala-mudharabah) whereby wakala is adopted for underwriting activities and mudharaba for investment activities which are the predominant models in the Middle East. More recently an additional model, waqf, has been developed which is in effect a form of trust.

In contrast to conventional insurance companies, which invest their premia in a range of interest-bearing and profit-generating securities, Takaful companies invest only in Sharia'a compliant concerns and their activities are subject to the oversight of a committee of Sharia'a scholars. Takaful companies may not insure prohibited activities (e.g. alcohol/armaments shipments) or 'prohibited' counterparties (e.g. banks) while, in theory, the motivation is not profit-maximization but mutual support.

The creation of the first specifically Takaful companies in fact pre-dated the 1985 decision, with the foundation in the late 1970s of the Islamic Arab Insurance Company (Salama) in the UAE and the Sudanese Islamic Insurance Company. Takaful companies have since sprung up in countries as far as Australia, Egypt, Kuwait, Lebanon, Nigeria, Pakistan, Sri Lanka, South Africa, and Tunisia. Since the mid-1980s, however, the primary focus of growth has been Asia, with Malaysia in particular making determined efforts to establish itself as the Islamic finance capital of the region.

Malaysia

The growth rate of Takaful in Malaysia has been extremely impressive. After an initial expansion from a very low base, the growth rate has settled down to an average 25 percent annually over the last five years[1]. There are currently seven Takaful operators in Malaysia. These are mainly local companies but the potential of the market is increasingly attracting international players, and two are due to begin operations shortly. Many of these companies are beginning to see Malaysia as a sound base from which to expand their Islamic insurance business into the rest of the region and local players have also instituted progressive measures in anticipation of overseas expansion, such as rating of products, which is an industry first. For example, in 2005 one Malaysian operator took an equity stake in a Takaful operator in Pakistan; some of these operators are also in discussions about investing in Middle East companies. Additionally, the industry is beginning to see greater knowledge sharing and collaboration with foreign players to encourage product innovation.

Companies seeking to establish Islamic insurance businesses in the country have the strong support of the Malaysian government. The central bank published guidelines for International Takaful Operators (ITOs) in late 2006, advising how to gain the necessary approvals. The 2007 national budget provides full tax relief for ten years to ITOs. Despite the rate of expansion to date, there is still enormous potential. It is estimated that Takaful has so far only achieved 5–6 percent market penetration[2]. A combination of extensive marketing and strong demand for Sharia'a compliant insurance from consumers will underpin continued rapid growth for the foreseeable future.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Middle East

Meanwhile, although progress in the Middle East has been less spectacular, there are clear signs that the rate of growth is accelerating. Already growth rates average around 10 percent across the region[3]. Market penetration remains low in most countries, with the exception of Sudan, where Takaful is estimated to hold over 80 percent share of the market[3]. Already, total Takaful business in the region is estimated at over US$120 million, half of which is in Saudi Arabia (comparable to the figure for Malaysia) and Saudi Arabia is believed to offer superb potential for Takaful as the predominant view in the Kingdom is that conventional insurance is haram. The other factor has been the sound social welfare system and strong communal support system that hitherto has dampened demand for insurance products. Proposed reforms to the social security system in some states and the strong demand for Islamic financial products is predicted to spur demand for Takaful.

Regulators in the Middle East are generally supportive of the industry. In particular, Bahrain is the first country to standardize the practice of Takaful and regulate the Takaful companies through a regulatory framework that takes into consideration the nature of the Takaful model and its relationship with participants as well as shareholders. The Central Bank of Bahrain (CBB) aims to allow Takaful firms to operate in Bahrain, on a basis consistent with that imposed on conventional insurers. The CBB's regulatory regime has been designed not to favor one form of insurance over another, allowing both types of structures (Takaful and conventional) to operate in a competitive environment.

U.K.

The U.K. is a promising market for Takaful. Although market penetration is as yet low, HSBC Amanah, for example, has established a specific home Takaful service. There have also been discussions and activity around establishing Takaful syndicates on Lloyds of London. Although nothing concrete has happened yet this is a clear sign of the potential for future growth. And some in the industry are already arguing that Takaful could have appeal beyond the specifically Muslim community. Competitively priced and sold through the right channels, Takaful could attract any consumer irrespective of their origin or faith, for instance so-called 'ethical' consumers. Meanwhile, in an interesting cross-border development, Lloyd's recently announced it is looking at rolling out Islamic insurance tailored to the needs of the Middle East.

Among the key barriers to be overcome first are accounting, tax and regulatory issues. For example, because of the differences between conventional insurance as recognized by the taxation authorities (HMRC) in the U.K. and Takaful, there is a risk that the latter may be deemed not to be covered by existing insurance provisions. This could put providers at a pricing disadvantage to conventional insurance providers as they would not be able to claim exemption from VAT. Similarly, the restriction of Takaful company investments to halal businesses could limit their risk diversification, and imply that solvency margins would have to be higher, in principle increasing the cost of capital. However, both HMRC and the FSA – supported by the U.K. government – are strong supporters of promoting Takaful, and are working hard to determine the best forms of treatment. Indeed, KPMG in the U.K. is currently providing advice on the

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

accounting, tax and regulatory issues to a group of Middle Eastern investors looking to establish the first stand-alone Takaful company in the U.K. and Western Europe.

Conclusion

Overall, the world-wide Takaful industry is estimated to be worth around US$3 billion. There are perhaps 80 dedicated Takaful insurance companies, and this number increases by around 200 if Takaful 'windows' – Sharia'a compliant operations of non-Islamic institutions – are included[4].

One outstanding constraint is the shortage of reinsurance opportunities for Takaful providers. At present, there are only a few significant 'reTakaful' players. Some scholars have granted dispensations to Takaful companies to reinsure with conventional insurers where no halal alternative is available. However, many companies lay off risks with others in the same sector, leading to obvious concerns about lack of diversification and concentration of risk. However, there are clear indications that reinsurance capacity will begin to grow in the near future, with a number of international players entering the market. Munich Re, for example, has recently become the first international reinsurer to receive permission to set up a joint venture with a Malaysian local company while Swiss Re has also entered this market.

Despite the constraints, growth in annual premiums is predicted to be 15–20 percent per annum for the next 10 years as new markets open and more products are launched and Takaful industry growth rates in the Middle East are expected to mirror this[5].

For more information please contact:
***Anita Menon**
Director
Financial Risk Management
KPMG in Malaysia
Tel: +60 (3) 2095 3388
e-Mail: anitamenon@kpmg.com.my

****Samer Hijazi**
Senior Manager
Financial Services Audit
KPMG in the U.K.
Tel: +44 (0) 207 694 2807
e-Mail: samer.hijazi@kpmg.co.uk

*****Hassan Jassim**
Senior Manager
Audit and Advisory
KPMG in Bahrain
Tel: +973 1722 4807
e-Mail: hjassim@kpmg.com

1 London based Institute of Islamic Banking and Insurance, 2007; Central Bank of Malaysia
2 Taken from the Central Bank of Malaysia's deputy governor's speech at the launch of Commerce Takaful berhad.
3 Bahrain Insurance Review, 2007
4 Asian Conference on Takaful - March 2006
5 London based Institute of Islamic Banking and Insurance, 2007

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Efficiency and cost management

P30 Global structures for insurance groups: what does the future hold?

P34 Finance of the future: towards a target operating model

3

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Global structures for insurance groups: what does the future hold?

Bermuda's growth as an insurance market and the influx of new capital following WTC and Katrina mean that it has increasingly been seen as a holding location for international insurance operations. Established groups such as Ace and XL Capital have been followed by a number of more recently formed groups who have located their head office and primary capital base in Bermuda and insurance or reinsurance operations in the major markets around the world.

This trend, together with recent developments in the EU, has prompted other insurance groups based in the major onshore centers to ask the question whether they should be looking afresh at the way they organize their international structures. Hugh von Bergen* and Tom Aston** look at the possibilities from a tax perspective.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

For any insurance company headquartered in one of the major onshore economies and currently writing business in other countries, the corporate tax advantages of moving the headquarters to an offshore center such as Bermuda look clear. You only pay home country rates of tax on the profits from your home country business; not, as you probably do currently, on the profits made in the rest of the world. In other words, the return on capital and activities located in the offshore center potentially escape a significant corporate tax burden.

The reason for this can be simply illustrated using the U.K. example. With a U.K. parent company, it is usually difficult to sustain a group's long-term tax rate significantly below 30 percent. Even if low tax subsidiaries – such as a Bermudan reinsurance company – are used, their profits will generally be subject to 30 percent U.K. tax, either immediately under the government's 'Controlled Foreign Companies' (CFC) rules, or when they are remitted to the U.K. Having an offshore holding company means no CFC rules and thus much more opportunity for concentrating capital and business activities in low-tax jurisdictions.

But if one looks at the position of shareholders the considerations are rather different and the advantages can look less clear cut. U.K. dividends will carry a tax credit, whereas dividends from a Bermudan company will be fully taxable at 32.5 percent (assuming higher rate taxpayers) with no tax credit. So, we might expect U.K. resident individual shareholders to prefer to receive dividends from U.K. resident companies. It may well be possible to tackle this by means of a dividend access share scheme, although the wider implications of this need to be considered carefully.

At the same time, many exempt U.K. institutional investors such as pension funds may well be indifferent about whether they receive dividends from a U.K. or a Bermuda company. In addition, dividend preferences may change as U.K. tax rules evolve to become compliant with European law.

There may also be significant one-off tax costs in moving from an onshore parent structure to an offshore one. Most countries levy some form of exit charge that taxes appreciation in value in assets owned in that country when a company is migrated or restructured to an offshore location. Indeed, the U.S. introduced specific anti-inversion rules following a number of high profile defections by U.S. multi-nationals to offshore centers. Migrating a company's business offshore also brings the potential for taxation at the level of the shareholder. It may not always be possible for the shareholder to roll over the gain (in an existing holding in an onshore company) into shares in a new offshore holding company.

The balance of these corporate and shareholder considerations will vary from group to group. But there are other issues. A wholesale move of the headquarters may have obvious people implications – not least, can an offshore HQ be staffed up with top quality people? One response might be to go for a sort of 'migration-lite', with only the incorporation address and tax residence relocating and executives flying to an offshore location for board meetings. Whilst such an approach might be superficially attractive, it is not clear that it is sustainable for large groups. Maintaining tax residence offshore requires a lot more than simply incorporating a group's parent company there. Careful attention to the board-level operation of the parent company will be required, and this is likely to reduce flexibility.

Nevertheless some insurance groups have already relocated from London to Bermuda. So far these have generally been mid-sized groups without wide public ownership of their shares.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

There have also been rumblings in the market from larger multi-national financial services operations, prompted possibly by frustration with a perceived lack of business friendliness in their home country tax regimes. But none has actually made the move so far, so it is difficult to tell whether this is mere political 'sabre rattling'. Certainly a move offshore carries a far greater reputational risk to a large multi-national insurance group than to a specialist reinsurance group operating in the confines of a knowledgeable marketplace. However, recently announced proposals to reduce the U.K.'s corporate tax rate from 30 percent to 28 percent suggest that the voice of the large corporate sector may be getting through.

A wider question

The onshore/offshore question is only part of the picture. In practice many multi-national insurance groups are devoting their energies to rationalizing their legal operating structures around an EU hub model. In doing so they are hoping to access some of the tax benefits of an offshore location without the need to relocate their head offices. Most long established multi-national insurance groups have a legacy structure based around locally incorporated subsidiaries, each holding individual regulatory capital. A few non-EU based groups have operated instead with branches of the parent insurer. But these have generally been subject to the same constraint – the need to hold local regulatory capital.

Increasingly KPMG firms are now seeing insurance groups looking to move towards the single EU carrier model. Thus they establish a single underwriting company in an EU state and operate through branches in other EU states under the freedom of establishment rules. The regulatory benefits of such a structure – supervision only in the home state and no duplication of regulatory capital – have long been known, although they probably remained under-exploited for a number of years. More recently the potential tax advantages of using a low tax EU state such as Ireland as the location for your group's pan-EU carrier have been recognized. For groups already based in the EU, recent developments in EU law have had a significant impact. In essence, CFC regimes and discriminatory dividend taxation rules should not now apply to bona fide subsidiary operations in EU countries, even if they have low corporate tax rates such as Ireland's 12.5 percent. Moreover many member states have implemented rules which allow businesses to be transferred from subsidiaries to branches on a tax free basis, although this can still be a painful process in practice if the tax pitfalls are not clearly identified in advance.

For groups based outside the EU, the tax benefits of the EU hub model will depend on a detailed analysis of the

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

CFC and foreign tax credit rules in the parent company's home state. Established names in the market who have gone down the EU hub route include XL Capital with its Dublin based operation and Swiss Re with its recently announced Luxembourg carrier. Experience to date suggests that using an EU hub structure can yield real tax benefits. At the very least, it can be used to shift the balance of group's tax burden from overseas to head office, and this generally increases a group's tax planning flexibility. They may well also need to consider whether the transfer of existing operations to a pan-EU carrier is a taxable event in their home country.

A complex question

The choice of corporate structure is a complex question. Many insurance groups are trying to balance expansion into new markets with operational efficiencies through outsourcing and shared service centers, while achieving regulatory and capital efficiency and the possibility of a lower long-term effective tax rate – and the landscape continues to change. Developments in EU law are driving member states' tax regimes towards equal treatment of income and gains wherever they are situated in the EU. New entrants in the EU are setting the benchmark in terms of the low corporate tax rates and many of the larger member states are responding by lowering their own rates. Solvency II is now visible and is beginning to influence the way that multi-national groups plan to deploy their capital. Indeed several groups are already alert to the possibility that when the Solvency II rules are introduced they may discourage the use of an offshore center as a head office or reinsurance location compared to an EU hub. International insurance groups need to be alert to all these factors as they look at their legal and capital structures and plan for future growth of their business.

For more information please contact:
***Hugh von Bergen**
Partner
FS Corporate Tax Advisory
KPMG in the U.K.
Tel: +44 (0) 20 7311 5570
e-Mail: hugh.von.bergen@kpmg.co.uk

****Tom Aston**
Director
FS Corporate Tax Advisory
KPMG in the U.K.
Tel: +44 (0) 20 7311 5811
e-Mail: tom.aston@kpmg.co.uk

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Finance of the future: towards a target operating model

Creating an explicit target operating model for the finance function is a valuable foundation for articulating and implementing a successful change program – and for improving the quality and strategic value of the whole finance operation. Maren Hausmann* and Matthew Smyth** explain.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

The pressure on finance functions has been steadily increasing over recent years. This is true of all industry sectors. But it is especially true in heavily regulated global financial institutions. From outside the company, new regulatory frameworks like IFRS, Basel II and Solvency II impose new and often onerous requirements. Financial markets are expecting greater speed, transparency and quality in reporting.

Inside the company, boards and senior management have a constantly growing need for accurate and real-time information for decision support in a fast-changing market environment with short product lifecycles, new products, mergers, and demergers. These pressures are being felt alongside, and in addition to, the continual drive for efficiency resulting from internal cost constraints. And on top of this, the role of finance is evolving – partly through changed expectations from the board, partly through finance's own aspirations – from mere number-cruncher and scorekeeper to strategic business partner and added-value contributor.

It is no wonder that finance struggles to absorb these pressures and satisfy these demands. KPMG International's research[1] suggests that 50 percent of finance department time is still focused on transaction processing. Many institutions are still struggling to get their core activities largely automated to free up the time and resources required to evolve into a true strategic role. In fact, the amount of time spent on manual adjustments, reconciliations and management by spreadsheet (and the related risk of control failures) has increased with every new regulatory requirement.

According to an IBM survey in 2003[2], the top priority for CFOs then was to achieve the changes necessary to enable an improved contribution to business growth, including better decision support, performance management, forecasting and risk management. The 2006 survey shows the same set of priorities: little progress has been made. It is hard to escape the conclusion that compliance initiatives (IFRS, Basel, S-O) have been taking priority and hindering the desired change towards adding value.

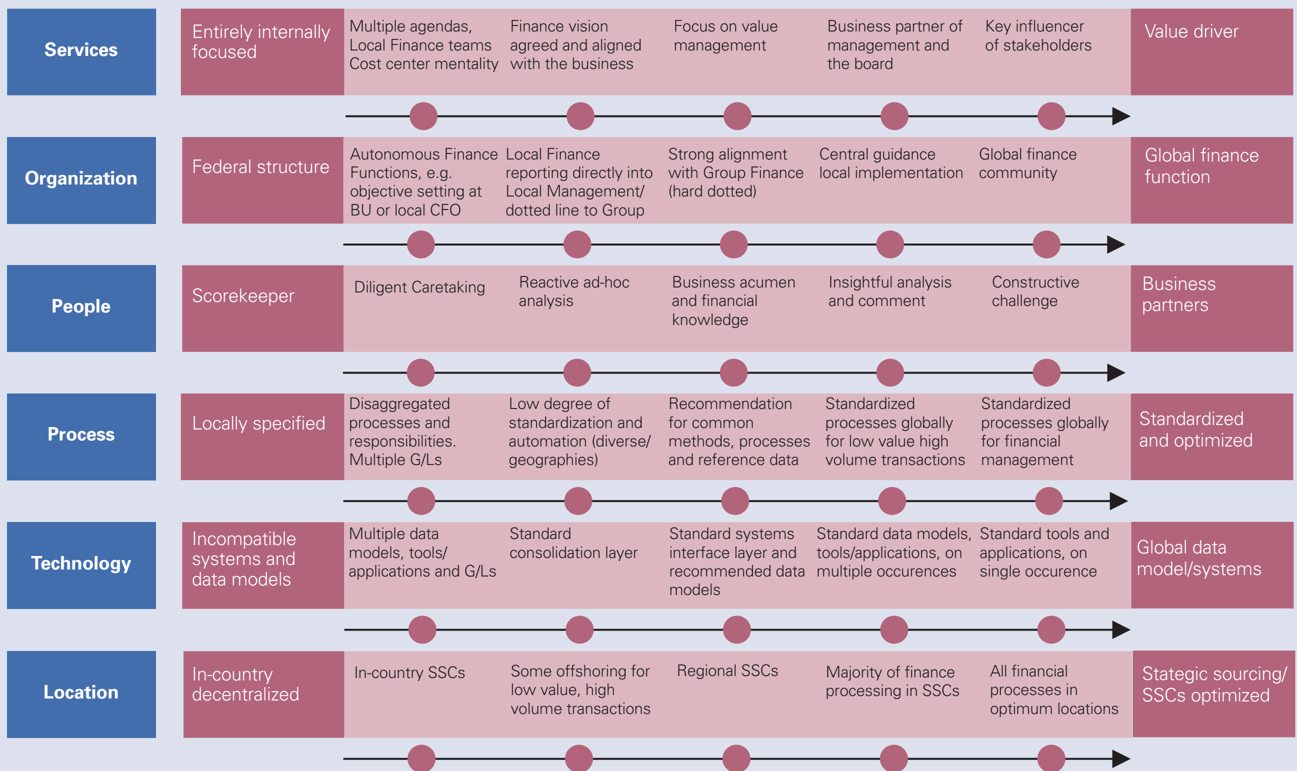
The ambition of finance to develop into a greater value-adding role requires as its foundation a stable and flexible environment for the daily transaction processing and financial control activities. But once this is in place, a fundamental change of the overall operating model of finance is required to achieve the longer-term target. Experience shows that those international financial services institutions which successfully transform their finance function have a common characteristic: instead of pursuing piecemeal improvements to processes and technology, they focus on changing the overall operating model holistically.

This does not imply that there is a single operating model towards which all financial services institutions should aspire. The goal will vary from company to company, and depend on factors such as the starting point, the nature and complexity of the business, the extent of internal and external pressures, the view on the right balance between centralization and decentralization and the appetite of the organization for the speed and direction of change.

What is necessary is to define a clear vision of the desired future role of finance, contrast it with the present position and chart a clear course and change program for moving from one to the other.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Figure 1 Target operating model for finance



Source: KPMG International, 2007

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

A graphical representation of the Target Operating Model (TOM) can serve to articulate the goal, and the nature of the change necessary to achieve it. The vision can be expressed in terms of six dimensions:

- Services: the creation of a common finance vision, strategy and understanding of the scope and remit of finance's services.
- Organization: how to organize finance in the global corporate environment, including governance structures and agreed roles and responsibilities.
- People: how to get a highly skilled and motivated finance team in place and manage talent over time.
- Process: how to put effective processes in place, ideally highly standardized and harmonized across businesses and geographies.
- Technology: how to build a robust, common and scalable finance IT architecture and applications supporting all relevant finance processes.
- Location: how to leverage the use of centers of excellence, shared service centers and off-shoring to optimize cost locations in an integrated manner.

Along each dimension, the evolutionary path from current to aspirational position can be tracked from left to right: best practice organizations manage to push their finance function to the right hand side of the TOM while managing carefully the interdependencies between all dimensions of the operating model.

Translating the TOM into an effective and well-supported change program is hard work. Developing a common vision for finance is the key initial step, creating a group-wide common understanding of the future finance function and securing clear sponsorship at board level. This involves determining the optimum balance between global and local requirements.

Translating the vision into measurable targets for improvement, for example shortening timelines for closing or reducing the number of corrections post-submission, is necessary to track benefits over the lifecycle of the related change program – and to help create a business case for the change program which secures widespread support. The business case itself summarizes the new vision, the target status of the TOM, the necessary investments and potential tangible and intangible benefits, program governance structure and framework as well as the roadmap for change.

A critical success factor is putting the right team in place to manage and implement the change: the right combination of group center and business unit representatives (global and local), the right combination of finance and IT skills, a strong program director and governance framework. A wide-ranging and complex multi-disciplinary program, demands effective change management skills, managing expectations and resistance and incentivizing finance staff during and after the program in alignment with the desired changes and new behavior. And above all: the experience to tailor complexity and workload in manageable pieces is the most critical success factor. Additionally, successfully executing this type of change program will require potentially significant organization-wide investments of human and financial resources. Development of a robust, multi-year business case will greatly assist the organization in aligning investments with ambitions.

Achieving the desired Target Operating Model can result in a streamlined, common and consistent information framework, leading to remarkable progress in the quality and speed of financial, managerial and regulatory decision making and reporting. It can remove the roadblocks to optimizing transactional processes and therefore free up finance for value-adding activities and for its transformation into a strategic partnership role. The most successful institutions achieve flexible and scalable solutions that support both organic growth and growth by acquisition. And at the same time, achieve a more cost-effective and efficient finance organization.

For more information please contact:

***Maren Hausmann**
Partner
Advisory
KPMG in Germany
Tel: +49 69 9587 3046
e-Mail: mhausmann@kpmg.com

****Matthew S. Smyth**
Principal
Financial Risk Management
KPMG in the U.S.
Tel: +1 212 872 6414
e-Mail: matthewsmyth@kpmg.com

1 KPMG International/EIU survey report, 2006 *Being the best – Insights from leading finance functions.*
2 Global CFO Survey by IBM, 2003 *Current state and future direction.*

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Reporting and regulation

P40 U.S. insurance industry faces major accounting challenges
P42 Financial reporting for insurance: significant uncertainties remain
P50 Quantifying uncertainty in technical reserves

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

U.S. insurance industry faces major accounting challenges

The U.S. insurance industry faces a number of current accounting challenges that threaten to stretch both systems and resources. These accounting challenges, of course, affect all SEC registrants, not only U.S. domestic players. Ed Chanda* and Jim Liddy** look at five of the most significant.

The U.S. accounting environment continues to evolve. A number of recent developments are specific to, or impact on, the insurance industry.

Other than temporary declines

The issue of 'other than temporary declines' affects any company with a large investment portfolio, which means insurance companies in particular.

In the U.S., companies can carry their investments in one of three ways:

- Cost – if the intent is to hold the investment until it matures.
- Available for sale – the value is marked to market and the gain/loss is shown in equity.
- Trading – the value is again marked to market, but the gain/loss is shown in income.

For example, if a company suffers losses on an investment but has the ability and the intent to hold the investment until these are recovered – i.e. it judges that this is only a temporary decline – then the decline in the investment can be shown as a reduction to equity. Otherwise, it has to be charged to income. However, with the trend to outsourcing the investment function, a question has arisen regarding whether a company retains the ability to hold the investment. Fortunately, the available guidance in this case is quite clear. If a company gives its investment advisor authority to buy and sell securities then it does not have control over decisions regarding whether a decline is temporary or otherwise. In such cases, all gains/losses have to be treated as income. However, depending on how the investment advisory agreement is structured, companies can put processes in place that re-establish their ability to affect decisions to dispose.

Accounting for deferred acquisition costs

In the U.S., the costs an insurance company incurs in selling a piece of business can be deferred and recognized over the period that the insurance protection is provided. However, over time diversity in practice has developed with respect to how companies treat these deferred acquisition costs when modifications to the underlying policies occur.

For example, an annuity may be sold to mature when the customer retires in 25 years. But after five years, the customer decides to buy a guarantee from the insurance company that will ensure a minimum rate of return. The insurance company takes a fee for this, but they are also taking on more risk.

If this adjustment had never been made, the costs to the insurance company would have been spread over the 25 years to the customer's retirement. Regardless of the change in arrangements, some companies would continue to account for the costs on this basis. However, other companies would say that this is effectively a new contract, and the deferred acquisition costs would be released in conjunction with the extinguishment of the contract. The financial statements obviously look different depending which approach is adopted, presenting analysts and investors with a confused picture.

The accounting profession recognized the need for common rules. And in 2005, the American Institute of Certified Public Accountants (AICPA) published guidance in SOP 05-1, to take effect in

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

mid-December 2006. Unfortunately, the guidance left open a number of detailed questions about how it should be applied; and in August 2006, AICPA formed a group to field questions about implementation. The problem areas were grouped into 12 topics and 'Technical Practice Aids' drafted for each of the topics. The Financial Accounting Standards Bureau (FASB) meanwhile rejected a request from insurance organizations to delay the effective date for SOP 05-1.

The AICPA and the U.S. Securities and Exchange Commission (SEC) have cleared for use 11 of the 12 Technical Practice Aids. The FASB itself has decided to wait and see how people get on with SOP 05-1 before deciding whether there is a need to issue further guidance itself.

FASB set to harden rules on insurance risk transfer

The past few years have seen the emergence of increasingly complex agreements that have blurred the lines between reinsurance and financing arrangements. Last year, this prompted the FASB to look at clarifying its accounting requirements in this area.

The issue is far from clear-cut, of course. By spreading the risk around other companies, reinsurance enables a single insurance firm to take on larger pieces of business than it otherwise could. However, as the agreements become more sophisticated and complex, questions arise regarding how much risk is actually being transferred and whether the primary purpose of the product is to provide financing. This is what worried the FASB, who in May 2006 published – for comment – an accounting model in which every contract would be split – or bifurcated, as they called it – into two main components for financial reporting purposes – insurance components and financing components.

In the event, FASB received convincing feedback that making such an allocation would be largely a matter of judgment and would not, in fact, clarify the situation. Also, the International Accounting Standards Bureau (IASB) announced that it would address this issue comprehensively in IFRS 4 (Phase II). So the FASB decided to drop the idea of bifurcation, preferring to wait and see how IFRS meets the challenge. In the meantime, it is hardening the rules about how much risk transfer is needed for such an arrangement to qualify unambiguously as reinsurance. The FASB Board is scheduled to discuss the revision of the relevant standard, Statement No. 113 on Accounting and Reporting for Reinsurance of Short-Duration and Long-Duration Contracts, during Q1 2007. The FASB is also considering extending the scope of FAS 113 to include non-insurance companies.

Critical accounting estimates in management discussion and analysis

The SEC requires that every quarterly and annual filing includes a 'Management Discussion and Analysis' (MD&A) section in which a company's senior executives describe the reality behind the numbers, including how they are arrived at and in particular what assumptions have been made.

For some time, the SEC has been pushing, in its comment letters and elsewhere, for greater detail on the critical accounting estimates that underpin the numbers. In particular, the SEC wants companies to explain how changes in historical estimates have affected the financial statements, how sensitive such estimates are to external factors like interest rates, and how likely such estimates are to change in future.

Following discussions with accountancy firms, the SEC has recently issued general guidance on addressing loss reserves in the MD&A. This covers:

- Loss reserve sensitivity analysis
- Explanations of changes in estimates of prior year loss reserves
- Carried reserves not equal to actuarial loss reserve estimates.

This is a particularly important issue for insurance companies, because their balance sheets are so dependent on the reserves estimates.

Management report on internal control over financial reporting

State insurance regulators are introducing a requirement for U.S. insurance companies to present a report on internal control over financial reporting, although it does not have to be audited.

Companies who already prepare reports that meet the regulatory requirements of S-O-404 may file that report on behalf of it's insurance subsidiaries, as long as they include an addendum confirming that the controls tested as part of S-O-404 compliance addressed controls over the preparation of the regulatory filings. The addendum has to include a positive statement by management that there are no material processes with respect to the preparation of the insurer's or group of insurers' audited statutory financial statements excluded from their Section 404 Report.

Changes like these, in addition to global developments like IFRS, are bound to put enormous pressure on insurance companies. This makes it more important than ever that they are absolutely clear both about what is required, and how it can best be delivered within their strategic plans.

For more information please contact:

***Edward Chanda**
Partner
Financial Services Audit
KPMG in the U.S.
Tel: +1 212 909 5970
e-Mail: echanda@kpmg.com

****Jim Liddy**
Partner
Audit and Advisory
KPMG in the U.S.
Tel: +1 212 909 5583
e-Mail: jliddy@kpmg.com

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Financial reporting for insurance: significant uncertainties remain

Over the next few years, the financial reporting regime for insurers will change significantly. Major initiatives including IFRS Phase II, Solvency II and further development of European Embedded Value (EEV) will mandate changes in the way insurance companies report their results and, in many cases, impact further on underlying systems and management information.

But as yet, there remains significant uncertainty over how these changes will play out. How should insurers respond? In this overview by Hitesh Patel* and the two associated articles by Hans Schoen**, Joachim Koelschbach*** and John Jenkins****, the authors explore some of the key issues.

At the moment, there is no global standard for insurance accounting, no comparability between companies and significant differences between the various local accounting and capital regimes. Industry efforts to develop and apply the concept of European Embedded Value (EEV) have improved reporting of profits for life business. But this is only a partial solution; and there are still inconsistencies in the implementation of EEV principles. Even IFRS is no real help. The insurance framework under IFRS is incoherent; not least in the way it addresses valuations of assets and liabilities.

There is a clear need for change. But insurance accounting is inherently more complex, and more subject to uncertainty and judgment, than accounting for conventional business

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

operations. The core problem is how to value the potential future liabilities that may arise under a portfolio of policies. There are two problems: the quantum of liability is intrinsically subject to uncertainty; and the timescales involved, especially in the life insurance and casualty business, may be measured in many decades. As a result, international standards bodies have struggled to develop effective, consistent and generally accepted frameworks. While mainstream accounting has seen significant progress in implementing new standards, insurance accounting has lagged behind.

The introduction of IFRS in 2005 started the process of convergence, but as applied to insurance contracts, the framework remains inconsistent as between the treatment of assets and liabilities. The development of the European Embedded Value (EEV) concept, based on the actuarial embedded value approach to quantifying future liabilities, is an attempt to create a more relevant framework for life insurance accounting. Gaps in the EEV principles so far published mean that they fail to address certain issues; and a wide range of flexibility remains open to companies in deciding how to apply the new methodologies.

Furthermore, the European Commission's Solvency II program also bears on the issue of valuing liabilities, since the calculation of liabilities is a key factor in the determination of capital adequacy. Although a draft framework directive is expected to be published in July 2007, the formal introduction of whatever finally emerges is still some years away.

Faced with this range of uncertainty, how should insurers respond? There are a number of pressing practical concerns.

Because of the way IFRS was introduced, few companies have yet implemented new basic systems architectures. In the great majority of cases, IFRS requirements are being satisfied with bolt-on and ad-hoc processes, typically reliant on spreadsheets and legacy systems. This response introduces a significant additional dimension of risk, given the widely recognized shortcomings of spreadsheet models and legacy systems to provide information for the new disclosure requirements. On top of this, finance functions are under huge pressure to satisfy ever-changing and ever-more-demanding regulatory requirements, including Sarbanes Oxley (S-O) and internal controls reporting. The fact is that current systems and processes are unsatisfactory in this unstable environment, and nor do they generate meaningful figures to allow improved management of the business.

It is tempting to conclude that nothing sensible can or should be done until the fog clears and the detail of the new reporting regime(s) become apparent. But this would be to ignore the increasing risks in the current situation. Insurance companies therefore face some tough strategic decisions over the coming months:

- How should they respond to the proposals put forward for IFRS Phase II and Solvency II?
- Should they move to early adopt some form of fair-value reporting, likely to be broadly consistent with the Solvency II and IFRS Phase II proposals?
- When should they plan for new IT systems?
- How should existing management information systems be upgraded?

The answers will depend on individual companies' assessments of the balance of risk and return. As ever, those that get it right could find themselves better-placed than their competitors to extract business value from the new requirements and the systems and processes necessary to satisfy them. Unfortunately, this does not make it any easier to determine the right strategy.

The key strategic decision is how companies integrate the various forms of reporting risk management, capital management and liability in one integrated model, so that all three areas are driven on a consistent basis. At the same time, they have to prepare contingency plans if there are delays in implementing the proposals. Insurers certainly face a challenging time over the new few years.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Insurance accounting: preparing for new IFRS

As this report went to press, the International Accounting Standards Board (IASB) was due to publish a Discussion Paper on accounting for insurance contracts, the second phase of its efforts to introduce internationally-accepted IFRS in this area. Significant differences in views still remain, between the IASB and various industry bodies and between European and U.S. insurers. It is likely that agreed proposals will take some time to finalize. Nevertheless, insurance companies need to begin considering the implications now.

The IASB has been working for a number of years towards developing an International Financial Reporting Standard (IFRS) on accounting for insurance contracts, embracing accounting by both insurers and policyholders. IASB judged that an IFRS on insurance contracts was necessary because insurance contracts were excluded from the scope of existing IFRS that would otherwise have been relevant (e.g. on provisions, financial instruments, intangible assets), and because existing accounting practices were diverse and also often different from practices in other sectors.

The board completed phase I of this project in March 2004 by issuing IFRS 4. In essence, this made limited interim improvements to accounting for insurance contracts, and introduced new disclosure requirements. Publication of a Discussion Paper on Phase II of the project is expected in the second quarter of 2007. Thereafter, an exposure draft will take at least 18 months to prepare, and a final standard will take at least another 12 months.

In developing its proposals, the IASB aims to reflect its conceptual framework and the principles adopted for recognition and measurement elsewhere in IFRS. However, the board is currently undertaking a number of other projects which may influence the development of phase II: these concern the conceptual framework itself, revenue recognition, fair-value measurement, financial statement presentation, financial instruments and revisions to IAS 37 Provisions, Contingent Liabilities and Contingent Assets. It is not yet clear what the result of the interactions between all these initiatives will be.

Divergences of view

A further key objective for IASB is to pursue convergence with national standards, especially U.S. GAAP. The U.S. Financial Accounting Standard Board (FASB) has not directly engaged with the IASB process so far, but plans to issue an Invitation to Comment once the Discussion Paper is published. The FASB will consider the responses in deciding whether to add to its agenda a joint project with the IASB to develop a comprehensive standard on accounting for insurance contracts.

However, given their current views, there is every possibility significant divergences of view could arise between IASB and the industry and between IASB and FASB. Resolving such differences would not be easy, and it is likely that final agreed standards could be delayed until 2010.

Fundamental issues

The fundamental issues revolve around the valuation of insurance liabilities. The IASB proposals aim to reflect the principles of fair-value accounting, represented in this context by the concept of 'current exit-value'. Typically, the current exit-value of an insurance liability is not directly observable, so it must be estimated using three primary 'building blocks':

- Current unbiased probability-weighted estimates of future cash flows
- Current market discount rates that adjust the estimated future cash flows for the time value of money
- An explicit and unbiased estimate of a risk margin (the margin that market participants require for bearing risk) and a service margin (a margin for providing other services, if any).

In principle, the current exit-value is the amount an insurer should have to pay if it transferred all its remaining contractual rights and obligations to another entity. An important feature of the current exit-value approach is that insurers would not be prohibited from recognizing a net gain or net loss at the

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

inception of a contract. This would be inconsistent with the approach currently under consideration in the revenue recognition project (see below). Clearly, adoption of this approach could have a major impact on the reported profitability of insurers.

The industry itself has a different perspective. At its September board meeting, the IASB received a briefing from representatives of the Chief Finance Officers (CFO) Forum, the Group of North American Insurance Enterprises (GNAIE) and four major Japanese life insurers. In essence, they argued that accounting profit should be recognized in line with release from risk (or as services are provided). Release from risk (or the provision of services) occurs over time as the period of cover (or service provision) elapses. Since there is no release from risk and no services are provided to the policyholder at the inception of a contract, no accounting gains would be recognized at the inception of a contract. The treatment of gains on inception is one of the principal issues being discussed in the context of the board's revenue recognition project.

The revenue recognition project is a joint project with the FASB. The two boards are developing two possible models for revenue recognition: the fair-value model and the customer consideration model. The fair value model would be more consistent with the IASB's current exit-value model for insurance contracts. The customer consideration model would be more consistent with the models proposed by the various industry bodies. In principle, there would appear to be no reason why a different approach to revenue recognition should apply to insurance contracts. Although the IASB's approach is not to pre-judge the outcome of another of its projects when developing a new accounting standard, it is inevitable that they will eventually need to address the issue of consistency between the approaches being developed for the two new accounting standards.

FASB approach

Although, as we have seen, FASB has yet to engage formally with the current IASB process, they are exploring developments to their own accounting standards. In particular, in 2006 FASB published an Invitation to Comment on Bifurcation of Insurance and Reinsurance Contracts for Financial Reporting. This explored whether some or all insurance contracts should be unbundled (bifurcated) into:

- components that transfer significant insurance risk and are accounted for as insurance – for policyholders (including non-insurance, insurance and reinsurance entities), that means premiums are expensed during the contract period and the occurrence of an insured event generates an insurance recovery that is recorded as a gain in the income statement; and
- financing components that are accounted for as deposits – for policyholders, that means premiums paid are recorded as an asset by the policyholder and the recovery from an insured event is a reduction to the deposit with no income statement benefit.

The CFO Forum and others are urging FASB not to pursue bifurcation arguments (which they argue are of secondary importance) but to concentrate on the definition of what constitutes significant risk transfer and to collaborate more closely with the IASB Phase II process.

Solvency II

Quite independently of these discussions, the European Commission project to develop a new solvency system for insurance undertakings (Solvency II) is addressing the issue of valuation of liabilities for solvency purposes, including proposals based on exit-value (strongly supported by the Chief Risk Officers (CRO) Forum). Detailed proposals for the valuation of liabilities in Solvency II are likely to take perhaps as long as the IASB/FASB process to come to fruition. Currently, the EC's proposals appear to be similar to those of the IASB. However, important differences in approach could arise as the Solvency II proposals are developed in more detail, for example in relation to treatment of discretionary participation contracts, changes in credit standing, unbundling deposits and

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

servicing components. If the costs of maintaining and managing data across the industry are to be kept at a reasonable level it is important that common liability measurement requirements emerge.

How to respond?

Faced with all this uncertainty, and the probability that the introduction of any new regime is three or four years away at least, it would be tempting for insurers simply to sit back and take no action. The problem with this stance is that they will then not be able to improve the transparency of their enterprises to capital markets, and they will face the risk of financial reporting errors if they continue to rely on unstable, spreadsheet-heavy systems. Two bolder alternatives would be first, to persuade the standard setters to accelerate their work; and second, to early adopt some of the current proposals, although this latter approach brings with it risks since there may be further changes.

Whatever the final outcome, it is likely to impose a quite radical adjustment in insurers' accounting practices. Analyzing and seeking to understand the potential implications of the various options ought to be a priority. Beginning to engage with the issues now could also bring substantive business benefits. Not least because companies need to start recouping their investment in the significant advances being made in risk and capital management systems.

It is especially difficult at present to extract a clear understanding of insurers' underlying sources of profit from their published financial statements. Reflecting this, many companies rely on statements prepared on an alternative basis for the purposes of internal management reporting. Insurers could usefully start considering now how they might adopt a more consistent – and transparent – approach for both internal and external reporting in future. Such an integrated solution to financial reporting would also make them better placed to respond as detailed proposals emerge.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

European Embedded Value: a good start, but further to go

Accounting for the value of life assurance companies has always presented particular difficulties, given the long-term nature of insurance contracts and the inherent uncertainty about the flow of premiums and pay-outs. The European Embedded Value (EEV) concept represents a significant step towards a more acceptable and consistent methodology. Indeed, a recent survey by KPMG in the U.K. (see box on page 49) confirms that a majority of companies consider it a more significant indicator than IFRS reporting. Nevertheless, there is quite a lot more to do if EEV is to achieve its full potential.

Valuing the future stream of earnings of a life company is particularly problematic. The performance of individual contracts will vary significantly according to whether a policyholder dies early, triggering a payout, or lives to pay many years of premiums. Conventional accounting standards have always struggled to provide for a realistic and consistent basis of valuation.

The concept of Embedded Value (EV) was developed to account for this uncertainty in the future stream of earnings by applying actuarial calculations to factors such as life expectancy and claims frequency. The resulting present value of future profits, together with the adjusted net asset value of the business, constitutes the EV. However, while it is a valuable concept, EV still leaves a wide-range of variation in how the calculation is to be carried out in practice. As a result, EV may not provide a firm basis for analyzing or comparing one company against another.

In May 2004, the Chief Finance Officers (CFO) Forum published principles for the calculation of European Embedded Value (EEV), a more standardized framework approach to the actuarial assessment designed to improve the consistency and transparency of EV reporting. The new principles included guidance on calculating or providing information on:

- the cost of options and guarantees
- the assumptions being made in respect of future investment returns and risk margins
- allowing for the amount of capital tied up
- disclosure of assumptions and key sensitivities; and
- new business margins.

CFO Forum members across Europe agreed to adopt the new methodology for accounts published in respect of the 2005 financial year at the latest.

Following a review of initial experience and comments from investors, in October 2005 the Forum published additional guidance on minimum required disclosures of sensitivities and other items. The revised principles will further standardize disclosure by member companies and allow analysts to understand more clearly the underlying assumptions and dynamics of the EEV results.

EEV is now widely used by the main life company groups across Europe.

A recent KPMG in the U.K. survey (see box on page 49) of life actuarial practices and methodologies confirms that life companies now regard their EV results as more valuable than their principal IFRS results in providing information on the value of their portfolios: 56 percent of respondents say EV is more important than IFRS; and 92 percent say they believe that analysts place as much or more emphasis on EV than on IFRS results.

Thirteen of the 38 respondents use their EV numbers for supplementary reporting in their accounts; eight use it to set their internal profit targets, while five say they use it as part of the product pricing process, and five say they use it for capital management purposes. Most respondents carry out EV reporting once every six months. Only 15 percent report monthly and two report annually (interestingly, these two indicate that they do so for internal management purposes).

European Embedded Value clearly represents a major step forward for the industry, and lays the foundation for more valuable and transparent reporting for the benefit of analysts and shareholders alike. However, significant problems still remain, principally because of the wide variation still open to companies in translating the EEV principles into practice. There are gaps in the principles where they fail to address certain issues (for instance, there is no guidance on the treatment

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

of fair-value on acquisitions); and differences in practice in company methodologies (such as how to reflect changes in actuarial assumptions).

One of the most notable outstanding issues is that there is still debate over whether to use 'real world' or 'market consistent' models. A 'real world' model is based on the views of the people using it in the market, for example, as to what the future investment returns will be. It would normally represent best estimate views. The alternative approach is the 'market consistent' approach. An asset model is said to be 'market consistent' if it models each asset to have the same price as the current price of that asset in the market. The survey found a mixture of responses, with 35 percent using a 'real world' approach, 30 percent using an indirect market consistent approach and 25 percent using a direct market approach. While, based on the definition, it would appear to be axiomatic that the market consistent approach is better, there are strong arguments in favor of both approaches.

Among the issues on which the EEV principles are silent are the calculation of fair-value balance sheets on acquisitions, and the treatment of major changes in actuarial models – for example, when an actuarial modeling system is upgraded or improved with a significant effect on the results.

Despite the aspiration of the industry to promote an EV methodology that would provide a more transparent and consistent approach to life company reporting, the reality is that there is still quite a way to go. The CFO Forum recognizes in principle the need for further standardization; but there are at present no firm plans to publish further guidance or revise the current principles. Greater standardization will carry short-term costs, constrain the flexibility of member firms in future and – for some – impose some commercial disadvantage. It will be a challenge to develop the necessary momentum. Nevertheless, the potential benefits are clear in terms of creating a genuinely level playing field and a consistent and realistic reporting methodology.

For more information please contact:

***Hitesh Patel**
Partner
FS Technical Advisory
KPMG in the U.K.
Tel: +44 (0) 20 7311 5460
e-Mail: hitesh.patel@kpmg.co.uk

****Hans Schoen**
Partner
Financial Services
KPMG in the Netherlands
Tel: +31 20 656 7459
e-Mail: Schoen.Hans@kpmg.nl

*****Joachim Koelschbach**
Partner
Audit Financial Services
KPMG in Germany
Tel: +49 221 2073-6326
e-Mail: jkoelschbach@kpmg.com

******John Jenkins**
Partner
Risk and Regulatory
KPMG in the U.K.
Tel: +44 (0) 20 7311 6199
e-Mail: john.a.jenkins@kpmg.co.uk

KPMG in the U.K. Technical Practices Survey 2006

Published in December 2006, the survey covered life actuarial practices and methodologies in EV, and individual capital assessment and FSA regulatory reporting. KPMG surveyed 38 life offices in the U.K. with an internal actuarial function, who contributed to at least one of the three parts of the survey. On October 1, 2006 the total market capitalization of the listed life assurers taking part in the survey was over £55 billion, and six of these companies are currently in the FTSE 100 index.

The survey forms part of a research project undertaken in order to benchmark the methodologies and technical actuarial practices in use today by actuaries in the U.K. life insurance industry. One of its main motivations is to try and improve both the quantity and quality of publicly available information on the actuarial valuation methodologies used in the industry.

Copies of the survey can be obtained from Laura Ainsley, KPMG in the U.K. (laura.ainsley@kpmg.co.uk).

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Quantifying uncertainty in technical reserves

Greater attention than ever is being paid by regulators and other stakeholders to uncertainties in technical reserves. Insurance companies are developing highly sophisticated models to try to improve the quality of reserve estimates. But, argue Aaron Halpert* and Douglas le Cocq**, the real issue concerns the clarity about how reserve estimates are arrived at and communication about the levels of risk inherent in any particular estimate.

Technical reserves – the amounts insurance companies set aside to cover future claims payments – underpin financial sustainability. Inadequate technical reserves have been a major contributor to some spectacular company failures in recent years. In hindsight, it is unlikely that any reserve estimate will be perfect, but even if that were to be the case, better tools are needed now for stakeholders to understand the risks underlying the largest liability on an insurance company's balance sheet.

It is no wonder, then, that regulators like the U.S. SEC have begun to take a keen interest in how insurance companies arrive at the appropriate level of technical reserves, and what degree of confidence such a level represents. Comment letters from the SEC are increasingly asking specific questions about the uncertainty inherent in reserve estimates. This is not just a public insurance company issue as disclosures on reserve uncertainty for all companies are becoming more common. Similarly, this is not just a U.S. phenomenon, as regulatory bodies from the U.K.'s Financial Services Authority (FSA) to Australia's Prudential Regulatory Authority (APRA) are also expecting increased discussion surrounding reserve uncertainties. More transparency is being demanded so that all stakeholders can understand a company's long-term risk profile. In the past the question might have been: 'Are the financial statements reasonably stated?' Now the questions are more detailed: 'How much risk is on the balance sheet?' and 'What is the potential impact to future earnings?'.

The attention now being paid to uncertainties in reserve estimates also parallels the focus by rating agencies and others on risk management, which we can see reflected in approaches to Enterprise Risk Management (ERM) and modeling economic capital. In Europe, for example, the Solvency II proposals require the connection between risk and capital to be made explicit. Solvency II will be a risk-based approach to capital analysis, starting with a consistent valuation of assets and liabilities at market value. Since the capital model relies heavily on the model for estimating reserves, uncertainties in the reserve estimates have to be equally explicit.

There is no doubt the issue of reserves estimates needs to be addressed. When historical reserve estimates are examined with the benefit of hindsight,

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

as both the SEC Reserve Table and the International Financial Reporting Standards (IFRS) 4 Loss Development Table require, significant shortages have emerged for certain lines of business and exposures. For example, exposures to claims in areas like asbestos, or environmental incidents, tend to cost more than initially expected. Many may argue that such exposures took the insurance industry by surprise. Yet even discounting the impact of such claims, historically shortages have existed. Like clockwork, a period of adverse reserve development invariably follows the trough of the underwriting cycle, when prices are at their softest. Stakeholders should be wary as the non-life insurance market appears to be entering a soft market in calendar year 2007.

In assessing uncertainty in technical reserves, it is not enough to look at historical data on claims. Another key input to general reserving methodologies is the level at which historical business has been priced. As with all models, the quality of the output is determined largely by the quality of the input. Errors in pricing information can easily lead to miscalculation of the reserves. This is often seen as a fall-out of the underwriting cycle, wherein reserve development, both adverse and favorable, follows periods of price weakening or strengthening which companies have been slow to recognize. As such, governance surrounding pricing and underwriting must be as robust as possible to capture data appropriately. In addition, when pricing new business, if the degree of uncertainty in the reserves estimates is ignored, or if errors in historical pricing information are not taken into account, faulty pricing occurs as well. Soon a company can find itself in a vicious circle of self-perpetuating inaccuracy. As with governance surrounding pricing, strong governance around the reserving process combats such a cycle, allowing companies an edge in estimating and understanding their results.

Currently, actuaries are using a variety of methodologies for quantifying uncertainty. There is no single 'right answer'. As companies strive to estimate – and manage – uncertainty, the computer models being used to calculate reserves are becoming increasingly complex. In particular, actuaries are looking to develop probability distributions so that reserve estimates can be derived at various levels of confidence. Much work remains to be done, both in terms of theory and practical implementation, though it is likely that in five to 10 years, global standards of practice are likely to emerge.

The effort to build better models brings with it its own issues. Stakeholders – and senior management for that matter – need to understand how a figure is arrived at so they can make a judgment on whether it represents a level of risk that is acceptable. It is not enough for actuaries to understand how the 'black box' calculations work; they also have to communicate effectively to users of their output how to interpret the results and its limitations.

The Casualty Actuarial Society (CAS) assembles an annual list of the top 10 issues facing the non-life insurance industry – number one for 2006 was ERM. But, the Society says, 'actuaries need to avoid overly complex models that provide little value to the organization, and instead need to identify and address risks to achieving the strategic goals. Actuaries need to effectively communicate within all areas of the organization to build a model encompassing firm-wide risks and get buy-in from all stakeholders.'[1] A number of actuarial associations have established task forces to address issues such as these.

A recent study commissioned by the American Academy of Actuaries, entitled ‘A Critical Review of the U.S. Actuarial Profession (CRUSAP)’[2], does just that. It concludes that the actuarial profession as a whole needs to improve its communication skills, particularly in regard to the ‘nature of actuarial work and its inherent limitations’. A similar study in the U.K. emanating from the General Insurance Reserving Issues Taskforce (GRIT)[3] has led to additional guidance regarding reserve uncertainty. Specifically, it calls for greater understanding and communication surrounding the uncertainties associated with technical reserves, including quantification of such uncertainties if possible. GRIT has further led to the formation of the Reserving Oversight Committee to take its recommendations forward through research on the effectiveness of various actuarial reserving methodologies and the quantification of uncertainty. In Germany, with Solvency II and IFRS Phase II for insurance contracts on the horizon, the audit increasingly looks at booked reserves from the perspective of confidence levels. Throughout the world, actuaries must be much clearer about the uncertainties that surround estimates of reserves, and how, as a consequence, such reserves estimates should be used.

So, quantifying reserve uncertainty is not just a technical issue. The governance of reserve estimation is recognized as an important element of corporate risk management, and improvements in governance are proceeding in parallel with improvements to the technical architecture. In the U.S., specific reserves committees with a clearly defined membership have been established to scrutinize estimates and understand the implications of uncertainty. In Australia, which is somewhat further advanced in its explicit requirements, there is already guidance for the insurance industry on how to capture and book reserve uncertainty. For many years, APRA has required that technical reserves should be determined as the present value based on a central liability, with risk margin added to yield the present value liability at a 75 percent confidence level.

Practical implementation has not come easily in Australia, however, and there are lessons to be learned about attempting to quantify reserve uncertainty. Issues such as how to use historical data to measure future volatility, the proper shape of the probability distribution, how to handle net exposures relative to gross exposures, and how to measure uncertainty associated with expired risk periods relative to future risk periods have all been raised as complicating factors. In fact, there is a new push underway to reassess and refine the existing guidance. Yet Australia serves as a guide for where the quantification of uncertainty is heading.

Europe’s insurance companies may be learning quickly from Australia, with the advent of both IFRS Phase II reporting and Solvency II. Reporting non-life technical reserves under IFRS will require:

- unbiased probability weighted estimates of future cash flows, i.e. the expected value of liability;
- an adjustment for the time value of money; and
- an explicit margin that market participants require for bearing risk and for providing other services.

Somewhat similarly, under Solvency II the market value of technical reserves will be based on the mean of the probability distribution for the expected present value of future cash flows while reflecting existing market uncertainties. The technical provisions would include a market value margin that meets the objectives of either transferring the portfolio to a third party or recapitalizing the company to ensure a proper run-off scenario by the original undertaking.

Given the uncertainties, any figure for reserve estimates is clearly an estimate, based on a myriad of assumptions and judgments. Different organizations will

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

accept different levels of uncertainty in reserve estimates, depending, not least, on the sort of business they are writing and their risk appetite. Within these organizations, there will be multiple views surrounding acceptable levels of risk which must be recognized and balanced. External stakeholders, too, must assess their levels of risk tolerance as decisions are made about the viability of an insurance company's business. Stakeholders increasingly focus on the risks that lead to uncertainty along with the frequency and severity of any resulting impacts. The key is to take such decisions based on full knowledge of the risks involved, recognizing the value of, but not simply accepting as 'fact', the predictions of sophisticated computer models.

Ultimately, of course, the CEO and CFO sign off the financial statements and they are accountable for the figures they contain, including the reserve estimates. Above all, the CFO – like every stakeholder – is looking for consistency in the reserves estimates, rather than wild swings from period to period as corrections are made. Reserve development directly impacts profit and loss figures, possibly raising questions regarding the validity of financial statement results.

Yet the CFO – and effectively all stakeholders – should recognize that some level of volatility is to be expected. In fact, a consequence of IFRS Phase II will be more volatile earnings as assets and liabilities are valued at market. As uncertainty is contemplated, the interplay of risks with their resulting impact on capital cannot be ignored. A clear understanding of the risks that lead to uncertainty, controls in place for mitigation of such risks and a process for communication of results become at least as important. As such, the CRO will play an integral role in considering whether corporate governance surrounding reserves is functioning properly.

It is still early days in the move to clarify the uncertainties in reserves estimates, but regulators and stakeholders around the world are no longer content with business as usual, accepting the technical reserve printed in a financial statement at face value. Rather, they are sounding a call to the insurance industry – the FSA, the SEC, and APRA all require more transparency and better disclosures surrounding technical reserve uncertainty now. Solvency II and IFRS 4 Phase II require recognition of the many risks inherent in non-life reserves and their impact on capital and financial results. The issues are exceedingly complex, but actuarial societies, insurance companies and advisory firms are all actively trying to identify the best approaches. One thing is certain; building a better model is only the beginning. The answer lies not only in technical ability, but also in ensuring that all stakeholders understand how the estimates are arrived at and the levels of risk involved. As stakeholders demand answers to the questions on the frequency and severity of risks impacting reserve estimates, an action plan for risk assessment, quantification and mitigation – the elements of ERM – become key. The world is demanding transparency now, and KPMG member firms' actuaries are heeding the call, regularly digging deeper and delving behind the numbers to provide practical guidance on understanding and quantifying uncertainty.

For more information please contact:

***Aaron Halpert**
Principal
Actuarial
KPMG in the U.S.
Tel: +1 212 872 6881
e-Mail: ahalpert@kpmg.com

****Douglas le Cocq**
Director
Financial Risk Management
KPMG in Hong Kong
Tel: +852 2978 8282
e-Mail: douglas.lecocq@kpmg.com.hk

1 *The Top Ten Casualty Actuarial Stories of 2006* published in *The Actuarial Review*, the Newsletter of the Casualty Actuarial Society. Vol 34(1). February 2007. Authors: Vince Yezzi and Christina Gwilliam.
2 CRUSAP study, December 2006
3 Presented to the Institute of Actuaries on March 27, 2006, *A Change Agenda for Reserving*, Report of the General Insurance Reserving Issues Task Force.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Risk and capital management

P56 What's in the regulatory cooking pot? A comparison of the U.S. and EU solvency systems and control
P62 A guide to model risk and control

5

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of i
provides no client services. No member firm has any authority to obligate or bind KPMG International or any other
such authority to obligate or bind any member firm. All rights reserved.

What's in the regulatory cooking pot? A comparison of the U.S. and EU solvency systems and control

The time may well be right for the insurance industry to engage in a debate about the merits of a single global standard for insurance regulation of risk and capital adequacy. To inform that discussion, Frank Ellenbuerger* and Giselle Lim** look at some of the key differences between the U.S. and EU approaches.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Although the Risk Based Capital (RBC) standards in the U.S. and the EU's proposed Solvency II share the common goal of protecting policyholders and strengthening insurers through sound regulation, in many ways their differences are acute. Most notably, Solvency II adopts a broad, enterprise-wide view of risk management and takes into account the whole risk profile of the company, while the RBC method focuses solely on the adequacy of capital.

In order to have a system up and running quickly, the U.S. made it a priority to come up with RBC requirements that govern the minimum capital necessary to cover an insurer's risk profile. The pragmatic approach taken was bottom up and from the outset the focus was on the measurement of the various risk categories. The result is an extensive factor-based approach to the measurement of risk capital. However, recent enhancements to the measurement of interest-rate risk and market risk have resulted in a principle-based stochastic method. While RBC does not currently address catastrophe risk, this is now generally perceived as a shortcoming. Just as in the measurement for interest-rate risk, it appears likely that the RBC framework will base catastrophe-risk estimation on advanced internal modeling.

The drive for Solvency II, in contrast, was borne out of the European Commission's desire to build a broader framework that has a number of key features:

- A risk-based evaluation based on market values
- Enhanced risk management requirements
- The utilization of market forces through disclosures
- The creation of a level playing field between banks and insurers.

As a basis for the Solvency II project, the Internal Market Directorate General of the European Commission had commissioned KPMG member firms to perform an extensive study into methodologies for assessing the solvency of insurance companies[1].

In contrast to the U.S., the Commission chose a top-down approach, based on the articulation of high-level principles and a clear structural framework. Solvency II's holistic approach has three supporting pillars:

Pillar 1: Capital adequacy, implemented through capital requirements on two tiers, a Solvency (target) Capital Requirement (SCR), and a Minimum Capital Requirement (MCR). The SCR can be calculated with a relatively simple, conservatively calibrated standard model or with an 'internal mode' which more accurately reflects the company's risk profile. Regulators are in fact encouraging the use of internal models as it will enhance risk management.

Pillar 2: Risk management requirements with capital adjustments to the SCR in the case of deficiencies.

Pillar 3: Disclosure requirements to reinforce market discipline.

In Solvency II, risk management and disclosure requirements are equally as important as capital requirements.

Regulatory action

There is a defined hierarchy of regulatory action for both the RBC framework and Solvency II. In the RBC framework, this hierarchy is defined in terms of how much the capital exceeds the RBC as a percentage. In the Solvency II framework, the hierarchy is defined in terms of the capital with respect to two regulatory levels – the MCR and the SCR. Failure to cover the MCR will result in 'ultimate supervisory action'. The MCR will be calculated through a simple formula so that 'ultimate supervisory action' will have an unambiguous trigger.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Boardroom discussion points

- How can we leverage regulation of risk and capital adequacy to improve our business?
- Should we be putting our weight behind a global standard for such regulation?
- Do we have the organization in place to manage risk effectively?

As the RBC does not have the function of a target level of capital, its regulatory function is more closely aligned with the regulatory function of the MCR. However, in terms of complexity and risk sensitivity, the RBC formula appears to be much closer to the calculation of the standard model of the SCR.

Capital calculation

For the greater part the RBC is calculated using statutory accounting values. This implies that two companies with the same balance sheet figures but with different risk profiles would end up having the same capital charge. In addition, capital is added to, already conservative, formula-based statutory reserves.

In contrast, the SCR calculation is based on market values, independent of statutory accounting, and is therefore more closely aligned to the risk profile of each company, giving companies an incentive to better manage their risks.

Quantitative differences

A direct quantitative comparison between the American and European systems presents a challenge as they are based on slightly different definitions of surplus capital. There is also no common calibration level for all components of the RBC, and the implicit safety levels of the RBC components vary. For Property and Casualty insurance (P&C) reserving, risk appears to correspond to a safety level, which would represent the ability of an insurer to withstand an unexpected one in ten year event. This would be in line with the safety level of the MCR. Investment risks appear to be calibrated to a higher safety level. For default risks, the calibration of the RBC was based on a 10-year period and a safety level of 95 percent. Due to the length of this 10-year period, the risk factors for default risk exceed the corresponding factors currently under discussion for the SCR[2,3].

The SCR has been calibrated to a one-year safety level of 99.5 percent, which represents the ability of an insurer to withstand a catastrophic one in two hundred year event. This high and uniformly defined safety level has two main consequences.

First, the SCR can serve as a target that can be used to benchmark the actual capital held by an insurance company. Product raters and policy holders will have more information at their disposal than under the current European system. This increase in information supports enhanced market discipline, which is one aim of the third pillar of Solvency II. In contrast, American regulators have stated that the making, publishing of any advertisement, announcement, or statement with regard to RBC levels of any insurer is prohibited[4].

Second, catastrophic events are rare by nature. Consequently, there is a severe shortage of data in the insurance industry for the estimation at a 99.5 percent safety level. Data problems are not as acute for a one in ten year safety level, as this represents losses most insurance companies have experienced.

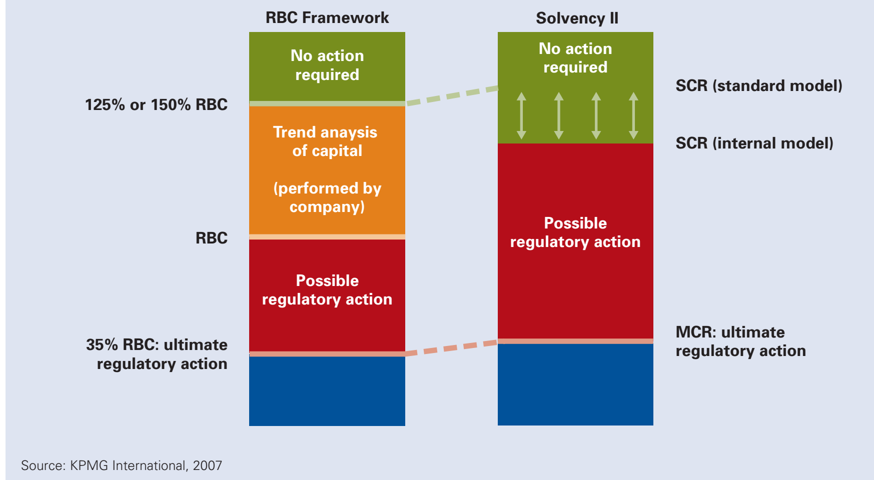
Relative advantages

A fundamental difference between the two approaches is that Solvency II will be based on economic fair-value concepts, while the RBC calculation is currently based on a direct estimation of risks[5]. In using fair-values, long-term effects, such as future changes of interest rates, are implicitly addressed. However, because they involve projections far into the future there are substantial uncertainties involved in such fair-value calculations. In addition, there are two very different competing proposals for the definition of the fair-value of liabilities[3,6], which suggests that there is a large model error component.

Overall, Solvency II is more risk sensitive than the RBC framework, since the calculations are based on best estimates and explicit-risk modeling

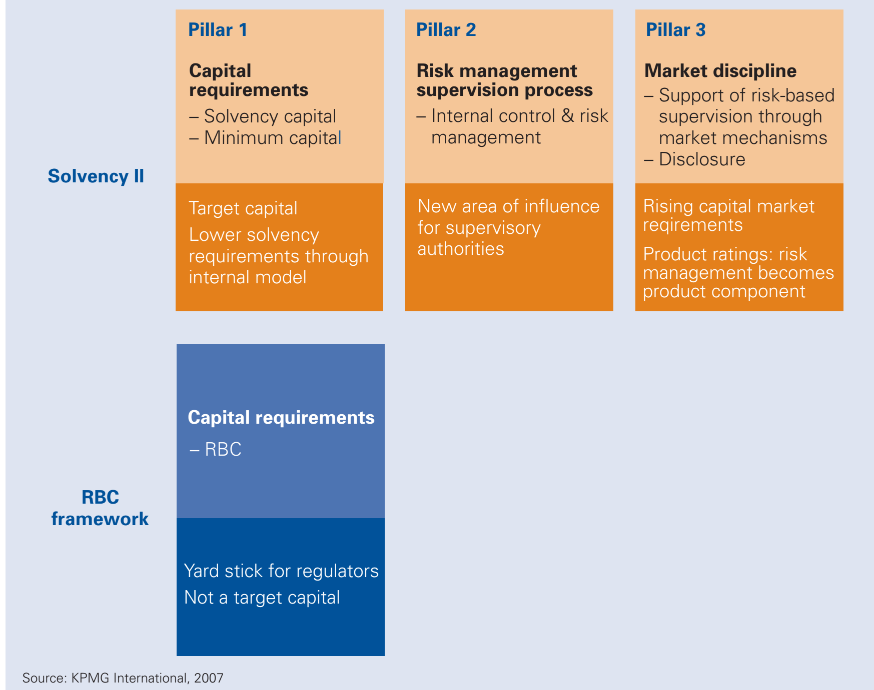
© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Figure 2 Regulatory action under RBC and Solvency II. (The capital levels in this figure are not based on a quantitative comparison)



Source: KPMG International, 2007

Figure 3 Components of Solvency II and RBC framework



Source: KPMG International, 2007

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Figure 4 RBC and Solvency II at a glance

Topic	RBC framework	Solvency II
Risk management	Not prescribed	Extensive principle based requirements
Disclosure	Not prescribed	Extensive requirements taking up IFRS disclosure requirements are expected
Target capital level	Not prescribed, usage of RBC as target capital is discouraged	SCR
Definition of surplus capital	Based on statutory assets and statutory liabilities Some life products: risk-based evaluation of liabilities for market and interest rate risk	Based on the fair-values of assets and liabilities The fair-value of liabilities will likely be estimated through a cost of capital concept[3]
Safety level	No explicit level	Approximately MCR: 90 percent (expected shortfall). Some charges are simply half the corresponding SCR charges Uniform safety level for SCR and its components SCR: 99.5 percent (VaR)
Catastrophe risk	Not (yet) present	Part of SCR In discussion for MCR
Ultimate regulatory action	35 percent RBC	100 percent MCR

Source: KPMG International, 2007

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

rather than (prudent) statutory values. An exception would be the RBC corresponding to long-term interest risk, which is calculated using a stochastic methodology.

The Solvency II top-down approach is designed to lead to a coherent system, which will bring together quantitative and qualitative risk management. This unified measurement approach helps in two ways. It makes risks more transparent for management and it further integrates risk and performance management.

The RBC bottom-up approach, meanwhile, has made a quick implementation possible and its estimation of risks can be based on practical considerations. In addition, the flexibility of using different time horizons enables long-term risks to be modeled more accurately than under Solvency II.

Outlook

Solvency II and the RBC framework take different approaches to establishing risk-sensitive capital requirements. However, if the first signs are anything to go by, developments in the RBC framework for interest-rate risk and market risk indicate that the thinking around the measurement of risk are reaching greater alignment on both sides of the Atlantic. For P&C insurance, recent work on a catastrophe risk charge also shows the potential for greater alignment of the two approaches.

A meeting of minds may be accelerated by major rating agencies, who are now including Enterprise Risk Management (ERM) criteria in their quality assessments and taking internal models into account.

The International Association of Insurance Supervisors (of which the American National Association of Insurance Commissioners (NAIC) is a member) is also likely to be a catalyst in the convergence process. They are developing global guidance for solvency regulation. Initial drafts have come to the same conclusions as Solvency II, and in particular, the three pillar architecture has been taken up.

Overall, during the next few years it seems likely that the regulatory cooks will add a sprinkle of European spices to the RBC framework, so that it will further converge towards the ideas that will be implemented for Solvency II.

For more information please contact:
***Dr. Frank Ellenbuerger**
Partner
Global Head of Insurance
KPMG in Germany
Tel: +49 89 9282 1867
e-Mail: fellenbuerger@kpmg.com

****Giselle Lim**
Director
KPMG Global Services Center
KPMG in the U.S.
Tel: +1 201 505 2080
e-Mail: glim1@kpmg.com

1 European Commission, Internal Market DG. Study into the methodologies to assess the overall financial position of an insurance undertaking from the perspective of prudential supervision ('KPMG Report'), 2002.
2 Y. Iyun, Risk Based Capital in the U.S. and Elsewhere, Presented to the Israel Association of Actuaries, Swiss Re, May 23rd, 2005.
3 Committee of European Insurance and Occupational Pensions Supervisors, Consultation Paper 20, CEIOPS-CP-09/06, page 120, 2006.
4 National Association of Insurance Commissioners (NAIC). Risk-Based Capital Model Act, Section 8B, as quoted by (4).
5 While the fair value is based on the market price of the risk, which would in turn imply a safety level felt by the market to be appropriate, in a direct approach the safety level is chosen first.
6 M. Kriele and J. Wolf. *On market value margins and cost of capital.* Blätter der Deutschen Gesellschaft für Versicherungsmathematik, 2007. To be published.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

A guide to model risk and control

With many insurance companies relying on models in a wide variety of business areas, the overall quality of these tools and the accuracy of their underlying assumptions are critically important. Board members and senior executives need to understand the risks their organizations face when they use such models and take steps to manage them appropriately. Laura Hay* describes one possible approach.

Many large insurance companies use models of varying degrees of complexity – from spreadsheets to more complex programs – as an increasingly important means of evaluating, analyzing, and reporting key business information. Some insurance organizations use hundreds or even thousands of financial, decision support and risk management models to understand, price and manage risk.

As these models proliferate, regulators have been scrutinizing their use more closely. Following the lead of control improvements advocated by directives like the Sarbanes Oxley Act of 2002, the proposed Solvency II and industry groups such as the U.S. Committee of Chief Risk Officers, many organizations are now seeking to:

- Document each model's theory and application
- Define a regular model validation process
- Conduct an independent model validation, segregating development from implementation efforts
- Impose robust model change controls
- Establish controls around model inputs
- Conduct model testing to determine accuracy, strengths and weaknesses.

Although an organization's use of models affects many aspects of its financial health and reputation, model development and validation is not typically an item on senior leadership's agenda. Many leaders may not have the time or quantitative skills to evaluate the suitability, limitations, or other risk-related aspects of the models or spreadsheets on which they rely everyday.

Board members and senior management do not need to become experts in computer modeling, but they do need to be sure they are fully aware of their organization's exposure to model risks and whether those risks are fully understood and appropriately managed across the organization (Figure 5).

Currently, senior executives at many organizations may not be fully aware of how many models and spreadsheets they have in place, whether they remain valid, and if they are used appropriately. For example, a model or spreadsheet might be changed or altered by one user group without the knowledge or input of other users. When that happens, leaders need to determine whether the model's underlying assumptions are still valid.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Figure 5 A framework for model control

Example model risks	Source of model risk	Common problem	Potential consequence	Key questions for senior executives
Misspecification	Data – Data feeds, manual entry, calibration processes	Incorrect data is used or data is fed incorrectly from one system to another	• Financial statements are incorrect • Decisions are based on poor information • Model output is inaccurate	• Is data accurate? • Is data transferred accurately between systems? • Has the model been calibrated to current conditions?
	Process – Controls around assumptions, data inputs, data outputs, model updates, reporting, interpretation of reports/outputs	Input parameters are loosely defined and poorly controlled	• Model users can manipulate model outputs • Control deficiencies can emerge	• Are the processes surrounding the model and its outputs efficient? • Is a feedback process in place to update the model if it is found to be inadequate? • Is the application security effective?
Misapplication	Governance – Direction from management regarding approach, strategy, policies and procedures – Model development guidelines – Documentation – Theory/methods – Validation, testing procedures	• Models are inappropriate for segment or usage • Key decision-makers do not understand model assumptions	• Key-man risks are high • Leaders cannot explain models to external stakeholders • Reputation damage can occur	• Are the organizational governance policy frameworks for the development, ongoing monitoring, and use of the tools robust? • Are model controls monitored and included in internal audit processes? • Is the model's purpose and appropriate usage effectively documented and understood?
Improper implementation	Method – Theory development and documentation, implementation, change processes, and application training	Poorly documented models, lack of sufficient skill to correctly integrate models	• Models do not work correctly • Errors may cascade to dependent models	• Does the tool function accurately, using relevant theories? • Has it been subject to appropriate validation? • Is the change process controlled and validated?

Source: KPMG International, 2007

Critical questions may include:

- Which models pose the highest risks?
- Which models feed into financial statements? Which models feed into others and thereby compound related risks?
- How often are models updated, and are duties segregated adequately?
- Is the model software vendor-based or homegrown? How often are models refreshed, and is the process simple or cumbersome?
- What infrastructure is in place to manage risk around all models? Does Internal Audit review model usage and validation and report on compliance with existing policy?

Addressing the challenges

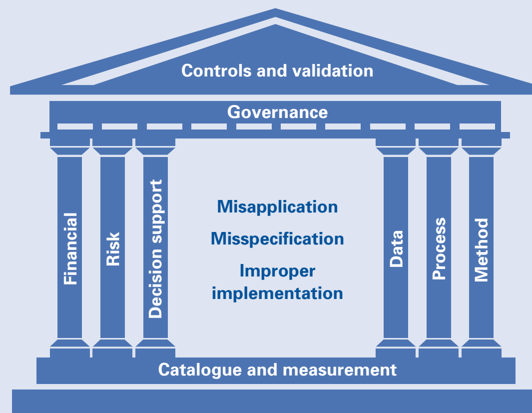
Sarbanes Oxley compliance has highlighted the challenges and risks associated with financial reporting models and spreadsheets. Now, organizations need to apply that experience and knowledge to managing the risks associated with other models and spreadsheets. Organizations can address these risks by developing a framework for comprehensive model control that provides for models and spreadsheets to be governed from an organization-wide perspective, even though they may be managed individually.

Boardroom discussion points

- Do we need to initiate development of a model governance process as a separate risk management category with senior management support?
- Should we consider organizational enhancements to measure, manage, and monitor model risk, for example by asking employees to wear two hats rather than add new staff?
- Do we have a complete register of the models we use and the key risks they pose?
- Do we have a prioritized program of model risk remediation?
- Do we need to create a model validation process?

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Figure 6 A framework for comprehensive model control



Source: KPMG International, 2007

As depicted in Figure 6, such a framework encompasses the models (financial, decision support, risk management), their risks (misapplication, improper implementation, misspecification), and the sources of those risks (data, method, process, and governance). It is governed by a process of model control and validation as well as a policy for model governance. The framework is based on a foundation that has been built by cataloguing and measuring the models themselves.

Chief risk officers would determine, for example, how many models they have, what they are used for, to what extent the organization relies on them, the trustworthiness of the criteria used to populate them, and the decisions that are based on them. This is essentially a three-phase process. During Phase I, risk managers would:

- define what a model is and is not
- produce an inventory of all models used in the business
- categorize the models into usage classes
- rank the models according to risk using criteria such as financial impact, existing controls, robustness, cost benefit, consistency, and input reliability.

Phase II would focus on the definition and application components for specific models. Definition components include model policy, model descriptions, and other processes designed to minimize model risk. Application components include the validation process and other model testing exercises. The goal of Phase II is to achieve better practice and improve the entity's management of models. Phase III focuses on the process of model validation.

Need for a special framework

As organizations have sharpened their focus on operational risk issues, many have realized that model risk – the risk, for example, that organizations will report inaccurate financial results or make poor decisions based on a model or spreadsheet – requires a specialized framework, governance, methods, and approaches. In the current market environment, with heightened regulatory expectations due to Sarbanes Oxley and the proposed Solvency II, the ever-increasing complexity of decision-making, and the use of models proliferating, it is essential that senior executives take rapid action to manage the risks.

For more information please contact:

***Laura J. Hay**
Principal
Actuarial
KPMG in the U.S.
Tel: +1 212 872 3383
e-Mail: ljhay@kpmg.com

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

Keeping you informed

Thought leadership

KPMG firms' thought leadership library explores the challenges for the financial services sector raised by change in the broader business environment – the economy, the regulatory framework and the forces of globalization. Listed below are KPMG's publications most relevant to the industry.

Insurance specific thought leadership

EU Solvency Report
Globalizing the Risk Business: surviving and competing in the global insurance industry
Implementing IFRS in the Insurance Industry
Insurance Insiders: www.kpmginsiders.com
M&A appetite and strategy in the global insurance industry
Principles & Presentation – Survey of insurers' 2005 financial statements
Risk and capital management: a new perspective for Insurers
Second survey of Capital Assessment Practice
SolvencyIIBriefing series
The State of the U.S. Insurance Industry

Related thought leadership

Financial Services Advisory Magazine: Headroom
Financial Services Industry Guide – Tax
Frontiers in finance – KPMG's regular financial services thought leadership magazine
Growth and Diversification in Islamic Finance
Increasing value from disposals – investing in divesting
Islamic Finance – Making the transition from niche to mainstream
Rethinking Cost Structures
Rethinking the business model
Sourcing: Future Sourcing – Evaluating the risks and benefits of sourcing
Strategic Evolution – A global survey on sourcing today
Tax in the boardroom
Tax risk management in the financial sector – A KPMG international survey
The Governance of Tax – turning tax policies into competitive advantage
Transfer pricing and international business
Working to rules

If you wish to request your own free copy, please e-Mail distributionpublications@kpmg.co.uk or download them from our publications library at: www.kpmg.com/financial_services

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

kpmg.com

KPMG's Global Insurance practice has an international network of industry specialists. To discuss any of the issues raised in this document, or any other insurance-related matter, please contact:

Dr. Frank Ellenbuerger
Partner
Global Head of Insurance
KPMG in Germany
Tel: +49 89 9282 1867
e-Mail: fellenbuerger@kpmg.com

The information contained herein is a of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon the information without appropriate professional advice after a thorough examination of the particular situation.

The views and opinions are those of the interviewees and do not necessarily represent the views and opinions of KPMG International or KPMG member firms. All information provided is of a general nature and is not intended to address the circumstances of any particular individual or entity.

© 2007 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved. Printed in U.K.

KPMG and the KPMG logo are registered trademarks of KPMG International, a Swiss cooperative.

Produced by KPMG's Global Financial Services Practice in the U.K.

Designed by Mytton Williams

Publication name: Insurance Insights 2007

Publication no: 307 018

Publication date: May 2007

Printed on recycled material