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**A Safety Belt
for Asset Risk
Management**

**Toward
a Global
Solvency
Standard V**

**Insurance
Accounting:
The
Implications**

**Price
Optimization
for New
Business Profit
and Growth**

**Europe in
2010:
Post-Crisis,
Pre-Solvency II**

**Windpool
Exposure
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**A Quarter
Century With
Emphasis on
Thought
Leadership**

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Micro-photograph of a sunflower. This year, *Emphasis* celebrates 25 years of bringing readers clarity and perspective on a range of complex insurance industry issues.

A Safety Belt

For Asset Risk Management

By Carl Hess

While many insurance risks are generally predictable, asset and other business risks have traditionally been subject to greater uncertainty. However, recent events suggest that identification and analysis of even the least predictable risks have improved.



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The events of the last two years have demonstrated that risk management in financial services cannot afford to stop at the 99.5 percentile (VaR) and that we need to find ways of factoring in events of low likelihood but high impact (see “Managing Extraordinary Risk,” *Emphasis* 2009/3). By accounting for these in advance, we can formulate rescue plans that can be implemented as soon as necessary to prevent value destruction.

This approach does not come naturally; in fact, it goes against the industry’s history of reacting to events as they occur. Nevertheless, there is substantial merit in developing a robust defense against extreme risks by combining qualitative understanding, quantitative modeling and cost-benefit analyses of possible strategies. This approach starts with the development of qualitative understanding by asking what could cause certain events, whether these causes are plausible and what the consequences could be — followed by a consideration of the investment risks, the impact on asset returns and, in some cases, the effect on liabilities.

We have identified 15 main extreme risks that, while very unlikely, would heavily affect economic growth and asset values and returns should they occur. They are grouped here into three categories: financial, economic and political. There are many other potential extreme risks in categories such as longevity, operations, processes or systems that should also be considered in a similar way.

“Insolvency for one institution can quickly become a systemic problem.”

Financial

Financial extreme risks revolve around solvency — whether a financial institution will be able to pay its debts with available cash. The interconnected nature of the modern financial system and its high levels of leverage mean that insolvency for one institution can quickly become a systemic problem. The primary triggers for financial risks (solvency) are falling asset prices and falling incomes. Financial risks can be self-generated (falling asset prices) and transmitted to the real economy, as we have recently seen. Alternatively, they can be generated by a recession in the real economy, which reduces incomes (corporate incomes through falling sales and/or household incomes through un- or under-employment) and is thereby transmitted to the financial sector through a default on loans.

Whatever the trigger, financial risks will generally result in declining asset prices as companies sell whatever assets they can to raise cash. A flight to quality ensues, meaning the highest-quality bonds (sovereign) will become more popular than other assets. Historically, gold has been a good hedge against financial turmoil on the belief that if capitalism were to end, gold would probably be more useful in a post-crisis regime than security certificates.

Economic

The economic extreme risks we have identified are less homogeneous than the financial risks and range from a deflationary depression to hyperinflation and a return to a gold standard. A deflationary depression scenario implies that government actions will prove incapable of returning the economy to sustainable growth. This would be a very bad environment for asset prices, and it is likely that there would be a flight to the safety of sovereign (nominal) bonds.

The other economic risks essentially assume that government actions are successful, but at a price. Entities could profit from a currency crisis, for example, by holding unhedged foreign assets, but that action would likely be highly disruptive to domestic asset returns, at least in the short term — assuming that the crisis has been triggered by some form of economic malaise.

Should stimulating the economy require government debt to grow to an unsustainable level, there is the prospect of sovereign default or hyperinflation — either of which would be devastating for asset returns. It is probably best to assume that inflation-linked bonds would be defaulted on in hyperinflation. It is possible, but not certain, that gold could act as a hedge against these risks.

Political and Other

The third category of extreme risks comprises those without financial or economic causes. Most are political, but other scenarios include climate change and killer pandemics. These scenarios are much harder to monitor and predict and, in most cases, would be hard to hedge. For example, hedging the breakup of the euro could involve the use of credit default swap contracts, introducing new risks. Adding food and water exposure to a portfolio may hedge climate change, but as they gain in value, confiscation would become a risk.

Figure 1. Likelihood and impact

		Risk		
Impact		Low	Very low	Very, very low
Financial	High			
	Medium	Excessive leverage	Banking crisis	
	Low		Insurance crisis	
Economic	High	Depression	Hyperinflation	
	Medium	Currency crisis	Sovereign default	
	Low			End of fiat money
Political	High		Climate change	End of capitalism
	Medium	Political crisis	Disunity in Europe	Major war
	Low	Protectionism		Killer pandemic

Key

Risk		Impact	
Low	Could be expected once every 10 years from current conditions	High	Direct and significant impact on most asset and liability values
Very low	Could be expected once every 20 years from current conditions	Medium	Direct and material impact on some asset and liability values
Very, very low	Could be expected once every 100 years from current conditions	Low	Direct impact on few values, variable significance

How Likely? How Bad?

Having identified and categorized the risks, the next challenge is to determine their likelihood and impact — a difficult task at best. Rather than attempt to develop a probability for each risk, a more realistic approach would be to assign each risk to one of three risk categories — low, very low and very, very low — and to categorize them by impact from high to low (Figure 1).



“It is useful to be able to determine how effective the hedge is based on how much loss is acceptable.”

We have also developed a matrix (Figure 2), using the term “association” rather than the mathematical concept of correlation to communicate that this is a qualitative assessment of the likelihood of events occurring together rather than a quantitative assessment of past data. The matrix indicates that financial risks and several of the economic risks are closely associated. A second cluster can be seen between the political and economic risks, indicating that economic well-being will be strongly influenced by political developments. As the matrix indicates, climate change and killer pandemics are truly independent risks. They may be loosely related (a hotter climate being a better breeding ground for germs), but otherwise intersect only with political crisis.

We use a subjective scoring system to derive a ranking of these risks (Figure 3, page 8). The scoring combines the impact and the risk together with the degree of uncertainty in assessing the risk. For example, we are much less confident in assigning a probability to a major war than we are to an insurance crisis. The ranking serves as a priority list for considering the various risks and whether any portfolio hedging activity could be or should be undertaken.

Hedging

The first observations are that not all of these extreme risks are hedgable and that any hedge used is likely to be very imprecise. For example, the outcome of a killer pandemic is highly uncertain, so the impact on assets and liabilities is unknowable. But it is useful to be able to determine how effective the hedge is based on how much loss is acceptable. Naturally, the more loss that is acceptable, the easier it is to hedge smaller proportions of the portfolio, while assuming the other assets become worthless.

More complete hedging increases complexity in a number of ways. The carrying cost of the hedge is likely to be higher. It is almost certain to require the use of derivatives, and therefore thought needs to be given to whether the counterparty would be willing and able to pay out. And, as Keynes warned,

We use the term “association” rather than “correlation” to communicate that this is a qualitative assessment of whether events are likely to occur together (with one perhaps being a minor or major cause of the other) rather than a quantitative assessment of past data. Quantitative assessment of rare events is difficult.

Figure 2. Association matrix

Leverage																
Bank	H															
Insurance	H	M														
Depression	H	H	M													
Currency	H	H	L	H												
Default	H	H	M	H	M											
Hyperinflation	L				H	L										
Fiat money		L			M	L	H									
Protection		L		H	M	L										
Political		M	M	H	M	H	H	L	H							
Euro	L	H	L	H	H	H	H							H		
End capitalism		L		M	L	L	M			L	H					
Climate											M					
Pandemic											L			L		
War				L		L	L	L	M	H			L	H	L	
	Lev	Bank	Ins	Dep	Ccy	Def	Hyp	Fiat	Prot	Pol	Eur	End	Clim	Pan	War	

Key	
H	High degree of association — could be causality in both directions
M	Medium degree of association — could be causality in one direction
L	Low degree of association — a possible contributing, rather than causal, factor
	No, or very low, association

Top Three Extreme Risks

Depression

The current risk of depression appears to have been reduced through policy action, but it remains an extreme risk because it may not be possible for governments to counteract any future drop in demand, should that occur. There has been an extended period of overconsumption by Western consumers, meaning that businesses have built productive capacity to satisfy a level of demand that is unlikely to be reached for a number of years as Western households increase their savings rate. Spare capacity is likely to mean lower corporate margins, lower employment, lower growth and subdued asset returns. A complicating factor is the level of debt. When debts can no longer be serviced or repaid, lenders experience losses and sell the collateral assets. The sales of collateral assets tend to depress asset values, and the process continues until either the cycle is broken (policy intervention) or asset prices become sufficiently cheap that private capital is once again put at risk.

The current extreme risk is that economic growth will remain anemic, meaning the economy will be vulnerable to any further drop in demand. This is compounded by the fact that debt levels remain too high relative to the ability to service them — and this includes the ability to service government debt.

Hyperinflation

Hyperinflation is inflation that is very high or out of control; prices increase rapidly as money loses its value. Definitions used by the media vary from a cumulative inflation rate over three years approaching 100% to inflation exceeding 50% a month. As a rule of thumb, hyperinflation is often reported for short intervals, often per month.

Although there is debate about the root causes of hyperinflation, it becomes visible when there is an unchecked increase in the money supply or drastic debasement of coinage, usually accompanied by a widespread unwillingness to hold the money for more than the time needed to trade it for something tangible to avoid further loss. Hyperinflation is often associated with wars or their aftermath, economic depressions, and political or social upheavals. The main cause is a massive and rapid increase in the amount of money, which is not supported by growth in the output of goods and services, and which leads to a loss of confidence in the money, similar to a bank run. Hyperinflation wipes out the purchasing power of savings, provokes extreme consumption and hoarding of real assets, causes the monetary base to flee the country and results in a cease in investments.

Enactment of legal tender laws and price controls to prevent discounting the value of paper money relative to gold, hard currency and so on, fails to force acceptance of a paper money that lacks intrinsic value. Often the body responsible for

printing the currency cannot physically print paper currency faster than the rate at which it is devaluing, thus neutralizing attempts to stimulate the economy. Governments sometimes find excessively loose monetary policy attractive because it allows a devaluation of their spending and displacement (or avoidance) of a tax increase to meet their expenses.

Excessive Leverage

The use of leverage is helpful for society because it allows capital-constrained entrepreneurs to bring new products to market and contribute to employment and economic growth. However, it is now clear that there is an optimal level of leverage and that going beyond it implies a social loss. It can be further argued that excessive leverage is a “public bad” and therefore appropriate for governments to regulate.

We suggest that a level of leverage is sustainable when the debt service can be covered by income. We could stipulate a safety margin to allow for shocks to income, for example, if interest rates rose. On this basis, leverage becomes excessive when the debt can no longer be serviced from income or when no safety margin exists. This will typically occur with speculation, when the intention is to repay the debt when the speculative asset has been sold for a higher price. Speculation risk can be latent, in that debt can remain too high, but serviceable, as long as asset prices do not decline. Falling asset prices will trigger a self-reinforcing cycle, and we have seen that it is not automatically possible to reduce leverage even if desired. Some public sectors are increasing their leverage (debt-to-GDP ratios), so we believe the risk of excessive debt will persist for a number of years.

In addition to standard debt, derivatives are another way the system becomes leveraged — typically by allowing a given amount of economic exposure to be gained with a fraction of the amount of capital. While many or most derivative contracts have built-in protection mechanisms (exchange traded, collateral requirements, variation margin and so on), not all do. There has been extensive media coverage of credit default swaps (CDS) in particular, which are not exchange traded (introducing higher counterparty risk) and are a multiple of the value of the physical bonds they are designed to hedge. Therefore, we find it easy to believe that derivatives, whether CDS contracts or another instrument, could be a source of excessive leverage.

As we’ve noted, the consequences of excessive leverage are possible forced asset sales driving down asset prices, causing further forced asset sales in a reinforcing cycle. This would cause the financial markets to stop functioning, triggering a reaction in the real economy similar to the one we have just seen: falling growth, employment and incomes, and the possibility of depression.

“Most asset owners do not spend sufficient time on risk management.”

it is better for one’s reputation to fail conventionally than to succeed unconventionally. If a single institutional investor becomes “super rich” relative to others through successful hedging, there would be a danger of becoming a target for special levies, taxation and/or confiscation. On the positive side, derivatives provide much greater flexibility and the more precise targeting of risks. They also don’t require much up-front capital, therefore leaving the bulk of the portfolio untouched.

Car Crashes: The Belt or the Windshield?

It is clear that there are numerous extreme risks that could interrupt future growth, with assets, and liabilities, faring differently depending on the event. Some events are easier to understand, and the consequences are more predictable than others. Of all of them, public policy issues should be considered above others, as they will both influence the risks identified here and be shaped by the shifting likelihood of the different risks through time. Our future research will look more closely at public policy issues.

While the risks identified here are remote, the impact on portfolios if they did occur would be significant, and the recent crisis has shown that risk management based solely on volatility — such as VaR — is not sufficient. Being aware of extreme risks before they happen can protect value if an organization builds a plan of action that can be implemented as soon as the need arises. Better to have the belt on in a crash than to take one’s chances with the windshield.

Wearing the Safety Belt

It is difficult — and even unpleasant — to spend time contemplating the effects of extreme risks. This is compounded by the fact that most asset owners do not spend sufficient time on risk management in the first place. Nonetheless, we believe that such efforts are certainly merited for long-term investors, because the cumulative probability over a long period of time that some extreme event will occur is not negligible, and the impact of such an event could be severe. But regardless of whether an extreme risk does or does not materialize, we believe that adopting the framework we have set out for the evaluation of such events should lead to a better risk management process.

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Figure 3. Ranking

Risk Ranking* (as of June 30, 2009)			
Rank	Risk	Description	Possible Hedge
1**	Depression	Debt-deflation trap; falling growth and incomes	Globally diversified long-dated sovereign nominal bonds
2	Hyperinflation	Extremely high inflation	Real assets (e.g., gold, globally diversified inflation-linked bonds)
3**	Excessive leverage	Debt burden cannot be serviced from income	Gold; reserve-status currency
4**	Currency crisis	Extreme movement between floating rates	Gold; foreign assets
5**	Banking crisis	Balance sheets can’t absorb another shock	Nominal sovereign bonds (medium duration)
6	Sovereign default	Default by a developed country on its debt	Country insurance (e.g., CDS)
7	Climate change	Diversion of capital to mitigation uses	No general hedge
8	Political crisis	Rise in power of extremist groups	No obvious hedge
9**	Insurance crisis	Insolvency within insurance sector	Nominal sovereign bonds (medium duration) short insurance equity
10	Protectionism	Reversal of movement toward free trade	No general hedge
11	Disunity in Europe	Breakup of the euro	Long Germany (hedged)
12	End of capitalism	Move to socialism and closing of markets	Gold
13	End of fiat money	Return to a gold standard	Gold
14	Major war	Major global conflict	Long neutral countries
15	Killer pandemic	Contagious disease with very high mortality	Long pharmaceutical equities, short airline equities

* This is our subjective measure, based on the impact, risk and degree of uncertainty in assessing the risk level.

** We are more confident in being able to attach a probability to these events.

Toward a Global Solvency Standard V

By Mike Lombardi, Naren Persad and Andrew F. Giffin

Solvency II, IAIS standards and other regulatory developments, along with parallel developments of international accounting standards and performance measures, are moving insurers and reinsurers steadily toward a common global solvency standard.

Whether moving to a single standard, or a range of comparable standards, solvency requirements are rapidly converging around some central themes — principle- and risk-based, market-consistent economic valuations of the entire balance sheet, reflective of individual insurer and reinsurer risk portfolios, and harmonized with international accounting and actuarial standards.

Solvency II has become the primary benchmark against which other reforms are measured, and was recently referred to as the “de facto global standard” by Matthew Elderfield of the Bermuda Monetary Authority at the Annual Conference of the International Association of Insurance Supervisors (IAIS) in October 2009.

Although the recent economic crisis has raised questions about how market-consistent measures can sensibly be applied when markets do not function as expected, the basics of the evolving solvency standards seem to be holding. Insurers and reinsurers worldwide need to evaluate how they will be measured under the new principles and emerging requirements in the jurisdictions in which they operate. More important, they need to anticipate the competitive opportunities that these changes will foster.

Solvency II

On November 10, 2009, the Council of the European Union adopted the Solvency II Directive, following prior approval by the European Parliament. This will introduce economic risk-based solvency requirements across all EU member states for the first time. These requirements will be more risk-sensitive and more sophisticated than in the past, thus enabling a better allowance for the real risks run by any particular insurer.

Solvency II is based on the core characteristics noted above and targets capital at a 99.5% confidence level over a one-year time frame, taking into consideration both diversification and risk mitigation effects.

The Solvency II Directive sets out the high-level principles and includes a standard formula for calculating regulatory capital (Solvency Capital Requirement or SCR) and the provision to use, in specific circumstances, partial or full internal models for calculating the SCR.

Currently, much of the work is focused on developing the details of the new framework, and this has involved the publication of over 50 consultation papers for industry feedback. This will culminate in August 2010 in a test of the impact of the new regime, with the fifth and possibly final Quantitative Impact Study (QIS5).

These directions provide a fairly clear pattern of the expected solvency standard to be applied by the EU Member States scheduled to be in effect at the start of 2013. Further detail on the shape of Solvency II and what companies should be doing about it in 2010 is provided in the article “Europe in 2010: Post-Crisis, Pre-Solvency II” on page 23.

“Insurers and reinsurers need to anticipate the competitive opportunities that these changes will foster.”



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IAIS — Capital Resources

The International Association of Insurance Supervisors (IAIS) has been working in parallel with the EU to develop global solvency standards for use by its 140 member countries. The IAIS has generally followed the Solvency II model, with some variations. At its annual conference in October 2009, it adopted a guidance paper on the structure of capital resources recognized for solvency purposes. The principles presented are subject to a separate guidance paper on asset and liability valuation that will follow.

The IAIS specifies that capital resources should both absorb losses of a going concern and reduce policyholder losses in a windup. Common stock, for example, would apply to both needs. Certain forms of subordinated debt would apply only to the second need. It was further recognized that firm capital also supports firm growth and rating requirements. The guidance calls on supervisors to define an approach for determining the capital resources eligible to meet regulatory capital requirements and their value, consistent with a total balance sheet approach for solvency assessment with regard to the quality and suitability of capital elements.

The guidance further specifies that to be certain that an insurer's obligations to policyholders are met as they fall due, liabilities, including technical provisions, must be covered by assets "over a definite period of time, to a specified level of safety" — in other words, using a statistical risk distribution.

IAIS — Group Supervision

The IAIS also approved a Guidance Paper on the use of supervisory colleges in groupwide supervision at its Rio de Janeiro meeting. This paper built on the existing Insurance Core Principle #17, establishing a framework for international cooperation among national supervisors. The current paper further clarifies roles and responsibilities of supervisors, particularly in dealing with multinational insurance organizations.

The approach is intended to address the need to deal with and be consistent with regulation of other financial service entities within a group, as part of IAIS' role within the overall framework of the renamed Financial Stability Board (FSB).

“Application of the new measurement methods will be needed to evaluate alternative strategic directions.”

Objectives of this guidance include consideration of potential threats to broad financial market stability, particularly in light of the recent market difficulties.

Supervisory colleges, led by the designated group-wide supervisor for particular multinational insurers with complex structures and relevance to both local financial markets and broader financial stability, will be developed to meet the need for effective and efficient supervision of each insurer. Critical to success is a mutual understanding among participating supervisors of the group's business strategy, financial position, legal and regulatory status, risk exposure and management, governance structure and processes, and group solvency. Mutual trust and effective division of supervisory tasks have been identified as critical.

The IAIS program, "Multilateral Memorandums of Understanding on Cooperation and Information Exchange," provides a formal basis for the formation and management of cross-border supervision. This guidance will be supplemented by current work on solvency assessment on a groupwide basis, the treatment of nonregulated entities and criteria for the assessment of equivalence among regulatory regimes.

Insurance Contract Accounting

Both the EU and IAIS have noted the importance of establishing and maintaining compatibility between accounting and regulatory standards for harmonization of requirements, transparency and avoidance of arbitrage, both among jurisdictions and across other financial sectors such as banking. The International Accounting Standards Board (IASB) has been reviewing the treatment of insurance contracts (currently governed by the International Financial Reporting Standard 4) for some years and has recently been joined in this effort by the Financial Accounting Standards Board (FASB), the U.S. accounting standard setter. Both boards are expected to publish an exposure draft of an insurance contract standard during the second quarter of 2010.



CFO Forum's Market-Consistent Embedded Value

Parallel with the development of the Solvency II and IAIS principles has been the evolution of the rules for the voluntary publishing of embedded values by life companies. The CFO Forum, made up principally of European multinational representatives, continues to enhance these conventions, now dubbed market-consistent embedded value (MCEV). Like Solvency II and the IAIS principles, MCEV relies on market-consistent valuation and consistent valuation of assets and liabilities. These require reliance on market prices, where deep and liquid markets exist, and on mark-to-model approaches to come as close to orderly market prices as possible.

MCEV differs in part from Solvency II and IAIS because it has a different underlying purpose. Solvency II and IAIS are primarily concerned with solvency from the point of view of policyholder protection, and hence the focus is on the capital position assuming potentially extreme events. On the other hand, MCEV is focused on the concerns of shareholders and investors for enterprise valuation and risks, and hence with measuring profit and loss in the normal course of events. The difference in purpose leads to differences in the underlying frameworks. For example, Solvency II and IAIS have focused on measurement in terms of the potential for having to wind up an insurer, considering valuation in terms of transfer of liabilities to an assuming party. MCEV focuses on liabilities from a going-concern perspective and the expected fulfillment of contract obligations.

A number of details are under review by the Committee of European Insurance and Occupational Pension Supervisors (CEIOPS), as part of Solvency II implementation, that parallel issues being addressed by the CFO Forum. These include the basis for identifying a risk-free rate (e.g., government

bonds, swaps), recognizing own credit risk, using liquidity premiums, calibrating stochastic models, best estimate assumptions, risk margins and allowance for future premiums. Depending on the results of this work, the underlying frameworks may converge further or may remain different in various aspects of measurement. However, current work on them will likely provide at least a clearer path to understanding the differences in what is reported.

“A key concern is that efforts to assure capital adequacy in a financial crisis will further weaken financial markets for assets.”

Financial Stability Board — Systemic Risk and Procyclicality

Problems of systemic risk on a global scale were highlighted by the recent financial crisis. This has led to the formalization of the Financial Stability Forum into the Financial Stability Board (FSB). The FSB comprises senior representatives of national financial authorities (central banks, regulatory and supervisory authorities, and ministries of finance), international financial institutions, standard-setting bodies and committees of central bank experts. It has been established to address vulnerabilities and to develop and implement strong regulatory, supervisory and other policies in the interest of financial stability.

A key concern is that efforts to assure capital adequacy in a financial crisis will further weaken financial markets for assets, thereby exacerbating the problem for companies — the problem of procyclicality. The Solvency II Directive explicitly calls for member states' approaches to solvency to provide for this issue. The IAIS' guidance paper on supervisory colleges (see above) includes consideration of financial stability issues.

The FSB's initial list of institutions that pose systemic risk included only six Europe-based, multi-national insurance and reinsurance firms, identified for their participation in nontraditional insurance markets.

Ideally, insurers' capital requirements would include a margin of capital, built up in good times, that could then be drawn down as needed in a crisis. There is growing acceptance of this concept, but further work is needed to develop the structure and level of the margin.

Implications for Insurers and Reinsurers

For companies operating in Europe, the principles that are part of the Solvency II Directive are now established, with implementation under way and an effective start date in 2013. CEIOPS is still working out further details of the new framework, but it's clear that international financial reporting standards and MCEV directions are generally the same, with some variations in the details.

For the Americas and Asia Pacific, the IAIS developments, mainly in line with Solvency II, suggest a very consistent direction. What is less clear is the timetable. In the U.S., the National Association of Insurance Commissioners is proceeding with a modernization project. Government legislation promoting a federal insurance office seems likely to pass in the near future, but this will not replace the current state-by-state regulatory system anytime soon, if at all. Many in the U.S. are resisting change to a Solvency II-style system. Certain property & casualty insurers insist that traditional methods for measuring insured liabilities have worked well, without the need to use a best estimate, time value of money or explicit risk margin approach.

Some of the developing countries (e.g., Brazil and Mexico) are actively evaluating Solvency II approaches. Implementation in both developed and developing countries will require considerable effort by companies to improve data and information systems, along with the technical expertise to complete the analysis and reporting demanded under this approach.

Any change in accounting, solvency and performance measurement systems will require extensive preparation, testing and observation of results for several accounting periods before going public. Initially, this involves evaluating proposed systems — which has been under way in Europe for some time — to test the details of proposed approaches and prepare for the coming effective date in 2013. Next it will be important for companies to determine how they will perform under the new methods. Will the new measurements of capital meet the revised requirements? How will the changes affect qualification for ratings? How will a company's operations be valued in public equity markets? What do the new measures suggest about changes in strategic direction?

Embedding ERM for Strategic Decisions

Most companies will need to understand how best to optimize their position through changes in existing strategy (e.g., change in mix of business or underwriting, investment and pricing policies). Application of the new measurement methods will be needed to evaluate alternative strategic directions, including the introduction of alternative product designs. And it is always desirable to be able to make such adjustments and establish consistent results under new rules before public reporting is required.

The IAIS and Solvency II require that a company be actively using the new solvency measures before internal models for measuring capital requirements can be used for regulatory purposes. In addition to using an acceptable model methodology, a "use test" requires that the model be used internally to assist with business decisions. Embedding ERM and capital management in the management process will not only meet a critical compliance requirement, it will provide a much-improved information base for making sound strategic decisions.

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“Any change in accounting, solvency and performance measurement systems will require extensive preparation.”

Insurance Accounting:

The Implications

By Alexander Dollhopf and Kamran Foroughi

Insurers will face unprecedented change in the way they report their business under International Financial Reporting Standards (IFRS) and U.S. GAAP. But how useful will the information be?

Around mid-2010, the IASB and FASB plan to issue a draft standard on accounting for insurance contracts, with the objective of issuing a final version in the first half of 2011. The publication of this draft is a major milestone in a process that started more than a decade ago to develop a standard for the measurement of insurance liabilities. Both boards have made considerable progress over the past year, despite distractions arising from the financial crisis, and the project is now moving forward with a real sense of urgency for several reasons:

- A number of major economies — including Brazil, Canada, India, Japan, Korea and Mexico — have announced plans to adopt IFRS or move their reporting standards to IFRS between 2010 and 2012.
- Due to internal rotation rules, the IASB chair and all board members who have participated in the project over many years will complete their terms by 2011. It would be unrealistic to expect a new board to get acquainted with the specifics of the insurance business and finalize the project quickly.
- The new insurance contract standard will affect more than just those companies subject to IFRS. Given FASB involvement in the insurance contract project, current insurance-related U.S. GAAP standards will likely be replaced by a similar standard in a similar time frame, leading to significant changes in U.S. GAAP insurance accounting.

The insurance contract standard is not the only change that will affect reporting by insurance entities. Following comments received during the financial crisis about the existing reporting standards for financial instruments, the IASB and FASB are working vigorously to revise them. As a result, on the IFRS side, IFRS 9: *Financial*

Instruments was published in November 2009. This new standard for financial instruments, which so far contains new classification and measurement rules for financial assets, will replace IAS 39, the previous standard. It allows fair-value and amortized cost measurement models for financial assets, where an entity's business model and the contractual terms of its assets determine classification. Subject to adoption procedures in certain jurisdictions, these rules will become mandatory for reporting periods beginning January 1, 2013, with the possibility of early adoption. In addition, the classification and measurement of financial liabilities, the impairment model for assets measured under amortized cost and the principles for hedge accounting are also being reviewed. The outstanding final IFRS and U.S. GAAP standards are expected to be published by the end of 2010.

A number of other IASB projects in progress will lead to further changes that need to be understood and implemented. Among these are the fair-value project, which aims to clarify the definition of fair value and establish a single source of guidance for all fair-value measurements, and the revenue recognition project, which will prescribe the accounting for contracts with customers in general, including pure service contracts.

Within the next few years, insurance companies preparing their financial statements under IFRS and U.S. GAAP will face unprecedented change. This is expected to lead to significant differences in the way that companies measure and communicate their performance, and manage their business and the products they sell. It is imperative that insurers follow these developments closely, quantify the impact of proposed changes and understand the business model implications before implementation.

“A number of other IASB projects in progress will lead to further changes that need to be understood and implemented.”



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Why a New Standard?

For a long time, analysts and other users of insurance companies' financial statements have expressed dissatisfaction with the information they receive. Because of the wide variety of insurance product designs within and across jurisdictions, the various risk and profit-sharing arrangements between policyholders and shareholders, and the variation in local reporting and regulatory practices, it is often not obvious how insurance business works, shareholder value is generated, or performance is assessed and compared. Therefore, for many years, life insurance companies in Europe, Canada, South Africa and parts of Asia have been publishing supplementary information in the form of embedded-value disclosures, in addition to their primary financial accounts, to better communicate their business performance.

Primary insurance company accounts, including current IFRS information, are not perceived as useful for a number of reasons, including:

- Different treatment of contracts classified as "insurance" or "investment" (those with insignificant insurance risk)
- Different prevailing practices for the measurement of insurance contract liabilities across jurisdictions and companies due to the application of local liability measurement practices, different types of liability adequacy tests and different interpretations of unbundling rules
- Mismatches between the valuations of assets and liabilities
- Implicit conservatism often included in the calculation of liabilities
- Inadequate allowance, in some circumstances, for the time value of money or the cost of embedded guarantees

What Is Currently Proposed?

Although a draft of the insurance contract standard is not yet available, some tentative decisions have been made by the IASB, often but not always mirrored in tentative decisions by the FASB.

Measurement approach

As proposed by the IASB, the measurement approach for an insurance contract liability should portray a current assessment of the insurer's obligation, using the following building blocks:

- The unbiased, probability-weighted average of future cash flows expected to arise as the insurer fulfills the obligation
- The time value of money
- A risk adjustment for the effects of uncertainty about the amount and timing of future cash flows
- An additional amount, referred to as a residual margin

The purpose of the residual margin is to prevent a profit from being recognized at inception (also referred to as a "positive day-one difference"). However, if the initial measurement results in a negative day-one difference, the entity should recognize this amount in profit and loss.

Future cash flows, the time value of money and risk adjustment are to be remeasured at each subsequent reporting date. The residual margin should be released over the coverage period in a systematic way that best reflects the exposure from providing insurance cover and should not be adjusted in subsequent reporting periods for changes in estimates.

The FASB measurement approach uses a similar building-block approach with the exception that the risk adjustment and residual margin are combined into one composite margin. Guidance on how the composite margin should be released into profit and loss will be developed later.

Acquisition costs

Under the FASB model, acquisition costs should be expensed rather than deferred, and the recognition of revenue to offset those costs is prohibited. Also, such costs will not form part of the cash flow within the composite margin calibration. This results in a loss at inception at least equal to acquisition costs.

The IASB has recently decided that a proportion of acquisition costs referred to as "incremental" (the marginal cost incurred when selling an insurance contract) should be taken into account within the residual margin calibration, reducing the loss at inception.

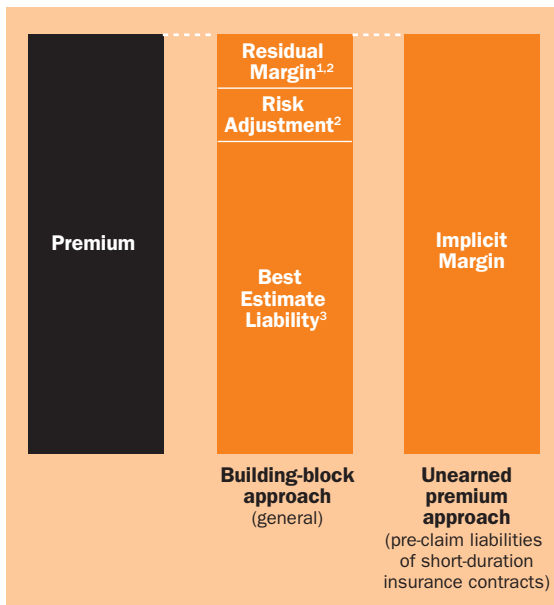
Nonperformance risk

The measurement of an insurance contract liability should not be updated for changes in the risk of nonperformance by the insurer.

Discount rates

The discount rate for an insurance contract liability should conceptually adjust estimated future cash flows for the time value of money in a way that captures the characteristics of the liability. It should not be based on the expected returns on actual assets backing those liabilities unless those returns affect the determination of policyholder benefits. The IASB has stated that the standard should not give detailed guidance on how to determine the discount rate, for example, whether the rate should be based on corporate bond, government bond or swap rates, and what adjustment, if any, should be made for credit risk or liquidity premium.

Figure 1. Initial measurement of insurance contract liability



¹ Under the IASB measurement approach, excludes an amount equal to the incremental acquisition costs

² Under the FASB measurement model, the residual margin and risk adjustment are combined into one composite margin

³ Combines the unbiased probability weighted average of future cash flows and the time value of money

Short-duration insurance contracts

For short-duration insurance contracts, such as most property & casualty contracts and certain pure-risk life insurance contracts, an unearned premium approach, already commonly used, is likely to be mandatory for pre-claim liabilities. The building-block approach, contrary to current general practice, will be required for claim provisions.

Participation features

The IASB tentatively decided that payments arising from a participation feature should be included in the measurement of insurance contracts in the same way as any other contractual cash flows, whereas the FASB requires a liability for participating benefits to the extent that the insurer has a legal or constructive obligation to pay those benefits.

Outstanding decisions

A number of important decisions remain outstanding, such as the presentation of the income statement and the treatment of embedded derivatives, unbundling, and unit-linked and index-linked contracts.

Figure 1 illustrates the initial measurement of an insurance contract liability under building-block and unearned premium approaches.

How Useful Will the Proposed Reporting Basis Be?

The usefulness of financial reporting information is often judged according to two main criteria: relevance and reliability. Figure 2 on page 16 shows the desirable attributes for an insurance business financial reporting framework that is to provide relevant information.

The currently proposed IASB measurement framework for insurance contracts, together with the new rules for classification and measurement of financial assets, will have a number of these attributes. The building blocks for the measurement of insurance contract liabilities reflect best estimate, nonfinancial assumptions and the use of market-consistent financial assumptions. Furthermore, worldwide convergence may be achieved if the FASB adopts similar principles for U.S. GAAP

“It is imperative that insurers follow these developments closely, quantify the impact of proposed changes and understand the business model implications before implementation.”



“It is often not obvious how insurance business works, shareholder value is generated, or performance is assessed and compared.”

On the other hand, a number of the IASB proposals risk compromising the relevance of the new standard. The potential lack of detailed guidance in a number of areas — such as future cash flows, allowance for the time value of money and risk adjustment — may lead to a continued proliferation of approaches, which would not be helpful. It is hoped that the IASB will propose detailed guidance or that some other credible international body will assume responsibility for doing so.

The combination of an amortized cost asset measurement and a market-based liability discount rate may lead to significant mismatches in the measurement of assets and liabilities, and an inability to compare results across the insurance sector. Insurers may wish to apply the fair-value option described in IFRS 9 to avoid such accounting mismatches.

While we acknowledge some of the arguments for not recognizing profits up front, we note that the prevention of positive day-one differences through the inclusion of a residual or composite margin, with subsequent release of the margin, does not reflect economic reality and makes a comparison of insurers’ new business strategies more difficult.

The recognition of initial acquisition costs as an expense when incurred, without reflecting some or all of these costs in the measurement under the building-block approach, will lead to accounting losses being reported during the period of sale of new business, even if such business is expected to be profitable. One of the most controversial aspects of the current proposals, this is likely to generate considerable criticism.

Another issue is that since the current dividing line between insurance and investment contracts remains, different accounting treatments will be applied to the two, even though the contracts may have similar economic characteristics. Finally, the treatment of participating features in life insurance contracts might not reflect economic reality.

Depending on the responses received during the exposure period, some of the tentative decisions may need to be reconsidered. To the extent that proposed features of the measurement basis undermine the relevance of insurers’ financial statements, the need for additional disclosure — either in notes to the primary financial statements or through supplementary information such as embedded value — will continue. The table shown in *Figure 3* has been designed to complement such additional disclosures. This table combines an embedded-value-style analysis of earnings with a reconciliation between IFRS equity, some form of “economic equity” and solvency capital requirements.

Figure 2. Desired characteristics of a financial reporting framework

1.	Reflects the economic characteristics and features of insurance contracts, for example, through consideration of all relevant cash flows attributable to a contract
2.	Reflects the underlying insurer’s business model, for example, through assessing the allowance for risk consistently across liabilities and their backing assets
3.	Uses market prices to measure insurance cash flows, where available, and market-consistent valuation techniques otherwise
4.	Reflects the costs of all inherent risks
5.	Is broadly consistent with the economic balance sheets underlying risk-based statutory and regulatory reporting frameworks
6.	Clearly defines the functions of liabilities and capital: Liabilities reflect the expected average outcome of future cash flows with no prudence margin, while regulatory capital ensures that future obligations to policyholders and other creditors can be fulfilled with a defined probability
7.	Clearly attributes performance to different areas of the business and provides feedback to users by monitoring key assumptions and risks
8.	Applies consistently across jurisdictions without being influenced by local regulatory requirements

What Will Be the Impact on Insurance Companies?

It is likely that insurance companies will need to implement the new standard on classification and measurement of financial assets, and the proposals for measurement of insurance contract liabilities, at the same time that substantial changes are being made to regulatory solvency rules in many jurisdictions. This will affect insurance companies in a number of ways:

- Companies should reconsider the way they assess and communicate the performance of their business. Companies may wish to prioritize which measures to target — for example, IFRS earnings, increase in IFRS equity or increase in economic equity.
- The expected profit profile of new business may change materially compared with that under existing primary accounts. Insurers may wish to review pricing and product design to minimize the likely effect of being forced to recognize an acquisition cost loss on day one. This may lead to the increased use of “trail” rather than “acquisition” commissions.
- The volatility within the balance sheet and income statement may change to better reflect real asset/liability mismatch risks and remove accounting volatility. Consequently, companies may wish to review their risk appetites, asset/liability management practices and hedging strategies.

- Appropriate systems and processes need to be developed to generate the required information in a timely, secure and fully auditable manner. Where not already in place, implementation projects need to be established. Experience suggests that the implementation task is nontrivial, and needs to be appropriately resourced and initiated as early as possible. In jurisdictions where risk-based capital frameworks are being implemented simultaneously, such as Solvency II in Europe, close coordination between the various implementation projects is critical.

“The current IASB and FASB proposals for the measurement of insurance contract liabilities will overhaul existing standards and lead to significant changes.”

An Economic, Risk-Based Global Standard for Accounting

Financial reporting for insurance companies is at a crossroads. The current IASB and FASB proposals for the measurement of insurance contract liabilities will overhaul existing standards and lead to significant changes. They will, for the first time, provide a global standard for insurance accounting, which will in part reflect economic and risk-based measurement characteristics. However, in their present form, the proposals raise some serious concerns that require further consideration if the resulting financial statements are to be relevant to users.

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Figure 3. Analysis and reconciliation of earnings

	IFRS Equity	Asset Adjustments	Liability Adjustments			Economic Equity	Split of Economic Equity	
		Fair Value of Assets	Investment Contracts	Residual Margin	Participating Features		Others	Solvency Requirements
Equity (start of period)								
New business sales								
Movement in existing business								
• Expected returns								
• Transfer to free surplus								
• Experience variances								
• Assumption changes								
Operating earnings								
Economic variances								
Total earnings								
Capital movements								
Equity (end of period)								

Price Optimization

For New Business Profit and Growth

By Angel Marin and Thomas Bayley

Non-life companies want to maximize profits from new business. Price optimization can make the difference.

“Incorporation of a customer behavior model in the pricing system for new business is fundamental to premium optimization.”

Introduction

To write more new business, property & casualty companies need to define the type of customer they want to attract and then understand how price-sensitive these customers are to their products. By effectively analyzing price sensitivity and expected sales volumes at varying profit levels, companies can increase new business conversion rates — given target levels of profitability — to arrive at an optimal new business pricing strategy.

Insurance companies have made significant advances in more granular risk-based pricing through the use of predictive modeling techniques. As a result, the spread of new business loss ratios compared with those for renewal business (known as the new business penalty) has been reduced. Predictive modeling has driven this improvement, and companies can now turn their attention to how to increase overall new business profitability.

The process needed to conduct this analysis, called price optimization, was described in a previous article (“Price Optimization for Innovative Insurers,” *Emphasis* 2008/1). We also described how price optimization could be used to improve the retention and profitability of an in-force portfolio (“Price Optimization for Profit and Growth,” *Emphasis* 2008/4). In this article, we show how price optimization methods have also been successfully applied by property & casualty companies to improve new business conversion rates and achieve the desired overall profitability for the portfolio — while working within management and regulatory constraints.

Incorporation of a customer behavior model in the pricing system for new business is fundamental to premium optimization. The improvements made in collecting customer and competitor information, combined with the increase in computing capacity, can help insurers to move from pricing exclusively according to risk attributes toward an integrated pricing approach. Such an approach incorporates competitors’ premiums and customer behavior along with risk attributes in the pricing of new business. Combining these elements should help companies find the most profitable balance between the extremes of low-volume/high-profit sales and low-profit/high-volume sales.

Why Optimize Prices for New Business?

It is easy to write more new business by simply reducing the overall level of premiums. Similarly, a company can increase the per-policy profitability of new business by increasing premiums for a given risk profile. However, neither of these pricing strategies will work in a real insurance market. Balancing growth and profitability is the key to long-term success.

By using price optimization techniques to analyze information about competitors’ price levels and customer behavior related to price levels, companies can find the proper balance between these factors. An optimized pricing system can also help:

- Determine the optimal price within the range of possible prices for every insured
- Adapt the premium based on market competitiveness to attract certain profitable segments of business
- Attract new customers with strong loyalty and increase the potential for cross-selling

Development of the pricing system should consider not only the risk but also the variation of other acquisition costs, customers' sensitivity to product price (elasticity), and the likelihood of their buying other products (cross-selling) or staying longer with the company.

To address these issues, companies need to start by defining a "benefit function" that incorporates the primary elements of product profitability over the required time horizon. The goal of the price optimization process is to find the premium level that will maximize this benefit function. *Figure 1* shows a typical breakdown of this function.

To arrive at a benefit function model, the following items will need to be included:

- **Conversion rate model.** This model estimates the probability of writing a new policy considering the relevant variables related to the customer and market competitiveness.
- **Proposed premium to be offered to the potential insured.** This is what the optimization process essentially solves for. This proposed premium is calculated by taking into account the appropriate probability of discounts such as No

Claims Discount in the U.K. or Bonus-Malus in Continental Europe.

- **Model refinement.** These models are usually refined by incorporating the probability that the policyholder remains with the company over time, and may also take into account extra profit arising from cross-selling and referrals (both of which can be modeled probabilistically).
- **Benefit function.** In particular, this can be modeled using time horizons chosen according to the financial goals of the company. It can be built for a short-term time horizon, such as one year, or for a longer time period of three to five years.
- **Pure premium model.** This can be carried out by modeling frequency and severity separately, or can be done directly through the modeling of loss costs, adjusted for inflation and loss development.
- **Expenses.** All expenses must be considered, including those for acquisition, administration and claim handling (perhaps varying by client profile). Expenses can be modeled both at the portfolio and per-policy levels.

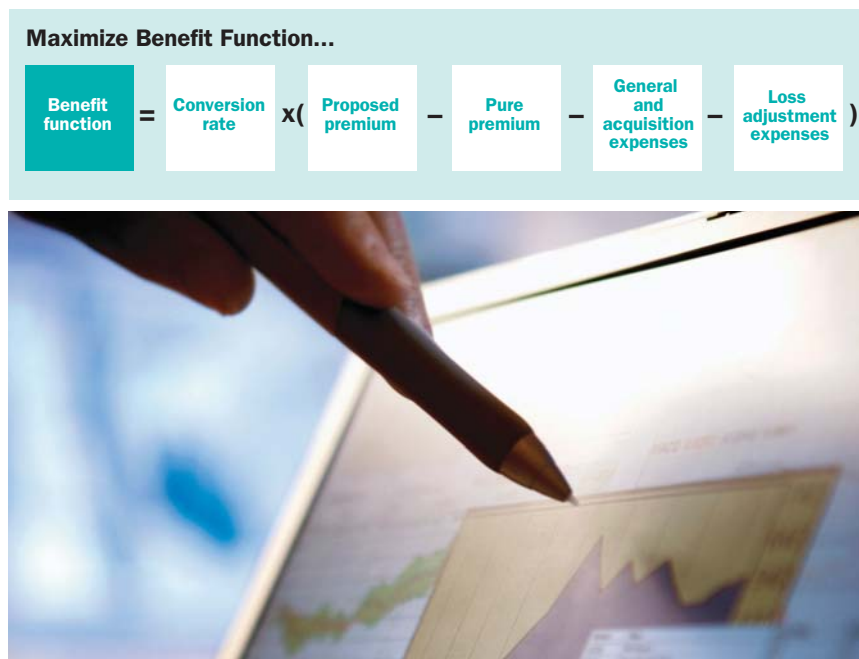


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Figure 1. Structure of a benefit function for new business price optimization



Some of the most important variables used in modeling these components are the classification of agents, driver age, claim history, geographical area or territory, Bonus-Malus system (or equivalent claim discount/surcharge system), and the difference between the offered and the market premium.

Building a Price Optimization Model for New Business

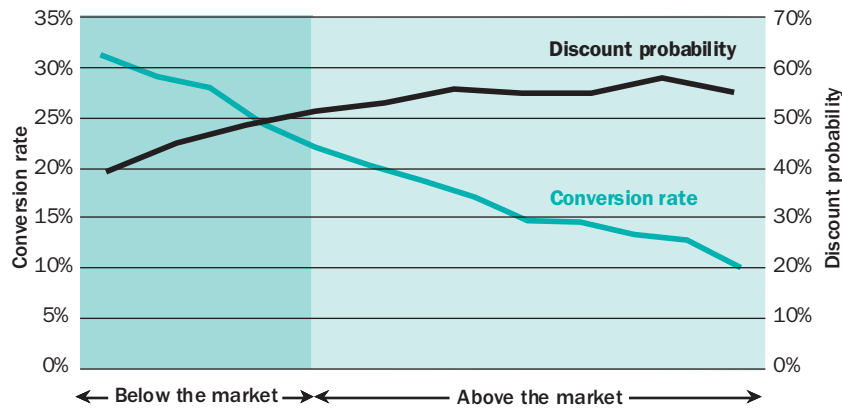
Elasticity of demand is a key ingredient in this process. Each company has its own elasticity-of-demand curve (formed by its potential client profiles, each with its own behavior). The curve is based on an analysis of the relationship between changes in the incremental quantities of policies converted from initial quotations and the price increase or decrease proposed by the company.

To ensure that the model represents current market reality, the internal and external data must be continually tested and upgraded. A model based on market information even just a year old may not accurately reflect current market competitiveness, and its use can lead to unprofitable pricing decisions.

Competitive market analysis (CMA) enables insurers to obtain premium rates for as many risks and competitors as possible (see “Competitive Market Analysis in Personal Lines,” *Emphasis* 2007/2). CMA incorporates the insight and knowledge of general market behavior (market direction, key competition), knowledge of price levels by rating factors, intensity of the competition by segment (measure of price dispersion) and a comparison of the company’s prices against market prices by segment.

Figure 2. Comparison of discount profitability and conversion rate in a European auto market

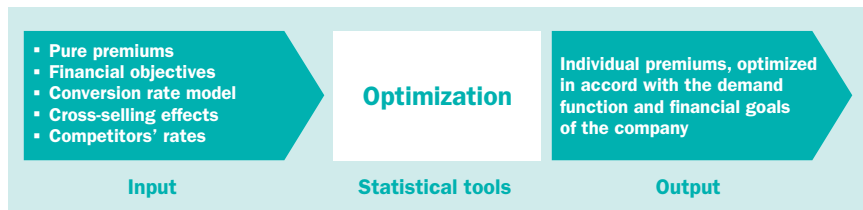
Difference in premium offered by the company vs. market premium



“The classic approach, which calculates premiums based solely on loss costs, is not enough to optimize a company’s growth and profits from new business.”

Figure 2 shows a real example from a European auto insurance market that gives policyholders rate discounts for various reasons. The price elasticity model needs to take this discounting into account. The figure shows two direct relationships: first, between the conversion rate and the difference between the premium offered by the company and the market premium for the relevant segment, and second, between the probability of applying discounts to a new policy and the company/market premium differential. It is clear that:

Figure 3. The optimization model



- The lower the premium offered by the company in comparison with the market premium, the higher the conversion rate and vice versa.
- The lower the premium offered by the company in comparison with the market premium, the lower the probability of the client being given a discount.
- The higher the premium offered by the company in comparison with the market premium, the higher the probability of the client being given a discount.

Along with the price elasticity information, other data are needed to build the model, including pure premiums by class of business, financial goals of the insurer, cross-selling information and competitor prices by class.

Figure 3 shows the inputs necessary for the new business optimization model and the outputs that would be generated.

Figure 4 is a schematic of the optimization process for new business. At the start, the company needs to determine the constraint and the target. It is possible to define the total new business revenue and maximize profitability given that revenue or (more commonly) to define the overall new business profitability and maximize new business revenue given that profitability target. The choice between these two approaches is a key management input.

The new business optimization process calls for an appropriate software tool that can jointly analyze all the elasticity-of-demand functions for all potential clients' profiles. With this analysis, the company can determine probabilistically the best combination of conversion rates and types of client, and then produce the desired maximum (the number of new business conversions) given an overall profitability

target. The process may need to incorporate constraints to satisfy any management or regulatory restrictions, which will lead to an adjusted and definitive combination of prices and client profiles.

Results Obtained From the Price Optimization Model

The new business optimization process produces an efficient frontier where, for each conversion rate, there is a combination of policies and prices that produces different profitability levels. However, only one combination of policies and prices will give the maximum profitability for a given overall conversion rate. The graph of the maximum profitability for each overall conversion rate forms an efficient frontier. There are other suboptimal combinations for the same conversion rate level, but the profitability will be lower.

A company might also want to maximize the revenue of new business, maintaining a given level of profitability. In that case, management would determine the overall profitability (in whatever form this is defined) to be achieved by the new business, and the optimization process would produce the combination of client profiles and individual prices to achieve it (i.e., maximum number of new policies or highest possible conversion rate), allowing for any restrictions.

“Balancing growth and profitability is the key to long-term success.”

Figure 4. New business optimization process

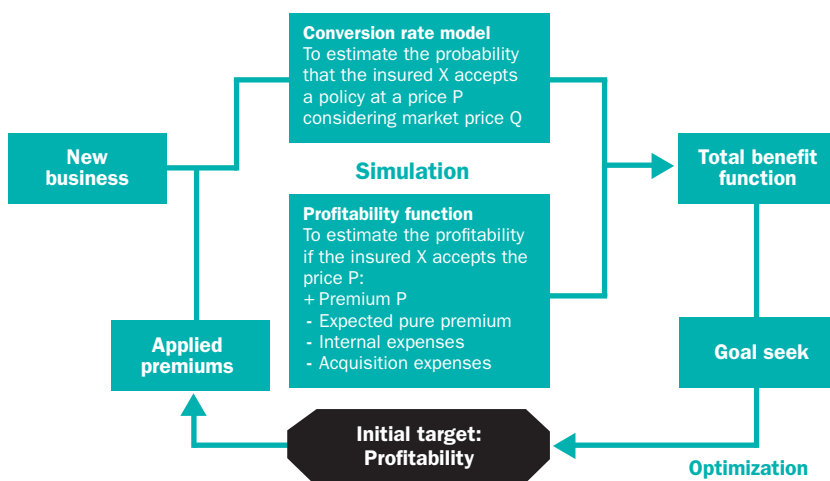


Figure 5 shows an example of an efficient frontier for new business conversion.

- The current Company strategy (red dot) is clearly suboptimal.
- The green dot represents Strategy 1, where the company improves profitability while maintaining the same conversion rate.
- The orange dot represents Strategy 2, where the company improves profitability at a reduced conversion rate.
- The blue dot represents Strategy 3, where the company increases conversion rates while maintaining the same profitability level.

Figure 5. Efficient frontier for new business conversion

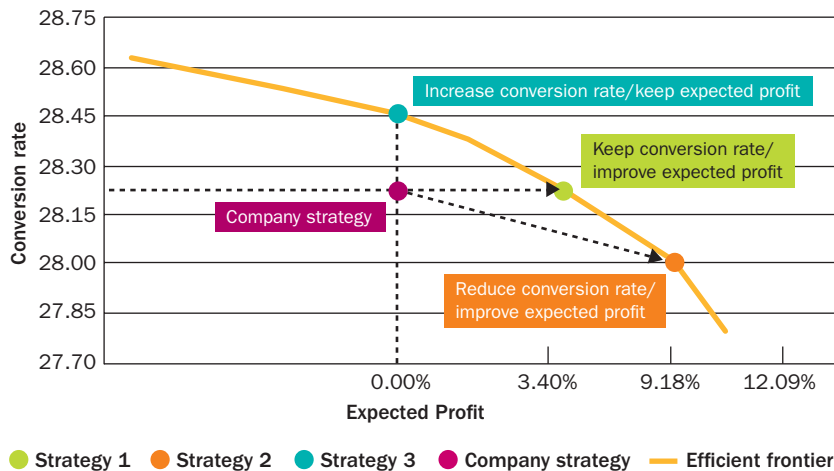


Figure 6. Financial indicators for efficient frontier strategies

Scenarios	Conversion rate	Average premium	Expected profit	Number of policies	Written premiums (thousands)
Company strategy	28.2%	334	0.0%	146,208	48,779
Strategy 1	28.2%	337	3.4%	146,208	49,201
Strategy 2	28.0%	343	9.2%	144,925	49,767
Strategy 3	28.5%	332	0.0%	146,932	48,833

“By adopting price optimization early, pioneering companies will capture more of the new business that they desire at profitable rates.”

Implementing Optimized New Business Rates

The optimal price for new business will be the one that satisfies the company’s strategic objectives while maximizing profitability, subject to management and regulatory constraints. Optimized rates can be implemented in two different ways:

- As an algorithm that calculates the optimized price per individual customer based on his/her particular rating attributes, which can be built into the rating structure and operate in real time
- As a set of optimized premium rates that would fit into a tabular rating structure

Advantages of Adopting Price Optimization of New Business

The classic approach, which calculates premiums based solely on loss costs, is not enough to optimize a company’s growth and profits from new business. The combined analysis of the different indicators that affect profitability allows insurers to reach their financial objectives while maintaining a competitive market position — thereby maintaining flexibility in the face of cyclical changes.

The statistical techniques and models needed for this analysis are available but are not yet widely used, although they are rapidly gaining adherents in different markets. By adopting price optimization early, pioneering companies will capture more of the new business that they desire at profitable rates — and gain significant competitive advantage.

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Europe in 2010:

Post-Crisis, Pre-Solvency II

By Fergal O'Shea and Ewa Machlarz

What is the outlook for the European insurance sector in 2010?

The year bridges two decades, and much of the activity we see today reflects fallout from the economic “boom and bust” climate of the decade just past, together with preparation for the huge regulatory upheaval that will accompany Solvency II in the decade to come.

In this article, we consider both of these aspects, starting with the actions companies operating in Europe should be considering in 2010, followed by a discussion of the effects of the recent financial crisis and the tentative recovery in the European M&A marketplace.

Preparing for Solvency II

The year 2009 saw a great deal of activity among supervisors and insurers in preparing for Solvency II. The Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) issued three waves of consultation papers detailing its advice to the EU Commission on Level 2 implementation measures. And many supervisory authorities began discussions with their insurance sectors, with particular regard to internal model approval for the purpose of calculating solvency capital requirements (SCR). The insurance industry associations (the European insurance and reinsurance federation, as well as national associations) and the CRO Forum actively lobbied on various key topics. Meanwhile, most insurance companies carried out gap analyses to determine their readiness for Solvency II, and some companies began to design implementation plans.

Despite this activity, there is still much uncertainty. CEIOPS and the insurance sector remain divided on such key issues as the determination and classification of “own funds” and the calibration of the standard formula for SCR. The standards for internal model approval will continue to be developed throughout the pre-application process as familiarity with best practice grows and enhancements are implemented, thus making the end goal a moving target.

Although political influences remain difficult to predict, they could be significant, as we saw in the late changes to the Level 1 text — especially where such critical topics as third-country equivalence are concerned. Against this backdrop, there have been preemptive moves by larger insurers to secure additional qualified resources and the focused support of some software providers, which calls into question the ability of other insurers to accelerate their preparations sufficiently as the Solvency II starting date approaches.

Quantitative Impact Study 5 (QIS5) will run from August to October/November 2010 and is the last opportunity for the European Commission to determine an appropriate calibration for the Pillar 1 solvency standard. Although for QIS4 most insurers used approximations and simplifications that would not be permitted under Solvency II, for QIS5 insurers should aim to be as close to Solvency II compliance as possible. Not only will this provide the EU Commission with more accurate calibration data, it will also yield useful information for each participant on its state of readiness and the likely impact on its business — by product, capital instrument and risk.

“Although political influences remain difficult to predict, they could be significant.”



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While full participation in QIS5 should form part of every insurer's preparations for Solvency II during 2010, there are many other essential actions to help mitigate the uncertainty and ensure that the implementation of Solvency II progresses as smoothly and efficiently as possible. Some other key steps for 2010 are to:

- Determine the quantitative risk management information required and desired
- Select and implement the appropriate IT platforms
- Review and enhance the market-consistent balance sheet calculation and document the relevant internal standards
- Design and carry out training programs to mobilize resources
- Collect materials for the draft internal model approval application file
- Review the strategic actions available to gain a competitive edge under Solvency II

We consider each of these in greater detail below.

Quantitative risk management information. Time invested in reviewing the current CEIOPS-proposed disclosure requirements and in developing a template Own Risk and Solvency Assessment (ORSA) report can be invaluable in highlighting gaps both in current calculation capabilities and in more qualitative areas, such as governance arrangements. This process can also help encourage employee engagement across the business and provide the opportunity to identify additional risk information that would be useful in decision making.

Appropriate IT platforms. Solvency II requires more secure, more auditable, more frequent and faster results, so many companies may need new or enhanced IT platforms. An investment in new data warehouses, proxy modeling tools (such as curve fitting or replicating portfolios), or enterprise actuarial or risk modeling systems can pay for itself through improved analysis and decision-making capabilities. However, the selection and implementation process will take time and care to ensure full efficiency and maximum flexibility for the future.

Market-consistent balance sheet and internal standards. The market-consistent balance sheet is the foundation for all quantitative aspects of Solvency II. For some companies, market-consistent balance sheets will be new or will require extensions to cover non-life business. For others, enhancements may be

required, such as the incorporation of management action and policyholder behavior models. In all cases, greater rigor and standards of documentation will be needed — no easy task in the absence of defined European standards.

Training programs. The fundamental concepts of Solvency II must become second nature across the entire senior management team, and traditional attitudes must be changed through engagement and dialogue. Skilled Solvency II resources are already at a premium, and preparing staff for the new regime (with such new issues as the required balance sheet format and product segmentation) will be a major challenge. This will take time and must be supported by a comprehensive training program.

Internal model approval. Many supervisory authorities, including the U.K. and the Netherlands, will begin the internal model approval pre-application process in 2010. Experience from Basel II indicates that incomplete documentation is a major threat to securing internal model approval. Early action to gather the necessary documents can help identify any omissions and provide sufficient time to remedy the situation.

Review strategic action. Not all activities should be focused on compliance. All firms should be considering how their risk appetites and business models might change under Solvency II. Simple actions to enhance capital efficiency under Solvency II, such as product redesign or changes in investment strategy, are available to all insurers.

Although some aspects of Solvency II remain uncertain, many insurers will be better informed and better prepared than others for any pending changes. Finding time to prepare for change amid the pressures of business as usual is difficult, but insurers that act decisively now are likely to be the real winners under Solvency II.

European M&A Activity in 2010

The financial crisis of 2008 caused a significant slowdown of M&A activity in the European insurance sector. Though the overall level of M&A transactions has not yet returned to that of 2007 and early 2008, there have since been some signs of renewed activity (mostly notably and recently the sale of ALICO to MetLife, the Pru's acquisition of AIA as well as the Delta Lloyd, and the imminent PZU and

planned Talanx IPOs). The economic situation seems to have stabilized since the end of 2008, but uncertainty persists, and it is difficult to predict the prospects for M&A business in the coming year. Some of the following factors are likely to affect insurance M&A opportunities in 2010.

Changes in the Regulatory Environment

As might be expected, Solvency II is already having an impact on M&A activity, and its influence will only increase. Although there is still uncertainty about the final details of Solvency II, as noted in the first half of this article, companies are starting to appreciate the implications of this regime on their business and, in particular, the likely effect on regulatory capital requirements.

Capital pressures under Solvency II may lead to an increase in merger activity among smaller firms or even complete closure to new business. Larger entities are likely to be better positioned to benefit from diversification and the resulting reduction in capital requirements. Furthermore, larger firms are likely to be better able to support the development of internal models to more closely reflect their actual levels of risk.

Clearly, the extent of Solvency II's impact on M&A activity will depend on what the final Solvency II standard formula factors are. These factors have not been finalized, and so the overall impact on required capital, and the related effect on M&A activity, remain uncertain.

Financial Crisis: Changes in Supply and Demand

Before the 2008 financial crisis, one strategic driver of M&A activity had been the search by companies in mature markets for good opportunities in emerging markets as a way to expand their global coverage. They sought the higher growth and yields expected in insurance markets such as Russia, Turkey, and Central and Eastern Europe. The 2008 crisis caused many of these companies to pause and reconsider their access to capital, their position in each of their markets and (once again) their business strategy.

The impact of the crisis on group balance sheets and available capital, and the reduced availability and increased cost of funding, have also tempered demand. At the time of the crisis, several pending

“The market-consistent balance sheet is the foundation for all quantitative aspects of Solvency II.”

deals were put on hold as companies tried to assess the extent to which they would be affected by the turmoil. At present, buyers still seem somewhat cautious and risk-averse. This clearly has demand-side impact, although it is uncertain how long this “stall” will persist as national economies stabilize and, in general, resume growth.

There has been some evidence in recent months of a pickup in demand, particularly for high-growth and high-yield investments in developing markets (for instance, the AXA buyout of EBRD's minority share in the ex-Winterthur CEE business, and the MetLife and Pru acquisitions of ALICO and AIA, respectively), and this may indicate increased buyer confidence. Some recently completed and pipeline IPOs (notably, Delta Lloyd, PZU, AIA, Chartis and Talanx) also point to increased market confidence and likely buyer demand.

We believe the key supply-side factors supporting future deals include:

- The trend toward the disaggregation of the insurance value chain and the move away from manufacturing on the part of distributors (in particular, in the bancinsurance sector)
- A refocus on core activities leading to divestiture of noncore assets, especially where these are capital-intensive and are not essential to the main activities or core competencies of the group
- The phenomenon of the “reluctant shareholder” — that is, government-owned or supported banking and insurance entities — wherein the support of the financial institutions in question has been a necessary but temporary expediency, and the public ownership is, in most cases, not consistent with public policy
- The situation regarding government-supported entities will also be influenced by the EU Commission's requirement for group restructuring (meaning, for some companies such as ING or RBS, significant asset disposals) as the quid pro quo for derogation from EU state aid restrictions

Although these factors could increase the supply of potential deals, the demand-side difficulties remain. However, our sense is that while companies are less expansionist than in the recent past, many remain committed to a territorial diversification strategy, with particular focus on high-yield, high-growth developing markets that offer scale opportunities. One positive effect of the financial crisis may be an increased supply of such transactions.

Financial Crisis: Effect on Prices

Before the financial crisis, the effect of high demand for, and a limited supply of, suitable target enterprises in many developing markets was a strong factor in bidding up transaction prices. But while the limited supply of suitable transactions may have inflated pricing levels, the financial crisis has had a greater impact on prices to date. There remain significant differences between bid and offer valuation expectations, and they are inhibiting the completion of deals. The bid/offer expectation gap is one of the most significant issues affecting deal supply. We have seen some solutions to this, such as price earn-outs, but a substantial flow of completed deals is unlikely to occur unless and until the price expectations of both buyers and sellers are more closely aligned than they have been recently.

To date, it appears as if the majority of insurers have withstood the recent financial crisis somewhat better than their banking peers. On the general insurance (P&C) side, most insurers tend to employ prudent investment policies, with the bulk of their assets being invested in cash or cash equivalents. (There were some exceptions to this, and those companies typically suffered investment losses.)

The life sector has been affected more directly by the financial crisis, as the fall in yields and many asset values has reduced the spread margins earned on investment-style products. The economic downturn has also damaged retail consumer confidence and put a squeeze on retail funds available for investment. This has led to an erosion in appraisal values related to lower new business volumes, as well as a significant deterioration in policyholder persistency. On the asset side, there have been some notable write-downs, particularly for companies with U.S. exposures and in structured instruments such as CDOs and ABS.

For the developing markets such as Turkey, prices for deals hit their peak just before the financial crisis. Some deals were then put on hold as prices dropped in reaction to market uncertainty. While no specific deals have been resurrected to date, there has been speculation. However, we cannot see

transactions progressing on previous multiples in the absence of significant conditioning through earn-outs or some other delayed compensation or risk-sharing mechanism.

European M&A: Final Thoughts

Over the past year, the continued influence of supply-side drivers such as regulatory and divestment strategy has emerged among noncore market participants. These factors support an increase in transaction activity. On the demand side, although most participants believe the worst of the financial crisis may have passed, buyers still seem cautious both in their outlook and in the prices they are willing to pay, perhaps mindful of a possible further economic dip in 2010. Compared with this time in 2009, however, firms are more actively considering acquisition opportunities. The key determinant of activity remains the offer and bid expectations of buyers and sellers, respectively, and the extent to which these can converge in such an uncertain business environment.

Conclusion: A Common Theme

The two areas explored above, Solvency II and the M&A market, may appear to constitute a somewhat arbitrary pairing of subjects — but they share an important common theme: that of change presenting opportunities. The notion that change presents opportunities may be thought of as a cliché beloved of consultants, but it is true in general, and definitely true in these two contexts.

Those insurers that prepare best for Solvency II, and take the opportunity it presents for a potentially very beneficial overhaul of their enterprise risk management philosophy and systems, are likely to be the firms that prosper over the decade just starting. Similarly, those insurers looking to expand profitably, whether geographically or in new business lines (or both), should find that the post-turmoil nature of the insurance sector in 2010 presents several opportunities that would not have arisen in the more stable years of the past decade and may not repeat themselves in later years of the decade to come.

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“Capital pressures under Solvency II may lead to an increase in merger activity among smaller firms or even complete closure to new business.”

Windpool

Exposure Risk Management

By Ming Li and Zack Schmiesing

Windpool operations and assessments are changing the face of property catastrophe risk management in the United States.

Because of their sudden and severe nature, catastrophe risks are the primary threat to property insurer solvency. But catastrophe risk management, at least in the U.S., is becoming more successful — and more complex — owing to the emergence of windpools. The convergence of several factors, including recent hurricane landfall activity, economic swings and legislative activity at the state level, have made potential windpool assessments a fundamental piece of catastrophe risk management and an essential part of companies' risk optimization practice. As a result, many insurers now need to consider new approaches to better understand and manage their windpool exposure.

Overview of Windpools

State-operated beach and coastal windpools have grown significantly in the U.S. in the past few decades and in many cases are among the top holders in market share within their respective states. Originally designed as residual insurers, beach and coastal windpools stem from the 1968 Urban Property Protection and Reinsurance Act. This act was intended to provide burglary and robbery coverage to residents in urban areas who were unable to obtain it from the private sector due to increasing rioting and civil disorder at the time. States quickly followed suit by developing state-operated Fair Access to Insurance Requirements (FAIR) organizations. FAIR plans established a property insurance source in high-risk areas for those who were unable to obtain coverage in the standard markets. These residual markets are meant to operate as the insurer of last resort by establishing conservative pricing and exposure requirements.

State-operated FAIR plans (typically formed as joint underwriting associations) are usually governed by the state's insurance regulator. These residual plans (also referred to as shared or involuntary) operate by sharing, or pooling, all writings, profits, operating expenses and paid losses among the association, which comprises specified companies licensed to write within the state. Association members are assigned annual assessments that calculate their portion of the profits or loss costs based on their written premium, as defined by the association guidelines.

Windpools typically cover only losses due to hurricanes, generally exclude flood and operate within clearly defined areas that are eligible for pool consideration. (There is a separate national insurance program for flood hazard.) Applicants are subject to specific maintenance and mitigation responsibilities, and are required to prove they are unable to obtain coverage in the private market. Pool member insurers are assessed based on their written premium market share within the state. Companies can decrease or "write out" of their assessment by voluntarily assuming a certain calculated value of risk within the defined territory.

Beach and coastal windpool associations currently operate in Alabama, Mississippi, North Carolina, South Carolina and Texas. Florida and Louisiana operate Citizens Property Insurance Corporations that have combined FAIR plans with windpools and operate like a traditional insurance company. The remaining eastern Atlantic states (other than Maine, which does not have a FAIR plan) write wind coverage through their FAIR plans.

"Many insurers now need to consider new approaches to better understand and manage their windpool exposure."



Ming Li

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Zack Schmiesing

Specializes in research and awareness of natural catastrophe activity, and works on portfolio optimization practices. Towers Watson, Cincinnati

Expansion of the Residual Markets

Windpool associations currently face a vexing situation. Private markets have been quick to respond to recent catastrophic tropical events, using updated actuarial models to support rate increases that mitigate loss potential and account for reinsurance costs and modeled loss expectancies. This has priced many coastal policyholders out of the private market and forced them to take out policies with the state-operated windpool association. Other companies have withdrawn coverage in highly exposed coastal states such as Florida and Massachusetts due to politically suppressed pricing adjustments, such as proposed rate increases that have been rejected by the insurance commissioner or denial of the ability to apply reinsurance surcharges to policyholders. Windpools, as the insurers of last resort, have seen exposure values and policy counts for these markets rocket upward in recent years.

This problem is compounded by significant population booms in coastal counties all along the Gulf Coast and Eastern Seaboard. Florida's Gulf Coast population has increased by an estimated 91% since 1980, and its eastern coast population has increased by 87%. The coastal population of Texas increased by 66% during this time (Figure 1). The situation in Texas, where the insurance department operates the Texas Windstorm Insurance Associa-

tion (TWIA), has spiraled out of control as exposure increased 362% from 2000 to 2007, and policy counts doubled from 2005 to 2007. The association paid only \$536 million in claims from 1971 through 2007. TWIA paid approximately \$2.1 billion in 2008 alone.

Recent Legislative Developments

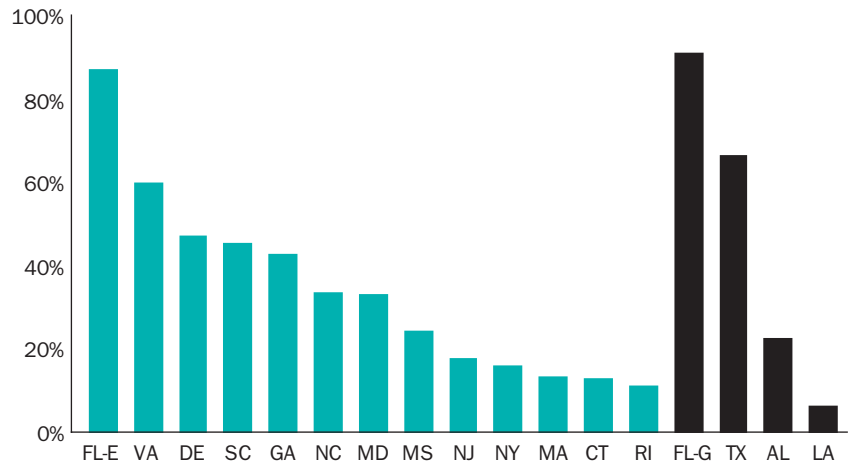
In response to rapidly expanding windpools and recent catastrophe losses, some states have turned to legislative reform to stem the increase in exposures and prevent funding shortfalls.

On April 30, 2009, the Texas Senate passed a windstorm bill in an attempt to solve the crisis facing TWIA after the \$2.1 billion-plus losses paid from Hurricanes Dolly and Ike in 2008 left TWIA with no money in its reserve fund. To restore TWIA to financial health, policyholders face an estimated rate increase of 5% a year for three years. TWIA member insurers can still be assessed up to \$400 million after a storm, which they will not be able to recapture through a policyholder surcharge. At the time of legislation, TWIA proposed three \$500 million reinsurance layers to pay out potential claims; however, the layers were never placed, owing to high reinsurance pricing and a lack of capital for premium funding. Essentially, TWIA operated uninsured in 2009, with all financial responsibility shared among member companies (through assessments) and those privately insured (through rate increases).

The Miami skyline during the peak of the construction boom.



Figure 1. Coastal population change 1980–2008



Source: <http://oceanservice.noaa.gov>, www.census.gov

In Florida, House Bill (HB) 1495 was signed into law in May 2009, making sweeping changes to the Florida Citizens Property Insurance Corporation and Florida Hurricane Catastrophe Fund. HB 1495 allowed Citizens to increase rates to pay into the Florida Hurricane Catastrophe Fund's (Cat Fund) "cash buildup" program and replace the Temporary Insurance Coverage Limits (TICL) program in six years through private sector rate increases and private reinsurance. In November, as part of HB 1495, rates were increased for roughly 330,000 policyholders in high-risk areas, along with a state-wide average increase of 5.2% for homeowner policies, 11% for mobile homes and 9.3% for nonresidential commercial property. The goal of the rate increase is to achieve actuarial soundness within Citizens' traditional rating structure through annual capped adjustments.

On August 26, 2009, North Carolina HB 1305 was passed, putting into place a comprehensive set of "Beach Plan" changes. Its provisions include requirements that the surplus be retained by the plan from year to year, along with an annual \$1 billion cap on nonrecoupable assessments, a 10% cap on catastrophe recovery charges to policyholders, and building coverage caps for residential and commercial structures.

Catastrophe Models and Coastal Risk Management

Ongoing political pressure to limit rate increases has created a grim situation within windpools and FAIR plans. Dedicated capital and reinsurance coverage often do not provide sufficient funds to support recovery from even moderate tropical hurricane damage. The impact of potential assessments, coupled with uncertainty over the solidity of FAIR plan and windpool recovery structures, is forcing private companies to retool their exposure management in coastal states. Some writers are shedding exposure statewide to reduce market share, thus lowering potential assessments, while others are shying away from expansion in the quickly growing coastal regions. Those writers choosing to stay have recognized the risk, balancing their coastal exposure (including potential windpool assessments) as an important part of overall portfolio optimization.

Catastrophe models can be used to help insurers make risk management decisions regarding windpools. These models contain tens of thousands of simulated events that can be used to analyze a portfolio's potential catastrophe losses. Companies can obtain the catastrophe modeling results of the windpool associations' exposure portfolio and determine the likelihood of assessments for various return periods. However, an extensive evaluation must be conducted before the modeling results are used to make any financially significant decision.

For example, companies need answers to the following questions:

- Are the results based on recent exposure data?
- What version of the model was used?
- What modeling options were used?
- Should any additional adjustments be made for nonmodeled perils or losses?

If the results are based on older data, exposure trend factors may need to be applied to create a more accurate view of the current exposure. It is often the case that the results are based on an older model version due to the lag between the windpool associations' portfolio analysis and companies' evaluation processes. The results then need to be adjusted to be compatible with the new models. It is also important to review the model assumptions used, for instance, long-term event set versus near-term rates, or allowing for storm surge and demand surge options. Additional adjustments may be necessary to account for loss adjustment expenses and nonmodeled perils or losses.

"Dedicated capital and reinsurance coverage often do not provide sufficient funds to support recovery."

“It is also important for insurers to consider the potential assessment when deciding how much catastrophe reinsurance coverage to buy.”

After the modeling assumptions are fully understood and any necessary result adjustments have been made, companies need to examine the guidelines and mechanisms of the windpool’s recovery plan and determine the size of their potential assessment. There are certain critical factors that need to be considered:

- The composition of the fund
- Reinsurance structure and activation level
- Recoverable versus nonrecoverable assessment portions
- Current surplus levels of the fund

With the windpool’s modeling results and a full understanding of its operating mechanisms, companies can determine the size of their potential assessment. For each event simulated in the model, the reinsurance structure is applied and the losses adjusted to reflect the windpool’s current surplus level and the recoverable assessment portion based on the relevant state guidelines. Companies’ participation ratios are then applied to derive an event set that contains companies’ assessment for each event. The results are then combined with companies’ own portfolio modeling results to calculate the marginal impact of companies’ exposures to the windpool. Companies can use

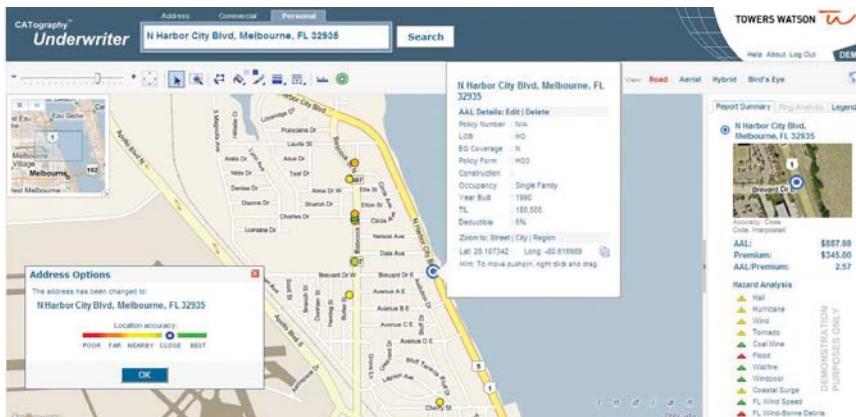
these results to evaluate the impact of their participation and review their reinsurance structures to understand the options they have with the pools to reduce their participation ratio.

Policy-Level Risk Balancing

Since many windpool exposure and subsequent potential assessments have increased significantly in recent years, some insurers selectively write out of the pools. Most states will credit voluntary underwriting within the defined coastal zone when calculating market share for assessment participation ratios, thus decreasing a company’s financial obligation to the plan. In such cases, catastrophe model loss estimates can be accessed through web-based GIS utilities such as Towers Watson’s CATography™ Underwriter (Figure 2) to help determine what types of policy and what areas should be targeted for writing. Different combinations of building characteristics within the pool’s defined eligible exposure area can be evaluated based on the modeled loss estimate results (Figure 3). These GIS utilities can combine existing portfolio concentrations of policyholders with hazard, market and historical loss information. With access to modeled results based on a potential property’s specific risk characteristics, users can determine the impact from voluntarily writing different numbers and kinds of policies with the goal of achieving the premium target — while adding minimal risk.

It is also important for insurers to consider the potential assessment when deciding how much catastrophe reinsurance coverage to buy. This is also likely to be an active discussion topic among primary insurers, brokers and reinsurers. If primary insurers have a sizable participation in the pools, reinsurers want to see what cedants have done to manage their exposure and mitigate portfolio loss potential. The company may wish to share its overall approach to coastal underwriting with reinsurers to reduce their participation ratio to an acceptable level.

Figure 2. CATography Underwriter



Windpool Risk Assessment Alternatives

Windpools, which have grown at an explosive rate in many coastal states, affect the risk management efforts of many private companies and make them reluctant to write business in high-risk coastal areas. The problem is compounded by skepticism regarding the effectiveness of windpools' reinsurance and assessment recovery plans. Political pressure to suppress policyholder rate adjustments has further complicated risk assessments.

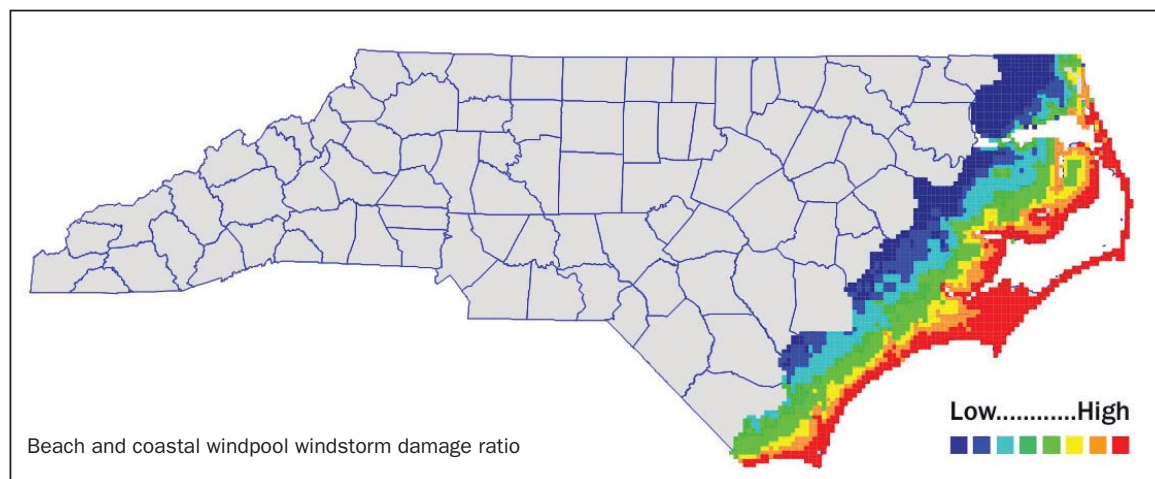
Insurers can use windstorm modeled loss estimates to account for potential assessments and incorporate the results into their catastrophe risk management plan. It is important to understand the modeling methodology and assumptions when examining the results. Additionally, companies can leverage modeled location results for various combinations of risk characteristics to target exposure with acceptable loss estimates for underwriting, thereby lowering their assessment share while mitigating portfolio cat loss potential.

By integrating the management of windpool exposure in their overall portfolio optimization strategy, insurers can provide coverage selectively and manage risk prudently. With individual windpool structures, reinsurance, capital and political focus in constant flux, the response techniques used in these strategies must be flexible. It is also essential for insurers to have a clear understanding of the market share assessment risk versus the assumed underwriting risk when they selectively write in coastal zones to lower assessment potential. While catastrophe models are a source of guidance, they should not be the only tool used to determine risk.

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“Insurers can use windstorm modeled loss estimates to account for potential assessments and incorporate the results into their catastrophe risk management plan.”

Figure 3. Coastal North Carolina hurricane modeled damage ratio



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eValue. By guiding decisions regarding investment, pension or mortgage solutions, this financial planning tool improves the way advice is delivered by retail financial services companies in the U.K. Contact: evaluate@towerswatson.com or +44 20 7170 2240.

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A Quarter Century

With Emphasis on Thought Leadership

By Patricia L. Guinn



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Towers Watson,
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This issue of *Emphasis* marks the publication's 25th anniversary as a platform for thought leadership in the insurance industry. Although *Emphasis* previously existed as a newsletter, it took on a magazine format in 1985 that continues today.

Leafing through that first issue is a bit like opening a time capsule. One article focused on the aftermath of the Bhopal disaster, when a massive chemical spill alerted the world to environmental risks — not to mention a wave of personal injury litigation. Other articles focused on the Bermuda market, trends in life insurance and health care costs. Each of the articles touched on issues that continue to resonate in today's industry.

If you take a broader look back at the mid-1980s, the insurance and financial press was filled with worries about insurer solvency and “wild swings” in pricing as well as the effects of industry consolidation and the emergence of new risks. One newspaper, quoting regulators, said P&C insurers “are becoming insolvent at an alarming rate.” But one top regulator said that his job was to make sure that policyholders' claims are paid and that his profession should not be expected to prevent insolvency.

If environmental risks were gaining prominence, so were other risks that now are part of the landscape. A 1985 *New York Times* editorial, for example, noted that “the insurance industry has begun to take notice of AIDS.”

Insurance journalists' crystal balls had mixed results in 1985. In London, *Post Magazine* wrote that the captive insurance industry “continues to be an important element of the risk financing programmes.” However, the author cautioned, “Many people are pessimistic about their future.” There were about 2,000 captives at the time; today we have more than 5,000. Then again, as the *Financial Times* wrote, “Insurers are by nature professional pessimists.”

Other nascent issues back then included globalization and the growing sophistication of risk and capital management.

The word “globalization” was not as commonly used in 1985, but the force of globalization was mounting. A Lloyd's executive, taking notice of China's growing wealth, predicted that the People's Republic would one day be among the London market's largest sources of business. He also saw potential for other parts of the Pacific Rim, including Malaysia and South Korea. Cross-border M&A activity was already accelerating.

The same was true of technological innovation. Just a year after the introduction of Apple's Macintosh computer and the world's first working “mouse,” modeling technology was still immature by today's standards, but actuaries and other risk professionals were beginning to look into stochastic modeling and other techniques that are widely used today. Meantime, technological advances were setting the stage for better measurement and deployment of capital.

It is satisfying to see that so many of these industry trends and developments have been reflected in the pages of this magazine. Our coverage over the years has examined everything from the risks associated with globalization and demographic change, to the management challenges of M&A and enterprise risk management, to the merits of emerging methodologies related to predictive modeling and price optimization. This issue continues the tradition by examining the movement toward a global solvency standard as well as issues around asset risk management, price optimization, and the implications of the IASB and FASB joint accounting project for insurance contracts.

This 25th anniversary issue is the first since the January 2010 merger of our two legacy companies, Towers Perrin and Watson Wyatt, to form Towers Watson. Both legacy companies have been active participants in the changes that have transformed the industry over the last quarter century. With the combination, I am confident that these pages will continue to contribute to industry thinking on important issues of the day.

For comments or questions, call or e-mail Patricia L. Guinn at +1 212 309 3949, tricia.guinn@towerwatson.com.



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