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1. Introduction

This paper aims to provide the reader with an overview of the current issues and trends seen in recent times in the general insurance industry. We start by giving an overview of the UK insurance market and how it has evolved since 1996. The remainder of the paper is split into four main themes.

Market developments

We give an overview of the market for mergers and acquisitions and discuss the increasing interest in catastrophe linked securitisation within the insurance industry. We also consider the run-off market and discuss developments in the reinsurance market cycle.

Claims

We provide an update on the major loss events in recent years which are generating uncertainty in current reserve estimates and we consider the potential for emerging issues such as climate change and the credit crunch to generate large losses in the future. We also update on recent legal developments in asbestos and personal injury claims.

Modelling techniques

Our analysis of evolving best practices includes reviewing the new techniques available for estimating reserve uncertainty and looking at the issues actuaries need to consider for reserving in a soft market.

Regulation

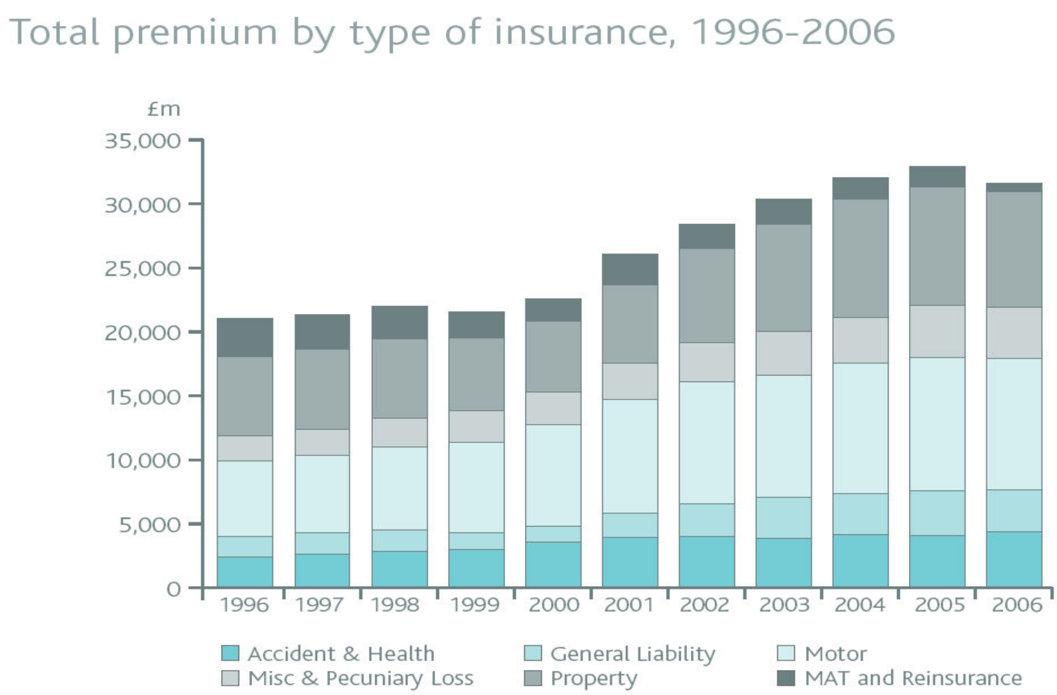
The impact of recent regulatory changes is discussed in the context of the changing capital requirements as a result of Solvency II. We also look at the wider impact of the European Union introducing IFRS and review developments relating to Part VII Transfers.

2. Industry update

General Insurance plays a critical role in the UK economy. The UK insurance industry is the largest in Europe and the third largest in the world.

2.1 The market

In 2006, the total net premiums for General Insurance Business in the UK (excluding business written through Lloyd's of London) were approximately £31bn.



Source: ABI

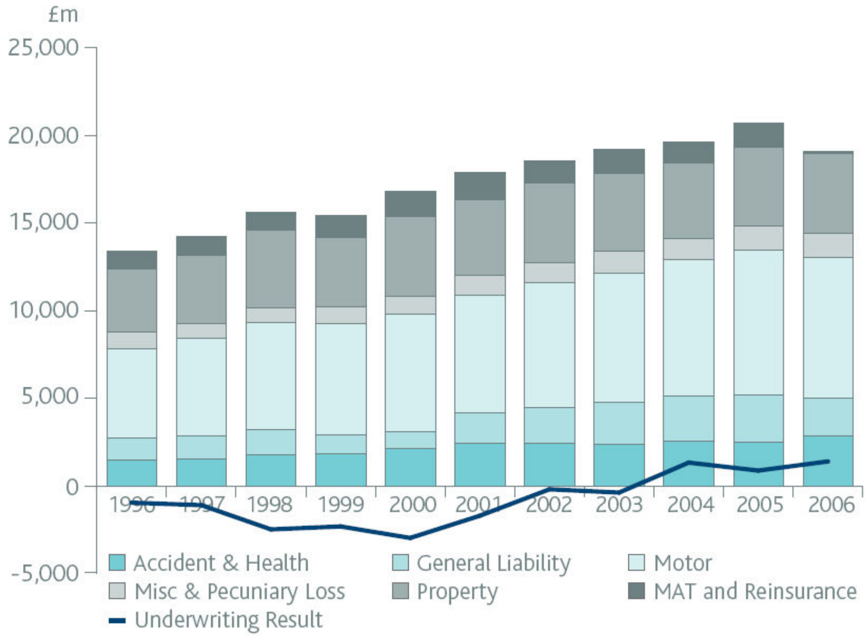
Of the £31bn of net premium written in 2006, 74% was written by the top 10 general insurance companies.

		Total Net Written Premium	Premium (£m)	
2006	**(2005)**		**2006**	**(2005)**
1	(1)	Aviva	5,914	6,003
2	(2)	RBS Insurance	4,438	4,544
3	(5)	AXA	2,703	2,596
4	(3)	Royal & SunAlliance	2,531	2,773
5	(4)	Zurich FS	2,240	2,605
6	(7)	BUPA	1,416	1,390
7	(6)	Allianz	1,260	1,445
8	(8)	HBOS	871	833
9	(9)	NFU Mutual	735	774
10	(11)	Fortis Insurance Company	660	573
11	(10)	Barclays	623	589
12	(13)	Lloyds TSB	590	552
13	(12)	Co-operative Insurance Society	442	562
14	(15)	Brit Insurance Limited	433	485
15	(14)	QBE International	427	538
16	(17)	Groupama Insurance Group	400	354
17	(16)	LV=	343	379
18	(19)	Amercian International Group	311	346
19	(20)	Legal & General	297	311
20	(25)	Munich RE	271	225
Total Net Written Premium (£m):			**£30,831**	**£32,950**
Share of Largest 5 Companies:			**57.82%**	**56.21%**
Share of Largest 10 Companies:			**73.85%**	**71.48%**
Share of Largest 20 Companies:			**87.27%**	**84.98%**

Source: ABI (General Insurance Business in the UK excluding business written through Lloyd's of London)

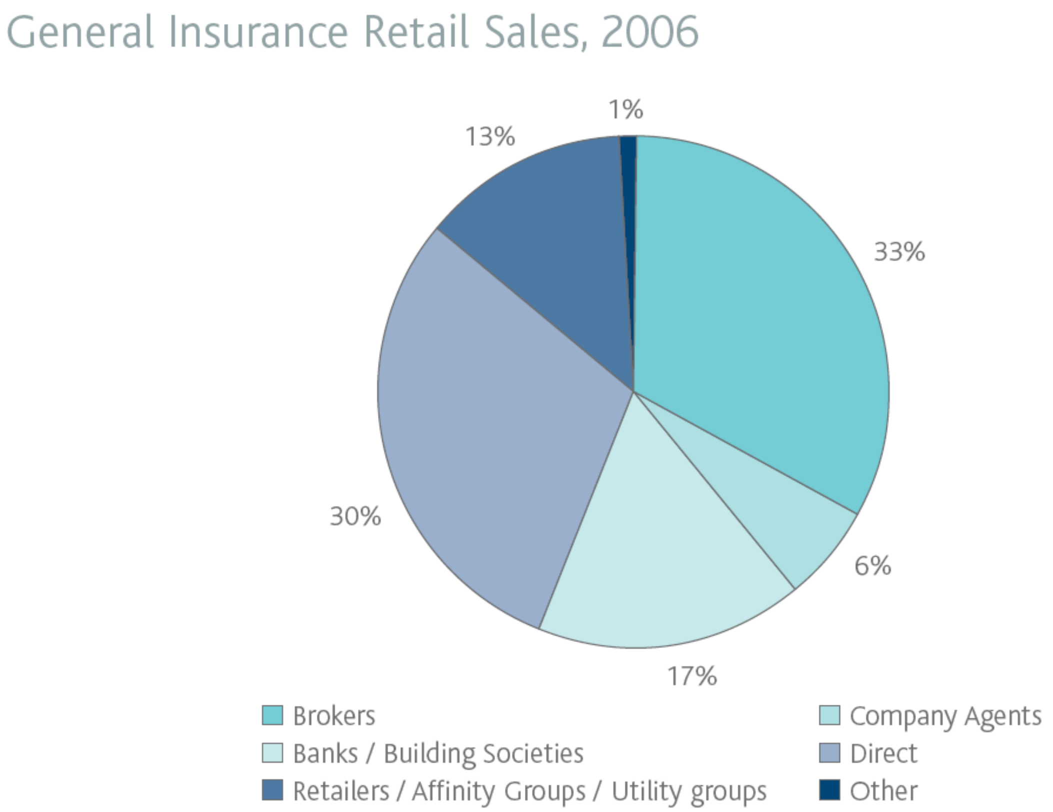
Since 1996, the claims paid by the UK General Insurance industry (excluding business written through Lloyd's of London) have increased by 42% to £19bn. Although claims have increased at a faster rate than premiums over this period, there has been an improvement in the underwriting result. This has partly been achieved by a reduction in expenses, and partly by insurers withdrawing from some of the less profitable markets.

Claims by insurance type, and underwriting results, 1996-2006



Source: ABI

The period between 1996 and 2006 has seen a significant shift in the way that people purchase insurance. This change is most clear for retail sales: the proportion of people buying insurance through brokers has fallen from 53% in 1996 to 33% in 2006. In contrast 17% was sold by banks and building societies in 2006 – an increase of over 12% since 1996.



Source: ABI

In 2006, the total net written premiums for insurance business written through Lloyd's of London were £13.2bn. Net incurred claims over the same period were £6.2bn.

2.2 Current topics

The remainder of this paper discusses in detail some of the key issues currently facing the general insurance industry. As mentioned in Section 1 these are split into four main themes as follows:

Market developments

2007 was a very active year for the M&A markets. Section 3 lists some of these transactions, and discusses the potential reasons for mergers and acquisitions. This is followed by Section 4, which gives an update of events in 2007 which affected the run-off market.

In recent years there has been an increasing interest in catastrophe linked securitisation within the insurance industry. An introduction to securitisation is given in Section 5. Section 6 considers the reinsurance market cycle.

Claims

After a relatively benign year for catastrophes in 2006, 2007 soon proved to be a higher than average catastrophe year. Section 7 gives an overview of some of the catastrophes in 2007. The UK Floods in June and July 2007, 07C and 07E, are described in Section 8.

Despite significant evidence that our climate is changing, 4.5% of actuaries in a recent survey said that they thought “climate change is a media myth”. Section 9 gives an introduction to climate change, and describes the impact on general insurance.

In February 2007, New Century Financials, the second largest sub prime lender in the US, announced that its financial statements needed to be revised due to loan losses. This took the global economy by surprise. Its filing for bankruptcy in April, followed by several reports of losses from financial institutions and real estate industry services, impacted the liquidity in financial markets. In Section 10, we give an overview of sub prime lending and the credit crunch.

There were a number of developments in the area of UK personal injury claims during 2007. These are covered in detail in Section 11. This is followed by Section 12, which gives an update of court decisions and rulings in 2007 in respect of UK and US Asbestos.

Modelling techniques

During 2007, one of the main issues for general insurers was the softening of premium rates for nearly all lines of business. Section 13 discusses what actuaries can do better when reserving through the soft market. With a growing emphasis on the uncertainty within claims reserves, Section 14 discusses the main challenges actuaries face in estimating reserve uncertainty.

Regulation

In Section 15, we discuss the impact of recent regulatory changes in the context of the changing capital requirements as a result of Solvency II. Then in Section 16, we give an introduction to Part VII transfers and an update on current legislation.

In Section 17, there is an update of the progress of International Financial Reporting Standards (IFRS).

3. Mergers & Aquisitions

2007 was a very active year for the M&A market. There were numerous transactions within and across different insurance markets.

3.1 Introduction

Over the past few years private equity has dominated the M&A market. However, recently corporate players have re-emerged demonstrating the increased confidence of the corporate market and strong balance sheets in certain markets, particularly Bermuda. The private equity industry has responded by stepping up its ambitions. Huge levels of liquidity have energised the market with private equity looking to invest vast sums. It is now conceivable that a group of private equity investors could buy a FTSE 100 company. We have also seen the development of alternative investors in the traditional private equity arena. Against this, the credit crunch and reduction in liquidity and banking finance may apply the breaks to these transactions.

3.2 Recent activity

In the London Market, Japan's largest non-life insurer has agreed to purchase Kiln, the Lloyd's insurer, for £442m. The Japanese group is aiming to use its large asset base to expand its overseas business. It has already made acquisitions in Brazil and Asia and this latest purchase will give it access to the London Market.

October 2006 saw Equitas being reinsured by the Berkshire Hathaway company, National Indemnity Company (NIC). This was a major deal for all of those involved in Lloyd's business written prior to 1993, as it will mean the end of the uncertainty regarding their liabilities, once the final phase is complete.

Bermuda based insurers have also shown interest in the London Market; Validus Re acquired Talbot underwriting and Ariel Re acquired Atrium underwriting. In both cases the purchase was made at a price significantly above the book value. The Bermudan insurers see the Lloyd's platform as capital efficient and benefiting from good flexibility and speed of access to customers.

Munich Re has been active in the M&A market in 2007, acquiring Midland & Sterling Life in the US, MSP in the UK and making other purchases worldwide.

In the companies market, Berkshire Hathaway has continued to expand its insurance holdings through its purchase of NRG, a life reinsurer in run-off since 1993. ACE Limited has acquired Combined Insurance Company of America, nearly doubling its presence in the global accident & health market. Zurich has also continued to build its European business; in January 2008, Zurich announced its purchase of TEB Sigorta, its sixth acquisition in the European market since December 2006.

The company market has also seen a growing interest in acquiring brokers. Insurers see this as an opportunity to gain ownership of their customer base whilst reducing their costs at the same time. AXA has been particularly active, purchasing 5 brokers in 2007 including Swiftcover and the Davis Group.

As well as assisting other companies in M&As, investment banks are making some acquisitions of their own. Deutsche Bank paid £997m to acquire Abbey Life, the closed life book of Lloyds TSB. Analysts believe this to be the most expensive deal of its kind seen in the UK. Goldman Sachs has also made an approach to the reinsurance broker Benfield for $700m.

More recently it is believed that Willis, the world's third largest insurance broker, has approached Marsh & McLennan regarding a possible takeover deal. The transaction could value the broker in excess of $15bn.

3.3 Drivers of M&A activity

Increased M&A activity in the insurance industry reflects the increased availability of capital following the strong underwriting performance seen in recent years. In the aftermath of the 2005 hurricane season – the worst on record and responsible for the single largest insured event – rates hardened significantly. In contrast to 2005 the 2006 and 2007 hurricane seasons caused significantly lower insured losses and as a result general insurers have mostly seen strong underwriting results.

An insurer considering an acquisition is seeking to diversify while building economies of scale. Acquisitions offer a buyer the opportunity to enter into new markets with a ready-made business model and infrastructure. A well executed transaction allows the buyer to incorporate new products and platforms quickly into its business. Closed books can also be seen as a profitable use of capital if the buyer believes they can run-off the liabilities for less then the price of the purchase.

Changing regulatory requirements are also driving acquisitions. As insurance markets move to risk-based capital regimes (ICAS in the UK, Solvency II in Europe) capital providers are reassessing their business mix in light of their capital requirements. Under the new Solvency II regime it is expected that the capital models will explicitly recognise product and geographical diversification in calculations of capital. Therefore, insurers may see acquisitions as an effective way of diversifying their portfolio to optimise their capital requirement.

In recent years we have seen increased interest from non-insurance investors seeking diversification away from their core business risks. The securitisation of insurance risk though alternative risk transfers such as catastrophe bonds has brought investors' attention to the world of general insurance. Emerging experience in the catastrophe bond market has educated investors in insurance risk, highlighting the high yields available for accepting catastrophe risk – a risk uncorrelated with the typical economic and business risks facing a global investor. This increased understanding has resulted in both corporate and equity investors increasingly viewing general insurers as a natural part of any well diversified investment strategy.

3.4 Expectations for the future

It is likely that the high level of M&A activity will continue to some extent into 2008. Global insurance markets still show plenty of potential for consolidation with larger organisations seeing acquisitions as an effective way to diversify and to build scale. However, the appetite for M&A's will be affected by the impact of the sub-prime mortgage crisis and credit crunch on both the banking and insurance sectors. Companies are continuing to assess their exposure to sub-prime lending. The level of financial loss will affect a company's appetite for M&A's and also their attractiveness to purchasers. The credit crunch has reduced the level of liquidity in the US and other countries worldwide. This is likely to be the case for some time. Falling liquidity levels may make acquisitions all the more expensive.

4. The Run off market

There were several notable developments in the run-off market during 2007.

4.1 Sanction of WFUM Pools' Schemes

In September 2007, the UK High Court of Justice sanctioned the schemes of arrangement proposed for the companies that made up the Willis Faber Underwriting Management (WFUM) Pools. The schemes' successful sanction reinforces schemes of arrangement as a key tool for achieving finality on run-off portfolios, both direct and reinsurance. Progress in this field had been slowed by the uncertain judicial landscape created following the July 2005 failure of the BAIC solvent scheme to achieve Court sanction. The successful implementation of the WFUM Pools' schemes reflects the evolution of pre-scheme and voting procedures, the drafting of the scheme documents and the estimation methodology.

4.2 EU Reinsurance Directive

Europe's Reinsurance Directive which was due to be implemented in all member states by December 2007, allows reinsurers to benefit from transfers of legacy business that could be a burden to the balance sheet. The directive supplements the Third Non-Life Directive, which applies to insurers who may also have written some reinsurance business.

The Directive will allow a pure reinsurer without a so-called "sufficient connection to the UK" to transfer a book of business in Continental Europe to the UK. Whereas previously practitioners had to show one or more connections such as UK creditors, UK insurers, or business written through UK brokers, to get to work on solving the issues through London, the directive will be a form of European passport and will likely increase the number of solutions for books in run-off. Apart from schemes of arrangement, other options include reinsurance, loss portfolio transfers, and transfers of liabilities under Part VII of the Financial Services and Markets Act 2000 (see Section 16.5).

5. Securitisation

Securitisation typically involves the sale of financial instruments which may otherwise be unmarketable to investors and are backed by assets producing cashflows. The cash flows are used to pay an income stream to the investors with a repayment of principal at the end of the term.

A special purpose vehicle is used between the borrower and the investor. This ring-fences the cashflows and initial principal from both the investor and issuer and hence protects the underlying assets from issuer bankruptcy.

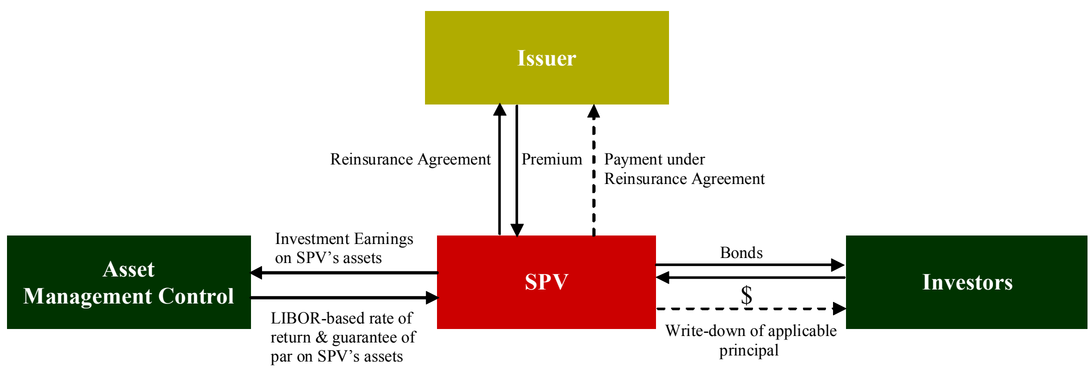
Securitisation of insurable events involves the securitisation of a portfolio of insurance liabilities relative to a pre-defined point of reference. This can take the form of both:

- Low volume catastrophe and similar liabilities where the return on the bond is linked to the incidence of one or more of these liabilities and their financial impact. In this case the risk of a natural catastrophe has been transferred to investors with reward relating to a lower incidence or impact than expected.
- Existing portfolios of high volume insurance liabilities such as personal lines household and motor books where the return on the bond is linked to the profitability of the portfolio. In this case the risk of underperformance has been transferred to investors with reward for performance above a strike point.

Recent years have seen greatest non-life interest in catastrophe linked securitisation within the insurance industry both due to the increased popularity of these instruments amongst investors, greater regulatory acceptance of innovative uses of capital and associated innovation in response to this demand. Therefore we will focus on this area of insurance linked securitisation.

The fundamental transactions within a typical catastrophe linked securitisation (as illustrated below) are:

- a premium payment from the reinsured to an SPV
- provision of capital by investors to the SPV
- investment of the capital and premium in fixed income instruments to produce a coupon stream for investors
- on non-occurrence of a trigger event, continued payment of coupons to investors and payment of principal at the end of the term
- on occurrence of a trigger event, a possible reduction or freezing of coupon payments and a withdrawal of principal to cover the losses arising from the trigger event.



Catastrophe linked bonds currently have four forms of loss trigger. These are:

- Indemnity
  - Acts like a traditional reinsurance contract where coverage matches the portfolio of the reinsured.
  - Can give rise to disputes as with traditional reinsurance
- Indices
  - Recoveries are based on the performance of an index related to a catastrophe, for example wind speed.
  - lower chance of dispute due to objective measurement
- Parametric
  - Recoveries are based on parameters of catastrophic events
  - Parameters can be customised to reflect the cedant's areas of greatest risk
  - lower chance of dispute due to objective measurement
- Modelled Loss
  - Hybrid between indemnity and parametric transactions
  - A portfolio is built to model the reinsured's own portfolio
  - Recoveries are based on the output of a third party model of the effects of a peril's parameters on the reinsured's portfolio.
  - Reduction in likelihood of disputes

The popularity of catastrophe linked securities lies with its attributes for both investors and those seeking protection.

The key benefits catastrophe linked securities offer are

- For investors:
  - Diversification from other asset classes
  - Differing levels of risk available with the structure being tranched into different slices each having different levels of exposure to the losses and associated risk premiums.
  - Possible greater transparency due to the underlying natural events
  - Capital exposure being limited to their initial capital investment
- For insurers:
  - Cat bonds transfer peak insurance risk from the (re)insurance industry to capital markets with a wider reinsurance base providing
  - Greater protection from counterparty credit risk due to the ring-fencing of capital for payment of losses
  - A wider base of sources and forms of reinsurance protection allows insurers to protect themselves more optimally from aspects of their exposures
  - Fewer disputes due to more objective measures of exposure to losses

The key areas of risk each should be aware of for catastrophe linked securities are:

- For investors:
  - Reduced diversification benefits due to excess concentration to geographical exposures and similar types of risks due to the focus on risks with geographical exposure to the western hemisphere
  - Not understanding the risks of the exposures they accept through their investment
- For insurers:
  - Basis risk due to the indemnity triggers being a less popular form of trigger for these securities
  - Basis risk through misunderstanding the insured exposures and hence the protection required from non-indemnity triggers.

In conclusion, securitisation is a useful additional tool for insurers to optimise their exposure to risk and a useful choice for investors to diversify their portfolio. Catastrophe linked securities increase the capacity available for protection of these low volume, high impact exposures and in conjunction with other methods of protection will enable the insurance industry to better protect itself from extreme losses.

6. The end of the reinsurance market cycle?

In the January 2008 reinsurance renewal season, premium rates reduced in most classes.

6.1 Introduction

As always at this point in the cycle, there were the familiar pronouncements from the major reinsurers that, although rates have fallen, they are still adequate. In the past this has often turned out to be wishful thinking, but could it be that the cycle is finally becoming less severe, and perhaps even disappearing completely? The 2008 rate falls were certainly not as significant as many commentators had expected given the benign loss experience of the previous couple of years in many classes.

There are at present several forces at play that, taken together, could lead at least to a significant dampening of the reinsurance market cycle:

- Increased availability and use of technical rating tools.
- Legal and regulatory pressures for greater transparency and competition.
- Increasing use of capital market solutions.

In this section we look at each of these in turn and discuss the possible effects on the reinsurance underwriting cycle.

6.2 Increased availability and use of technical rating tools

There are several strands here:

- Technical pricing tools, based on probabilistic models calibrated to actual historical loss experience (frequency and severity), are now readily available and becoming more widely used.
- In property catastrophe, models of the main natural hazards are constantly being improved, and the use of these models is becoming more sophisticated. In particular, post Katrina, the limitations of these models are now better recognised and taken into account by users, as is the importance of using accurate exposure information.
- The worldwide drive of regulators towards risk-based capital modelling (for example Solvency II in the European Union) is leading to the widespread adoption of Enterprise Risk Management techniques. Although the primary objective of regulators is policyholder protection, a valuable spin-off is that these techniques, if deeply embedded, encourage underwriting discipline.

In summary, quantitative methods in underwriting are becoming more sophisticated and are being used increasingly effectively. This should act to dampen the cycle by attacking it at the point it has reached right now: where excess capital has been attracted by a year or two of relatively benign loss experience. Although most underwriters, if asked, would no doubt agree that a year or two of benign experience does not necessarily imply risk has diminished, rates have in the past often fallen to unrealistically low levels at this point in the cycle.

Technical risk assessment using tools such as those mentioned above brings more science to the task of distinguishing short-term random variation from longer-term trends. For example, natural catastrophe modelling systems make it very plain that the relatively benign loss experience of 2007 was just good fortune. 2007 was the first year on record in which two Atlantic hurricanes made landfall as category 5 storms (Dean and Felix). Fortunately both these storms made landfall in less developed parts of Central America. Cat models show what might have happened if the paths taken by these storms had been different.

6.3 Legal and regulatory pressures for greater transparency and competition

These pressures should tend to dampen the reinsurance cycle by attacking it at the point where rates would otherwise rise excessively following a few years of poor results.

Frictional costs of traditional reinsurance have been targeted by regulators and legislators for a few years now. At last there seems to be a concerted effort to act against the obvious potential for conflict of interest that occurs when brokers, who are supposed to be acting for one party in a transaction (the cedant), are remunerated by the other party (the reinsurer).

It was in October 2004 that Eliot Spitzer (then attorney general of New York State) announced his intention to sue Marsh & MacLennan for anti-competitive practices. Several other major reinsurance brokers were also implicated and paid substantial fines and damages. Although the brokers did not admit liability, they changed their business practices so that cedants would be more aware of brokerage commission.

Three years later, the European Commissioner for Competition (Neelie Kroes) has embarked on a similar campaign. Unlike the US case, there is no allegation of fraud against particular brokers, but this may be the first step towards new regulations requiring greater transparency in the EU. The effect would undoubtedly be to reduce frictional costs and make the reinsurance market more competitive. At present, brokerage commissions in some classes of business can be as high as 40% of the total premium.

While clearly bad news for brokers, and although aimed primarily at fair treatment of cedants, the reduction in frictional costs is likely to benefit traditional reinsurers in the long-run, particularly now that they have to compete increasingly with alternative risk transfer methods such as catastrophe bonds and similar capital market solutions.

In addition to questioning the transparency of reinsurance brokerage, the European Commission is also questioning the competitiveness of the long-established subscription approach to reinsurance (in which co-insurers sign up to the same terms and conditions, and at the same premium rate, as set by a lead underwriter). If the lead underwriter sets a rate that is too low, then it will not be possible to attract sufficient participants to place the risk fully. However, if the lead underwriter sets a high rate, then other market participants are only too happy to follow. This lack of real competition as the market rises almost certainly contributes to the market cycle.

The main argument in favour of the subscription market is efficiency (which implies lower frictional costs): it is argued that detailed risk assessment is carried out only once by the lead underwriter. However, the optimum premium rate at which any reinsurer should be prepared to take on a risk depends on factors such as correlation with risks already underwritten and the reinsurer’s solvency margin. As these things vary from one reinsurer to another, it is not appropriate for all to quote a rate equal to that of the lead reinsurer. In a more competitive market, a reinsurer whose existing risks have low correlation with the proposed risk should be willing to accept the new risk at a relatively low rate, all else being equal. A reinsurer with a relatively high solvency margin requires a higher premium in order to achieve an acceptable return on capital: in return for this higher premium, the cedant has a higher level of security than would be obtained from less well capitalised reinsurer. (This is recognised in Solvency II, which allows credit for reinsurance assets depending on the security rating of the reinsurer.)

With the increasingly widespread use of ERM techniques mentioned previously, it is increasingly feasible for reinsurers to compete in this more sophisticated way, so the traditional practices of the subscription market now put greater limits on competitiveness than they did in former times.

Outlawing of the subscription market (which has been called for by some commentators) seems unlikely at present, but cannot be ruled out. This would radically change the way the reinsurance market operates. If each coinsurer offered different terms and conditions, the administrative complexity of claims handling would become excessive. A more realistic scenario is a market in which terms and conditions are fixed on each contract, but coinsurers offer to participate at differing premium rates.

6.4 Capital market solutions

Catastrophe bonds and similar capital market solutions finally seem to be taking off in a big way after a dozen or so years of incubation. There are now many examples of such instruments being used in place of traditional insurance and reinsurance. They have been issued by primary risk-takers (oil companies, for example), by primary insurers, and by reinsurers.

For traditional reinsurers, capital market solutions are a double edged sword:

- They lead to increased competition, as they are an alternative means by which primary insurers can manage their risk.
- They are a means by which traditional reinsurers can manage their own risk.

To compete effectively with this new alternative, traditional reinsurers need to operate efficiently, and in particular, to reduce the transaction costs associated with traditional reinsurance. It is true that there is also a high frictional cost at present associated with capital market risk transfer, but this is likely to reduce as these new instruments become more standardised. One aspect of this is the development of standardised catastrophe loss indices by the cat modelling companies.

This competition between traditional reinsurance and capital market solutions is clearly likely to dampen the traditional reinsurance cycle, again by attacking it at the point where, in the past, traditional reinsurance rates have risen excessively following a drop in capacity caused by a few years of poor results.

6.5 Conclusion

In summary, it seems likely that the reinsurance cycle will be less severe in future than it has been in the past. However, the basic economic and psychological forces that cause the cycle are still with us, and the cycle is unlikely to disappear completely.

7. Catastrophes

After a relatively benign year for catastrophes in 2006, 2007 soon proved to be a higher than average catastrophe year.

7.1 2007 catastrophes

Barely three weeks into 2007, Windstorm Kyrill swept through the UK and Northern Europe, killing 47 people. The insurance loss for this is expected to be around £2.3bn.

The UK was affected by widespread flooding in June and July; 07C and 07E respectively. Current estimates suggest the total loss to the insurance industry for both of these events is in the region of £3bn. These floods are described in more detail in Section 8.

The 2007 Atlantic hurricane season was the first recorded season with two Category 5 storms making landfall. Hurricane Dean started as a tropical wave on 11 August 2007 and by 18 August it had become a 165mph Category 5 hurricane. It made landfall between Mexico and Belize, and then weakened over the land.

A tropical wave formed on August 31 2007. On 1 September, it strengthened to become Hurricane Felix. By 3 September, it had rapidly strengthened and became a Category 5 hurricane. It made landfall as a Category 5 hurricane in a region known as the mosquito coast, an area on the Atlantic coast of Nicaragua. Hurricane Felix set a record for the fastest intensification from first advisory to a Category 5 Hurricane in the Atlantic.

As neither of these Category 5 hurricanes hit widely populated areas, they did not lead to particularly large losses to the insurance industry.

In October 2007, a series of wildfires burnt across Southern California. Santa Ana winds, along with drought and the hot weather, helped the California Fires to spread. The fires were reportedly started by a number of sources, including arson and damaged power lines. The estimated loss to the insurance industry as a result of these fires is approximately $1.9bn.

In October and November 2007, as much as 80% of the state of Tabasco in Mexico was flooded. The Tabasco Floods were caused by rivers bursting their banks following heavy rain. The resulting loss to the insurance industry is estimated to be $0.7bn.

It has been widely speculated that catastrophe related losses will get worse over the coming years. Following 2005 when Katrina, Rita and Wilma caused widespread damage and large insured losses, 2006 did not live up to the expectation of being another bad year for catastrophes. As a higher than average catastrophe year, 2007 very quickly lived up to some people’s views that there will be more and more catastrophes, but the question is, what does 2008 have in store?

7.2 Update of the 2005 hurricanes

Continuing uncertainty exists around exclusions for flood losses caused by the levee breaches in New Orleans following Hurricane Katrina. A ruling by a Louisiana court in November 2006 held insurers liable for flood losses on the basis that the policy wording did not distinguish between flooding as caused by natural forces and flooding caused by man-made negligence i.e. through inadequate flood defences. In August 2007, this ruling was overturned by the US Court of Appeals for the fifth circuit. It ruled that the flood exclusion should stand regardless of the cause of the floods. The insurers' position was further strengthened when the Supreme Court declined to hear the appeal in February 2008, stating that it is not an issue to be settled in Federal courts.

In late 2007 it was revealed that, following the exhaustion of its physical damage cover, an insured in the Gulf of Mexico had claimed for its removal of wreck expenses under its third party liability cover. Owners of rigs, platforms etc in the Gulf of Mexico are responsible for removal of wreck costs following a loss, as enforced by the authority granting leases in the region. Historically these claims have been covered by the insureds' physical damage policies, however where their cover is exhausted insureds are now claiming on their liability policies. One claim has been settled for a market loss of $200m and it is thought that there are approximately five other notified claims. The expected loss from these other claims is thought to be materially smaller than the claim which has already settled. The potential for other claims to arise and for the known claims to increase adds to the uncertainty around the market's ultimate exposure to hurricane Katrina.

8. UK floods 07C and 07E

Flooding is not an uncommon occurrence in the UK. Events occur on a fairly regular basis, and are the result of a variety of causes.

8.1 Introduction

Over the last 60 years, areas of the UK have experienced flooding caused by snow thaw in 1947, tidal surge in 1953, prolonged periods of rainfall in 2000 and torrential rainfall in 2005.

According to the Association of British Insurers (ABI), household insurance in the UK is unique in that flood cover is included as standard. The provision for flood cover is written under the ABI's 'Statement of Principles', which was renewed in 2005. This guarantees cover to households with a 1-in-75 or less risk of annual flooding, or in areas at greater risk where plans are in place to improve flood defences to this level.

8.2 2007 floods

ABI estimates indicate that some 400,000 homes in the UK are at a 1-in-75 or greater risk of annual coastal or inland flooding. Throughout June and July of 2007, many areas of the UK suffered from flooding, with perhaps the most notable events in Hull and Gloucestershire. Current ABI statistics suggest that in total the cost of the summer floods will be around £3 billion as a result of around 165,000 claims, of which in the region of 120,000 relate domestic policies.

To put a sense of scale on the costs of the 2007 floods, the combined incurred claims reported to the ABI for the third quarter of 2007 were £1,461m. This figure encompasses both the domestic and commercial property weather claims. In comparison, between 1997 and 2006, the average claims for the third quarter were £172m.

The threat of flooding from tidal surge was also highlighted in November, when sea levels around the east coast of the UK reached their highest surge levels for several decades. From an insurance cost perspective, the main fear related to tidal surge is that it could result in flooding in parts of central London. The Environment Agency estimates that the financial cost of a flood in central London could reach £30 billion.

8.3 Government & ABI response

On 9 October 2007, the Government announced its plans to increase spending on flood defences to £650m in 2008/09, £700m in 2009/10 and then to £850m 2010/11. On the same day, the ABI issued a press release saying that in total these figures fell £100m short of the levels for which they had called before the summer floods. The ABI, along with other groups, has also called for the spending increases to be brought forward, so that improvements to flood defences can begin as soon as possible.

In early December 2007, the ABI released its review of the summer floods, Summer Floods 2007: Learning the Lessons. In this, the ABI made a number of recommendations which it feels will help improve the response to future flooding events. Many of the recommendations focus on the need for better preparation and response procedures, so that disruption to services and delays in reaction are minimised when such events occur in the future.

As part of the Climate Change Bill, the ABI review calls for the Environment Agency (EA) to take a key role in identification, assessment and mitigation of flood risk. The review also calls for the EA to commission and make available flood maps, showing the risk of flooding from all sources.

On the theme of the need to keep the public informed, the ABI recommends that the Government produce a 25-year national strategic plan. This plan would also set out policy investment changes needed to meet the targets set out in the Climate Change Bill. Along with the long-term plan, the Government would be required to produce annual updates, detailing progress and the investment policy for the next three years.

With a view to producing a planning policy which will meet the UK's future needs, the review calls for the Government to support the EA by ruling in cases where Local Authorities have decided to overrule EA advice. In tandem with this, the ABI calls for building regulations to be amended so that repairs in high-risk areas are carried out to a higher standard.

8.4 The way ahead

The ABI's Statement of Principles currently runs until 2009. The issue of legislation surrounding domestic household insurance is controversial, but is one which has broached recently by Sir Michael Pitt, author of the Pitt Review: Learning lessons from the 2007 floods. Sir Michael has called for minimum standards to be set for customer service, after his review identified instances of neighbours being given conflicting advice by their insurers.

The Pitt Review's final report is due to be published in June, and aims to work with the industry to improve claims handling. However, Sir Michael has said that if the ABI is not able to make improvements on its own, then legislation will be necessary.

However, Sir Michael does seem to be in agreement with the ABI over the need for action over flood warning and defence measures. On 13 February 2008, he warned a meeting of the Local Government Association that preparations and warnings for surface water flooding were not in place, and called for more resources to prevent similar disasters from occurring in the future.

9. Climate change

Climate change is increasingly becoming an acknowledged reality. While the debate still goes on about its causes and whether it is a “phase” or a long-term trend its existence is generally accepted.

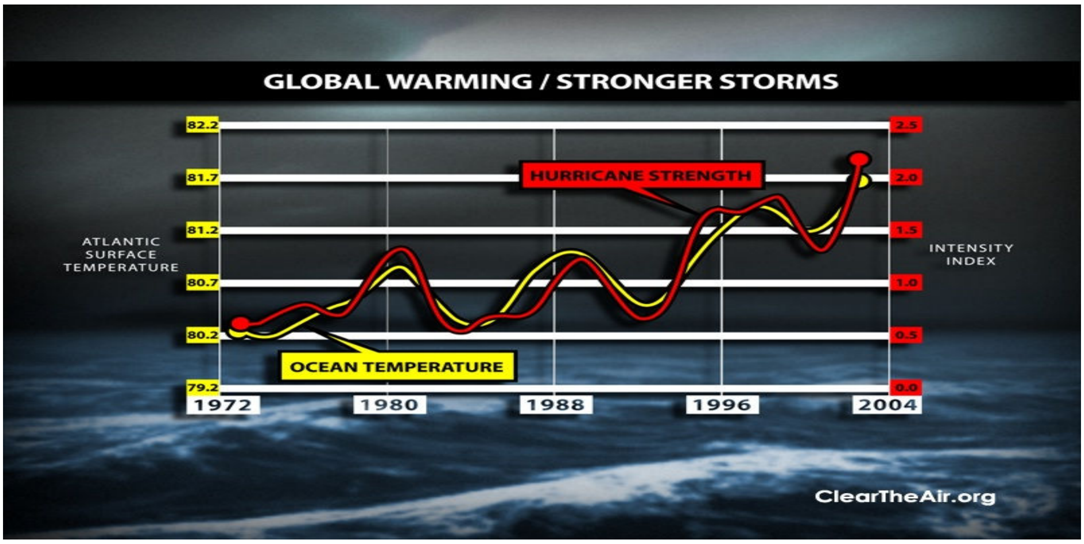
9.1 Introduction

The overwhelming majority of scientists believe that humans are responsible for this greenhouse gas-warming. Climate change is expected by experts and scientists to impact the world economy in many ways. There are a wide range of opportunities and threats, not least for insurers.

9.2 The reality of change

Events in 2007 such as the Californian wildfires, flooding in the UK and Asia and drought in Australia were all partly attributed to climate change. The 2007 hurricane season was only the fourth season in which two category five hurricanes were recorded and the first season in which two category five hurricanes made landfall (Hurricane Dean and Felix in both cases). Increasingly, the signs are that climate change related events are occurring now and we can no longer speak of these issues as a future concern.

The melting of the ice caps may lead to a rise in sea levels. Warmer conditions will also cause a rise in sea level as the volume of the oceans expands a little. A rise in sea levels would of course lead to increased sea encroachment, but also to an increase in storm surge flood risk. While there is some uncertainty about the rate of changes due to global warming, many scientists agree that we will see an increase in frequency and severity of severe weather events such as hurricanes, storms, floods and droughts.



Correlation of ocean temperatures and hurricane strength (courtesy of ClearTheAir.org)

9.3 The impact of change

The socio-economic impact of climate change is global in scope and its effects will be felt by people, businesses and governments alike. Increasing temperatures and associated water shortages will increase pressure on already strained ecosystems. The greater risk of crop failure due to heat waves and floods will increase the likelihood of localised food shortages.

On a national scale, “trigger events” such as flooding could result in significant changes in property and land values, from which there will be winners and losers in all lines of industry. On a global scale, changes in regional climates and availability of food and water could result in conflicts and migration. Again there will be winners and losers, so it is critical that the insurance industry adapts now to make certain we are ready for climate change.

9.4 An Actuary’s view

A questionnaire was put to the actuarial profession in October 2007 on the implications of climate change on their work. The profession’s views on climate change were varied but there was a consensus on some issues, 83% of those surveyed believed climate change is real and 58% also thought that it was likely to have an impact on their work. Of those who believed climate change is real and will impact their work, 52% believed that current assumptions need to be modified in order to incorporate climate risk into non-life pricing and reserving models. To summarise; climate risk is real and is not adequately reflected in current models.

9.5 Insurance risks

Natural catastrophes that affect the UK are mainly storms and floods which have a direct impact on private and commercial properties with a consequent impact not only on property insurance but also on business interruption insurance. The cost of disruption brought by natural catastrophes to the overall economic activity can be greater than the cost of damages to infrastructure and property. Insurers have the opportunity to work with their customers to ensure that proper coverage is being sought but insurers can also help their customers to better understand the risks. It may be that new types of cover could be developed which could be both profitable for insurers and beneficial to their customers.

While flooding as a result of rising sea levels is a long term concern, a more immediate concern is the changing frequency of hurricanes, particularly along the East Coast of the US and the Gulf of Mexico. Research shows that global warming also leads to more frequent and more intense storms. Even a minor hurricane making a direct hit on Miami would give rise to billions of dollars of losses. Furthermore, rising ocean temperatures may make it more likely that hurricanes will sustain energy further north and could make landfall as up the coast as New England. This will bring fresh challenges for insurers, to model and control their aggregates.

9.6 Opportunities

There are also business opportunities involving climate change. Increasingly, a good environmental record is an essential part of company strategy. An example is the ABI's climate wise initiative, launched in September 2007. This is a grouping of companies and organisations in the insurance industry who have signed up to a set of principles aiming to acknowledge the risks associated with climate change and implement mitigating strategies.

Climate change products will also provide new market opportunities. The UK floods of the Summer of 2007 made it clear the consequences of having inadequate insurance provisions in place. According to ABI, a 10% increase in uptake of retail property and contents cover could generate up to £1.29 billion in additional premiums each year based on current premiums.

There is no doubt that the insurance industry has much to do in relation to climate change. This is not all about cost and threats – there are many opportunities for insurers to be the source of financial security and stability to many other industries as they grapple with the changes ahead.

10. Sub prime lending and the credit crunch

In February 2007, New Century Financials, the second largest sub prime lender in the US, announced that its financial statements needed to be revised due to loan losses. This took the global economy by surprise. Its filing for bankruptcy in April, followed by several reports of losses from financial institutions and real estate industry services, impacted the liquidity in financial markets.

The U.S. sub-prime mortgage crisis has had and will probably continue to have an impact on the insurance industry. Despite not being affected as strongly as the banking sector, the insurance sector has still suffered some losses. The key uncertainty remains on the scale of the impact.

10.1 Key concerns for the insurance industry

The main areas affecting the insurance industry are:

- Investments: some insurance companies have invested in instruments which may be affected by the sub-prime crisis. The most affected instruments are: collaterised debt obligations ("CDO"), mortgage backed securities, credit default swaps or even public/municipal bonds, which have been insured by monoline insurers. These are insurers who guarantee the timely repayment of bond principal and interest upon default of an issuer.
- Traditional Insurance Exposure: insurers with exposure to Directors & Officers ("D&O") and Errors & Omissions ("E&O") could be exposed to security class-action lawsuits mainly arising from
  - Mismanagement of a company's investment portfolio
  - Participation in any securities issued
- Bond insurers: some bond insurers provided financial insurance guaranteeing payments of principal and/or interest covering defaults of bonds, CDOs, and residential mortgage securities. The sub-prime crisis led to significant liabilities for certain bond insurers with exposures on securities related to sub-prime mortgage bonds. Bond insurers are now faced with the challenge of raising enough capital in order to retain their ratings, which is vital to keep on underwriting business.
- Mortgage insurers: some mortgage insurers, protecting lenders from default on home loans, have been adversely affected due to the increased number of defaults on loans.
- General economic difficulties: there is still uncertainty about whether a general economic fall out will arise and if so to what extent.

10.2 What has already happened?

Several companies have already reported losses following the sub-prime crisis for different reasons. We draw your attention to some losses reported and how they affect different companies for different reasons.

- XL Capital Holdings ("XL") reported a net loss around $1bn in the fourth quarter of 2007, caused by around $1.5bn of losses due to credit market conditions: at least $550m of which is due to its investment in Security Capital Assurance Ltd ("SCA"), and $330m of reserves losses in relation to reinsurance agreements with SCA. SCA, of which XL retains a 46% share, has been significantly hit by downgrades of CDO.

- The world largest bond insurer MBIA has seen large losses due to exposure to sub prime losses. Following these losses, MBIA had to raise capital in order to retain its AAA ratings. Another large bond insurer, ACA, recorded net losses of $3.26bn compared with year earlier income of $202.7m. The company was in talks to raise capital at the end of January 2008, aiming to return to an AAA rating.
- Swiss Re and AIG, amongst others, have announced significant impacts from the credit crunch because of their exposures to credit derivatives. In November 2007, Swiss Re reported a CHF 1.2bn mark-to-market loss arising from its exposure to two credit default swaps written by its Credit Solutions unit that provides protection for a client against a fall in the value of a portfolio of assets. In February 2008, AIG reported a $4.88bn charge for credit default swap insurance it wrote against collateralised debt obligations backed by sub prime mortgages.
- JP Morgan announced on 16 March 2008 its acquisition of Bear Stearns, the fifth largest US securities firm, for approximately $2 per share, down from $100 at the end of 2007. After reducing rates, the Federal Reserve stepped in the sub-prime crisis once again by providing a $30bn financing arrangement with JP Morgan to cover Bear Stearns less liquid assets, which would likely include mortgage securities. In addition, the Federal Reserve reduced interest rates for the sixth time in six months by three quarters of a percentage point to 2.25%.
- Bear Stearns had been particularly badly affected by the sub-prime crisis, notably as a result of two of its internal hedge funds collapsing last June due to high investment in mortgage securities. This, and the fact that Bear Stearns is considerably smaller than some of its Wall Street rivals, meant that it did not have the liquidity needed to continue to trade independently.

10.3 What to expect in the future?

As mentioned above, securities class-actions have already been filed. Professional Liability Insurers and Reinsurers, with D&O exposures in particular, may face large losses.

Analysts announced in November 2007 that losses to the insurance market are likely to be around $3bn. At the end of January 2008, equity analysts tripled initial estimates to $9bn of expected D&O losses, related to the credit crunch, due to an ongoing weakness in the equity markets. It is difficult to assess the impact, especially as it takes a few years to have a more precise idea of the amounts involved in such claims. Approximately 170 claims have been filed through Lloyd’s to date.

Another uncertainty is the effect the crisis will have on reinsurance rates, especially in the current soft market. Some believe that this has not had a significant impact on the 2008 renewal rates, except on companies with large exposures on the affected areas.

Finally, the credit crunch has reduced the level of liquidity in the US and other countries economies. This is likely to be the case for some time and therefore will impact the wider economies.

There is however a possible upside to the general insurance industry. As insurance risks, particularly those relating to natural catastrophes, are perceived to have little or no correlation to other economic risks, investors may seek to enhance returns on their portfolios through greater investment in the industry. This may be via direct equity investment, or through the rapidly expanding cat bond securitisation market.

11.Personal injury update

During 2007 we saw a number of developments in the ever evolving area of UK personal injury claims. Here we discuss those that are most significant to the general insurance industry.

11.1 Periodic payments developments

Over the year there were several key court judgements relating to the indexation of periodical payments. A landmark ruling was made in the case of Lee Carl Thompstone vs. Tameside & Glossop Acute Services NHS Trust.

Background

The Claimant, Lee Carl Thompstone, was born at the Defendant's Tameside Hospital on 15 March 1999. He claimed damages for major brain injury sustained at birth as a result of negligence in the management of his birth. His injuries take the form of spastic quadriplegic cerebral palsy for which he will always require various therapies, care and equipment.

The case came before Honourable Mrs Justice Swift on two occasions in March and June 2006. All heads of loss were agreed and approved by the court, save for damages for future care.

The main outstanding issue is the method of payments of future care costs, i.e. by lump sum or periodical payment, and in particular which index payments should be linked to if periodical payments were to be used.

The judgement – 23 November 2006

Based on financial advice received the Claimant felt that it would be more appropriate for the periodical payments to be linked to an earnings index rather than RPI. Based on expert evidence from Dr. Victoria Wass, an academic labour economist, it was argued that for many years earnings had increased faster than prices.

The Defendant opposed the use of an index other than the RPI.

Based on the evidence heard the Judge reasoned, in this landmark decision, that linking the periodical payments to RPI would breach the principal of the Claimant's entitlement to 100% compensation.

The Judge ordered that the amount of periodical payments should vary with reference to the 75th percentile of the Annual Survey of Hours and Earnings (ASHE) 6115, which tracks the changes in the wages of carers. This was the first case in which a Court has determined whether an index other than RPI should be used to increase periodical payments.

Following this ruling there were several other judgements where periodical payments have been linked to indices other than RPI, including:

- RH vs United Bristol Healthcare NHS Trust
- Corbett vs South Yorkshire Strategic Health Authority
- De Hass vs South West London Strategic Health Authority

The appeal – 13 November 2007

The NHS appealed the decision in the four cases mentioned above. The case was brought before the Court of Appeal on 13 November 2007 and the Lord Justice Whaller handed down his ruling on 17 January 2008. The court upheld the first instance decisions in each of the four cases and closed the door on any further appeal unless the defendant was able to produce previously unheard evidence.

It is not yet known whether the defendants will petition the House of Lords directly to appeal this ruling.

11.2 Injury costs recovery scheme

The new NHS Injury Costs Recovery (ICR) scheme came into force on 29th January 2007. The scheme replaced the previous Road Traffic Act (RTA) scheme.

The new scheme will introduce the following changes for the first time:

- The collection of ambulance charges which will be recoverable for journeys where the injured person has made a successful personal injury compensation claim.
- Provisions to take into account contributory negligence where it has been a factor in the primary compensation claim.
- The ability to waive repayment of NHS Charges on excessive hardship grounds prior to appeal.
- Liability applies to all compensators, not just insurance companies.
- It extends to foreign compensators.
- Crown bodies will no longer be exempt.

The Compensation Recovery Unit (CRU) of the Department of Work and Pensions will operate the new scheme on behalf of the Secretary of State for Health as they did for the RTA scheme.

Charges will be recoverable where:

- A personal injury compensation payment has been made in consequence of any injury suffered by an injured person

and the injured person has:

- Received NHS treatment at a NHS hospital as a result of the injury
- Been provided with NHS ambulance services as a result of the injury (unless dead on arrival), or
- Received treatment at a NHS hospital and been provided with NHS ambulance services.

The new scheme will apply to treatment provided in NHS hospitals in England, Scotland and Wales.

11.3 6th Edition of Ogden Tables

The 6th Edition of the Ogden Tables was published on 3 May 2007. These tables are produced by the Government Actuaries Department (GAD) in consultation with lawyers, accountants and other relevant parties. They are intended to provide a guide for the multipliers to be applied to an individual's earnings and / or care costs to ascertain an appropriate lump sum award.

There has been no change to the 2.5% discount rate, set by the Lord Chancellor in June 2001, to be applied when selecting the appropriate multiplier. However, there have been some key changes in the assumptions and approach used in the 6th edition compared to the 5th. These are a change in the mortality assumptions and the change in the evaluation of contingencies other than mortality.

Mortality

The mortality assumptions used in the 5th Edition of the Tables were based on the then latest available population projections (the 2002-based population projections) for England and Wales. These projections were then adopted for use throughout the United Kingdom.

The 6th Edition of the Tables uses mortality rates from the latest available population projections (based on the 2004-based population projections), which take account of data following the last National Census. This has had the largest impact on the multipliers at younger ages for loss of pension. There has been very little change in the multipliers for loss of earnings and increases of between 0% and 4% for multipliers for pecuniary loss for life compared to those in the 5th Edition.

Contingencies other than mortality

This is the most significant development seen in the 6th Edition of the Tables as it is a departure from the approach used in earlier Editions.

The research concludes that people without disabilities spend more time out of employment than earlier research had suggested. This implies that it is considered appropriate to apply a higher discount for contingencies other than mortality than was previously indicated. All other things being equal, the effect of this is that some claims for loss of earnings would reduce.

The research also concludes that there are four main factors that have the most impact on a person's future employment status. These are:

- gender;
- whether the person was employed or unemployed at the outset;
- whether the person is disabled or not; and
- the educational attainment of the person

Factors that were previously considered important, such as occupation, industrial sector, geographic location and level of economic activity become relatively insignificant once educational attainment has been taken into account.

Accordingly, the discount to be applied to a working life multiplier can be found from the tables by looking up the reduction factor to be applied to a person with reference to their status on the four new factors listed above.

11.4 Department of Constitutional Affairs – consultation papers

Case track limits and the claims process for personal injury claims

The first part of this paper reviews and makes proposals on the case management track limits for civil claims. The second part considers how the claims process for personal injury cases could be streamlined to become more efficient and cost effective.

The consultation period began on 20 April 2007 and ended on 13 July 2007.

The law on damages

This paper sets out for consultation various issues relating to the law on damages contained in a series of reports published by the Law Commission:

- Claims for Wrongful Death
- Liability for Psychiatric Illness
- Damages for Personal Injury
- Medical, Nursing and Other Expenses
- Collateral Benefits
- Aggravated, Exemplary and Restitutionary Damages.

The consultation period began on 4 May 2007 and ended on 27 July 2007.

The results of the consultations, which are yet to be released, will give us an indication of their significance.

12. Asbestos update

There were a number of court decisions and rulings in 2007 in respect of UK and US asbestos.

12.1 UK asbestos – pleural plaques

In October 2007, the House of Lords ruled that pleural plaques are not a compensable disease. The landmark judgement upheld the Court of Appeal ruling in January 2006, which found that the condition was not in fact a disease and hence people should not be able to receive compensation. Prior to this judgement, pleural plaques sufferers had been compensated for over 20 years. The trade union Amicus has estimated that there are around 14,000 pleural plaques cases a year, accounting for around 75% of all UK asbestos-related claims.

After the House of Lords decision, there were calls for the decision to be overturned. The government has, however, decided that it would not be appropriate to legislate on the issue. In November 2007, the Scottish Government announced that it was planning to introduce a bill to overturn the House of Lords' judgment in Scotland and to restore compensation to thousands of Scottish workers diagnosed with pleural plaques. There still remains some uncertainty as to precisely how this will be achieved. If the House of Lords decision is not followed in Scotland then there may be pressure on England and Wales to follow suit.

12.2 UK Asbestos – mesothelioma

Disparity in compensation amounts

A campaign demanding equality for families affected by asbestos across the country has been launched after it was revealed that English families are receiving tens of thousands of pounds less compensation than their Scottish counterparts. In England and Wales the level of bereavement compensation is set at £10,000 by the Fatal Accidents Act 1976 and is payable to the spouse only. However, in Scotland, where payments are decided by the court, awards have been up to £30,000. Other family members in Scotland can also receive bereavement compensation of between £10,000 and £15,000, which is separate from other forms of compensation such as loss of earnings.

PL and EL wordings

It has been warned that disputes surrounding employers' liability wordings may leave mesothelioma claimants in limbo, not knowing from which insurer they can claim against. The difficulty arises from employers' liability wordings that resemble wordings more typically used in public liability policies. The issue has been highlighted following the failed appeal in 2006 of former local authority insurer Municipal Mutual Insurance in its case against Bolton Metropolitan Borough Council over asbestos liabilities. This case concerned a public liability policy, which covered "injuries occurring during the period of insurance". It was found that mesothelioma “occurred” when the disease manifests itself - not at the time of exposure. Employers' liability policies, however, more typically protect against "injuries caused during the period of insurance". A number of test cases on the issue are due to be heard in June 2008.

Amendment to the Compensation Act 2006

In the case of Fairchild V Glenhaven Funeral Services (May 2002), the House of Lords ruled that in mesothelioma cases, where exposure had occurred in more than one employment, it was not necessary for a claimant to prove which of those exposures had caused his disease. He could sue any one of the employers and recover his damages in full, leaving that employer to try to recover contributions from any other implicated employers.

In Barker v Corus UK (2006), the House of Lords decided that the proportion of compensation paid to a claimant should be proportional to the time that an employer negligently exposed the claimant to asbestos. The judgement also stipulated that employers were not liable to compensate a claimant for the time that he had been self-employed and thus had negligently exposed himself to asbestos. Following considerable public outcry, the Government amended The Compensation Act 2006 to effectively bring matters full circle, back to the position as it was immediately following the Lord's ruling in Fairchild. Once more insurers and claims handlers are likely to face claimant solicitors targeting solvent or insured companies in order to secure full compensation.

12.3 US asbestos

Stability of claim filings

Over the past few years there has been a stark reduction in asbestos claims filings in the US. This reduction, primarily in respect of non-malignant claims, has followed from the introduction of legislative reforms in a number of states. States such as Florida, Georgia, Kansas, Ohio, South Carolina and Texas have introduced strict medical criteria in order for a plaintiff to be eligible for compensation. In some other states unimpaired claimants are placed on an “inactive docket” until their symptoms develop into a compensable disease. Other states such as Maine, Maryland, Mississippi and Pennsylvania have introduced forum shopping legislation, which means that the claimant has to demonstrate a sufficient connection with the state in order to file their claim there.

According to some published figures, new asbestos claim filings against the Manville Trust, long regarded as a reliable indicator of asbestos litigation, have fallen from over 100,000 in 2003 to around 10,000 in 2006.

Under-funding of asbestos and environmental liabilities

Based on their statutory returns (Footnote 33), the US Insurance Industry’s asbestos liabilities may be under-funded by between \$5 billion and \$20 billion as at 31 December 2006 (Similarly, the US Insurance Industry’s pollution liabilities may be under-funded by between \$2 billion and \$23 billion as at 31 December 2006. These estimates of possible under-funding are based on various published estimates of the total US insurance industry’s asbestos and pollution losses.

13. Reserving through the softening market – how can actuaries do better?

Following the relatively benign loss experience of 2006 and the declaration of record profits, the impressive rate increases achieved during the prior renewal seasons were not repeated in 2007 and the start of 2008.

Although most observers are convinced that the market is now softening, they are less clear as to the true extent of falling rates.

Within this section, in the context of previous soft markets and managing the reserving process for outstanding liabilities, we discuss the following:

- understanding the concept of a "reserve" cycle; and
- understanding the business;
- recording premium rate movements;
- the benefits of benchmarks.

13.1 Understanding the reserving cycle

It is only as recently as 2003 that an actuarial paper suggested the existence of a reserving cycle. This paper postulated that the reserving cycle was correlated with, yet lagged, the underwriting cycle. Insurers exhibited a tendency to over reserve when the underlying loss ratios are low (i.e. during the hard part of the cycle) and under reserve when the underlying loss ratios are high (i.e. during the soft part of the cycle).

An understanding of the main drivers of the reserve cycle is important when attempting to allow for the impact of such a cycle when carrying out a reserving exercise. This includes the impact of:

- stronger case estimates being made during the "harder" parts of the underwriting cycle, and vice versa;
- changing terms and conditions through the underwriting cycle (e.g. average contract length), leading to a change in the underlying development pattern;
- changing coverages; and
- inappropriate use of rating indices due to the impact of the underwriting cycle.

The reserving cycle is visible across all underwriting classes, but tends to be more pronounced in long-tailed casualty classes. It is important that management is aware of the reserving cycle, how to cope with it and that they can also anticipate it. However, this is not an easy task, and is one which needs further research.

13.2 Understanding the business

A good understanding of the underlying business is key to the accurate estimation of reserves. Understanding both the business written and the impact of changes in underwriting through the years is vital. What may seem trivial at an earlier juncture may have a substantial impact on the eventual profitability of the business written. For example, detailed discussions with underwriters should take place about the impact of any changes in the underlying business and how it can be allowed for in the reserving process. This thorough understanding ensures that suitable adjustments and appropriate assumptions are made when setting the reserves.

As such, it can be useful for firms to consider changes in features of each of the reserving classes such as:

- changes in underwriting staff;
- descriptions of business insured;
- details of any major contracts; and
- summaries of market losses impacting the class.

The need for understanding the business is more pronounced when there is a change in market conditions. For example, in a more competitive market, there is often pressure on terms and conditions as well as price. These may change to improve the marketability of a product, and the level of coverage offered may also change. This could lead to changes in claim characteristics for the most recent business written. The impact varies by class; for example, we would tend expect a more pronounced change in the casualty/liability classes. These and other factors should be fully understood and reflected in any actuarial estimates.

13.3 Recording premium rate movements

A robust, efficient and well understood approach to recording premium rate movements is essential for the construction of premium rating indices which have a fundamental importance within the reserving process, business planning and pricing models. If accurately recorded, a premium rate index can indicate whether the market is softening and to what degree it is softening so this can be reflected in the reserves.

In May 2004, Lloyd’s issued guidance which suggested that consideration of rate movements should be broken down into a number of key elements, including the following four:

- claims inflation;
- pure rate change;
- changes in terms and conditions; and
- changes in exposure.

Historically, the estimation of rate movements has been almost entirely dependent upon the judgement of underwriters. Management and actuaries should be working with the underwriters to set up a clear and robust framework whereby rate change information should be considered and selected in an efficient way.

13.4 Benefits of benchmarks

A common theme in soft markets is for insurers to underwrite a wider range of business types, both in order to diversify but predominantly to be able to write business in lines where they believe ‘harder’ rating levels are available. As such, in previous soft markets, companies have started dabbling in areas with which they are less familiar.

In the absence of meaningful historical data, companies should investigate different sources of benchmark development patterns and loss ratios which can be used to develop the reserving assumptions. For the reasons discussed above, it is important that actuaries understand both the business they are reserving, and the business which has been used to derive the benchmark.

Due to the complexities of insurance portfolios, as well as characteristics that make a class unique to a particular underwriter, no single market benchmark is likely to be found and an appropriate blend will need to be derived.

13.5 Conclusion

During the soft part of the market cycle it is critical for firms to review their reserving processes. There are various tools that can be used to help improve the process. Actuaries should also be reviewing the reserving process and consider adapting the process in light of changing reserving methodology. Deriving good quality premium rate indices, benchmarks, understanding the business underwritten and understanding the reserving cycle are important in being able to improve the reserving process and the robustness of the estimates.

14.Reserving uncertainty

The setting of reserves for general insurance business relies on the estimation of future claims development. Reserving uncertainty is the process of quantifying the volatility of this reserve estimation.

14.1 Introduction to reserving uncertainty and recent developments.

Actuaries commonly use three different measures:

- Range of reasonable best estimates - The actuary's view of the range of best estimate reserves that a "reasonable actuary" could determine based on the available information.
- Range of probable outcomes - The entire range of possible outcomes, excluding those events that are considered extremely unlikely and could be ignored for all practical purposes. This could mean between the 10th and 90th percentiles of the distribution of the reserve outcomes.
- Range of possible outcomes - Description of the entire distribution function of the possible ultimate claims costs relating to a block of policies – theoretically this could range from zero to infinity.

Estimating reserving uncertainty has become an increasingly important issue in recent years, with its applications to capital setting within the ICAS regime and in line with the requirements of the updated GN12 (the UK non-life actuarial profession's guidance on actuarial reports, which includes guidance on reporting uncertainty). In light of the upcoming Solvency II and IFRS regimes, the discussion around the techniques and approaches available to estimate reserving uncertainty is likely to gain an even greater significance in the years to come.

There have been several working parties exploring different aspects of reserving uncertainty. These working parties consist of general insurance actuaries, whose areas of expertise include reserving. Examples of recent developments include papers from the Reserving Oversight Committee of the Actuarial Profession, namely "Best Estimates and Reserving Uncertainty" released in July 2007 and "Quantification and Reporting of Uncertainty for GI Reserving" released in August 2007. The papers discuss existing guidelines, an interpretation of GN12, the idea of a best estimate, methods used to quantify uncertainty, descriptions of uncertainty and communicating uncertainty with reference to reserving uncertainty and General Insurance actuaries.

With the above papers in mind, some of these areas for discussion are looked at in more detail below:

14.2 Challenges in estimating reserve uncertainty

The fundamental challenge facing someone who is trying to make an estimate of the uncertainty in a set of reserves is how to estimate the range of outcomes which might occur in the future using only the data that relates to that particular company's experience to date. For example, if a company has exposure to a particular type of natural disaster which occurs on average once every 100 years, but only has data going back 25 years, then it is unlikely that the company will have the historical data to be able to judge the impact that such an event might have on its reserves.

A range of statistical methods are available which attempt to solve this problem by aiming to generate a full probability distribution for the reserves, recognising that the experience to date will form a sample from that distribution.

When estimating reserve uncertainty, it is often the "tails" of the distribution that are of importance. For example, when determining the capital requirements for an insurance company it is necessary to consider 1-in-200 year events, or the 99.5th percentile of the reserve distribution.

Recently, research has been carried out by the GI Reserving Oversight Committee which aimed to evaluate precisely how good the various different statistical methods were at estimating the uncertainty in a set of reserves. One of the aims of the research was to compare the strengths and weaknesses of different methods and to provide a starting point for actuaries to learn about the different techniques available. However, the research produced some unexpected conclusions which have a significant impact on the way that reserving uncertainty is considered.

The methodology adopted was to simulate a claims run-off triangle by using a statistical distribution. The "true" ultimate value of the simulated claims was also obtained by simulating the claims all the way to ultimate. Each statistical method for estimating uncertainty was then applied to the triangle and the "true" ultimate value of the claims was compared to the range of outcomes predicted by the statistical method. This process was repeated thousands of times to determine how good each method was at predicting the range of outcomes.

Somewhat surprisingly, it was found that even when the run-off triangles used were simulated in such a way that they complied perfectly with the assumptions of the statistical method being tested, all of the statistical methods tended to underestimate the events at the tails of the distribution. In other words, events which that statistical method estimated should occur once every 200 years were actually more common than this. When the statistical methods are applied to real-life data, where it is usually unclear how well the assumptions of the method are met, it is possible that these statistical methods will perform even less well.

The consequence of this conclusion is that it is unlikely that using a statistical method by itself will be sufficient to quantify the uncertainty in a set of reserves adequately. Other, often more subjective, techniques will need to be applied as well and actuaries will need to apply significant judgement to decide on the most suitable approach and to satisfy themselves that the results of their analysis are reasonable.

14.3 Communicating uncertainty

A further area of debate around reserving uncertainty is in how best to communicate uncertainty to non-actuaries or, more generally, people who do not have a statistical background. This could include company management and the wider public.

A possible way of assisting with describing uncertainty is to adopt the wording conventions used in the reports of the intergovernmental panel on climate change. These reports uses specific wordings depending on the likelihood of a particular event occurring, for example an event might be described as fairly likely to occur if it has a probability of 75%, likely to occur if it has a probability of 90%, very likely to occur if it has a probability of 95% and extremely likely to occur if it has a probability of 99%. In this way uncertainties can be described in plain-English terms, which assist understanding.

14.4 Looking forward

The actuarial working parties are making big steps to increase the understanding and awareness of reserving uncertainty within the profession. In parallel with this, the implications of Solvency II are raising the profile of reserving uncertainty within the wider insurance community. The requirement of Solvency II for risk based capital is pushing the topic up the list of insurance management's priorities, which is forcing companies to increase their understanding of it. With the actuarial profession focusing on the ease communication of this highly technical subject it is hopeful the dialogue on this subject will be greatly improved.

15.Capital and Solvency II

Capital models, the results from them, their wider use and understanding (or not) and reporting on these models continues to be a hot topic that consumes significant resources within the UK general insurance world.

15.1 Introduction

As we move closer to Solvency II, where the use of internal models is likely to become even more widespread, more companies are focusing on (continuously) developing their models, improving their understanding of these models and extracting more valuable insight and information from them.

The results of QIS3 and likely structure of the SCR formula mean that, for most companies of a reasonable size, an internal model is likely to give rise to a lower capital requirement than using the standard formula. Use of an internal model is dependent upon regulatory sign-off of that model.

A theme common to both the ICAS regime and Solvency II is that a key requirement which will need to be met, in order for a regulator to sign-off a model, is that the company must be able to demonstrate embedded use of, and belief in, its own model.

15.2 ‘Moving further into an embedded world’

A common subject in our discussions with various insurance companies, both large and small, has been ‘what does it really mean, having an embedded model?’ Whilst opinions as to what ‘embedded use’ might be have varied widely within these companies some consistent themes are emerging from the regulatory side of the discussion.

As well as the appearance of a wide range of viewpoints between companies operating at the two ends of the ‘embedding’ spectrum, there also appears to be a gap between what many companies claim they do, in a qualitative manner, and the quantitative reality of their capital modelling operations. This is particularly the case with respect to capital allocation.

However, common capital allocation themes emerging from companies operating at the more advanced end of the modelling spectrum include:

- Recognition that there is no single, correct way in which to allocate capital;
- Use of multiple methods of allocating capital that are dependent upon both the specific question that is being asked and reason for allocating capital;
- Using the results and information from a capital model as one of several sources of information used to inform a final capital allocation process; and
- Recognition that the amount of capital and risk appetite used to drive a regulatory level of capital might be very different from the risk appetite that is used to determine strategic decision making.

When it comes to educating potential users of model output, and to production of tailored reports and information for these users, a consistent message is that this process takes time and considerable effort to get right. However, the resulting benefits are said to make the effort fully worthwhile.

15.3 Developing areas of modelling

Areas where we have seen the most development recently include catastrophe modelling, reserve uncertainty and operational risk.

In catastrophe modelling two areas that companies have particularly been focusing on are:

- Making better use of the information contained within the external catastrophe models that they already use; and
- Consideration and allowance for effects such as event clustering.

Reserve uncertainty, as discussed in the previous section, has been an area that has received significant attention over the past few years, whether under the guise of communicating uncertainty or the more recent output from the profession's General Insurance Reserving Oversight Committee. Companies are now appearing to spend more time and effort trying to ensure that their understanding of what has been captured by their reserve uncertainty process and parameterisation is robust and that they are keeping up with the latest technical developments and findings in this area.

Operational risk appears to be an area where current good practice exceeds, by a considerable margin, what is currently required within a Solvency II (SCR) context. Many operational risk models can already demonstrate that they are fully aligned with the company risk register and allow for all appropriate risks. However, these models often have single parameter values describing one or both of event frequency and severity. The next step that is being taken is to expand the parameterisation to allow for variability in frequency and / or severity. This has often seemed to be driven by a desire on the company's part to capture, quantitatively, the consequential capital benefits that they believe have been generated by improvements to the underlying systems and controls.

15.4 What next?

Companies at the less advanced end of the 'embedded modelling' spectrum are likely to be devoting more resources towards ensuring that they move rapidly through this spectrum. Solvency II, internal model approval and 2012 are not very far away. Companies that do not have a model in use by the end of 2008 will be at a considerable disadvantage when it comes to trying to demonstrate a track record of using the capital model for several years.

Still on the Solvency II theme, our surveys have demonstrated that Pillar 3 and disclosure requirements are not yet receiving much attention. We expect that, as this comes increasingly onto the corporate radar, this could result in ownership, structure and control of capital models receiving a thorough shake-up. Questions will be asked, such as:

- Who owns the model?
- Does the model really do 'what it says on the box'?
- How do we tell if the model has been changed?
- Do we want the model to be audited?

The answers to these questions could drive the field of general insurance capital modelling in several new and exciting directions.

16.Part VII transfers

Part VII of the Financial Services and Market Act 2000 (“FSMA 2000”) sets out the UK procedure for transferring books of insurance and/or reinsurance business.

Transfers can involve part or the totality of a book within a group of companies or between separate companies. Three other changes in the landscape for Part VII Transfers arose during 2007:

- Consultations and discussions have taken place during 2007 to clarify certain areas of both the regulation and the FSA involvement in the process.
- Non life insurance business has been transferred out of Lloyd’s for the first time during 2007.
- European legislation is also creating opportunities for companies to exercise passporting rights across the EEA from the end of 2007

16.1 Change in legislation

FSMA 2000, as it stands, contains some grey areas, which would gain from clarification. In addition, as drafted, the Part VII legislation only applies to a subset of Lloyd’s names. This has led to consultations taking place late 2006 and early 2007, mainly on the following areas:

- Views to extend transfer of insurance business provisions to all names of Lloyd’s syndicates who stopped writing business prior to 1996;
- Put beyond all doubt the extended power of the Court to overrule certain contractual terms (specifically those that nullify or terminate the contract in the event of a Part VII transfer taking place); and
- Put beyond all doubt that accompanying reinsurance and other contracts in relation to the business transferred may be transferred as part of the transfer.

These proposals have largely met with approval from the industry. The draft legislation has not yet been published as we write this article but is expected shortly.

16.2 Change in the FSA process

There has been an ongoing dialogue between the FSA, the court and industry regarding the role played by the FSA in Part VII transfers. This was prompted by the Court requesting greater FSA participation in helping it to evaluate certain more complex cases. Discussions have been held between the different parties involved in Part VII Transfers including the FSA, actuaries, lawyers, judges and barristers. The key changes consist of the FSA producing a report on the transfer for the Court on a more frequent basis as well as being represented by a barrister at court if appropriate. Discussions are aimed to ensure sufficient flexibility so that the FSA’s involvement can be adjusted depending on size and complexity of a particular transfer.

16.3 Part VII transfers out of Lloyd's

The first insurance business transfer out of Lloyd's was a life Syndicate managed by Spectrum.

Both Admiral and Highway have successfully transferred general insurance motor liabilities out of Lloyd's in 2007. This remains a difficult area, partly owing to the legislative constraints outlined above and partly as a result of the desire by Lloyd's to ensure that its franchise is not adversely affected by the Transfer.

16.4 Equitas transfer

Equitas announced in October 2006 a deal by which National Indemnity Company ("NIC"), a member of the Berkshire Hathaway group of insurance companies, reinsured all the liabilities of Equitas, provided a further $5.7 billion of reinsurance cover to Equitas and took over the run-off managing company.

The names reinsured their liabilities into Equitas in 1996. This structure provided a degree of finality, however the liability of the claims would return to the names in the event of Equitas' failure.

The second stage is to transfer the liabilities, under FSMA 2000, from the names into Equitas or another company which would be created for this particular matter. The amendments to FSMA 2000 affecting Lloyd's, described above, would enable the Equitas names to benefit from this transfer, and without it the second stage is unlikely to go ahead.

16.5 European passporting

EEA countries should have implemented, by the end of 2007, their national legislation giving effect to the European Reinsurance Directive (see Section 4.2). Countries such as the United Kingdom, Germany and Ireland, have already adopted it. However, this is not yet the case of all EEA countries. This Directive effectively means that reinsurers now benefit from a similar "passporting" mechanism that the direct insurers already had. This will encourage transfers of portfolios between insurers and reinsurers within EEA countries for companies seeking to consolidate their European operations.

17. International Financial Reporting Standards

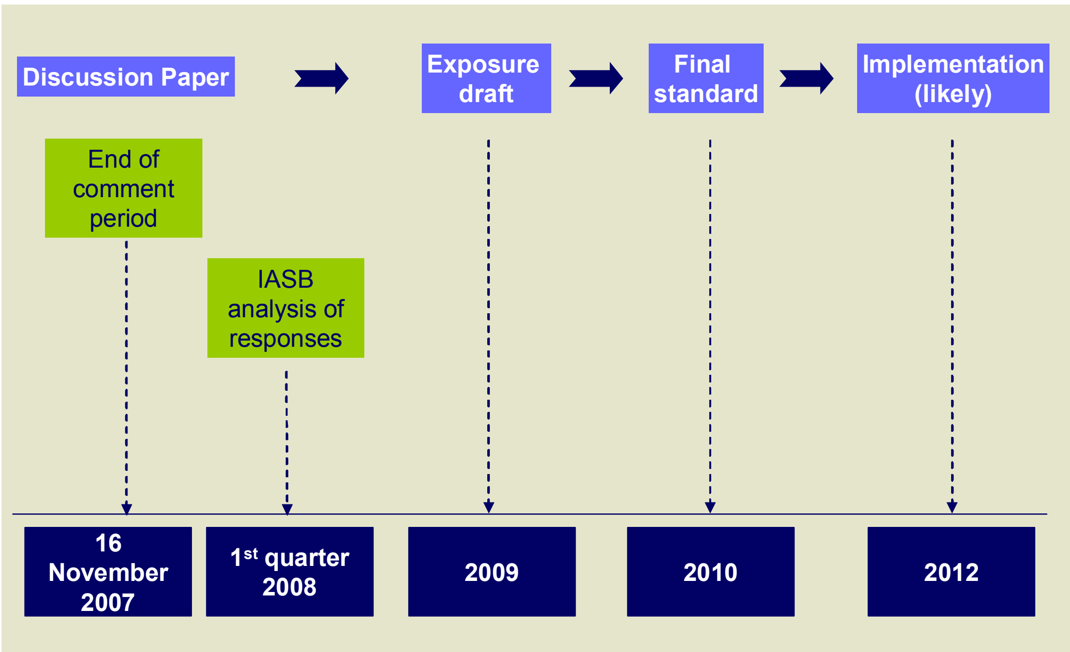
In July 2001 the European Union embarked on a series of technical projects to implement International Financial Reporting Standards ("IFRS") including an insurance project. IFRS for insurance contracts aims to address investors' need for more reliable and relevant information about profit drivers and business risks.

17.1 Proposed timeline

IFRS for insurance contracts (Phase II) began in July 2004 with the setting up of an Insurance Working Group. The International Account Standards Board (IASB) published its preliminary views in a discussion paper on 3 May 2007 that launched a public consultation process. Respondents were invited to provide comments on the discussion paper by 16 November 2007. The Board expects to begin analysing the responses to the discussion paper in the first quarter of 2008, but does not expect to publish an exposure draft until 2009. A final standard is not expected until 2010 with implementation likely to be in 2012.

It is likely that much of the detail may well change between now and the implementation of IFRS Phase II. However, the key change to a valuation of insurance contracts based on current estimates of future cashflows should be considered by insurers and actuaries sooner rather than later, both to aid a smooth transition period into the new IFRS world and to assess the impact of the new standards.

The remainder of this section will discuss the IASB's proposals, including the technical issues raised in its discussion paper and the impact these proposals may have on general insurers.



17.2 Key features of the IASB proposal

The IASB proposals are designed to provide a more relevant method of valuing insurance contracts and to use market assessments of expected risks and rewards. The key features are:

- A single measurement model for all insurance and reinsurance contracts;
- Prospective valuation based on estimating the present value of all expected future cashflows; and
- A "Current Exit Value" based on the price to transfer the liabilities to another entity.

The discussion paper centres on the Current Exit Value that it defines as:

"the amount the insurer would expect to pay at the reporting date to transfer its remaining contractual rights and obligations immediately to another entity."

Typically, the current exit value of an insurance liability is not observable, so the Board's preliminary view is that an insurer should measure its insurance liabilities using the following three building blocks:

Building Block 1: Current estimate of cash flows	• explicit and consistent with observable market prices • unbiased information about amounts, timings and uncertainties • current and corresponds to conditions at the end of the reporting period • not entity-specific
Building Block 2: Explicitly discount all cash flows	• time value of money should be taken into account • not influenced by assets held to match liabilities unless there is a contractual link • observable market rates for cash flows that match in terms of timing, currency and liquidity
Building Block 3: Risk and Service Margins to reflect uncertainty	Risk Margin should • reflect the market rate for bearing risk • be estimated at inception and subsequently by using market data and internal information • not be a shock absorber • be updated at each reporting date • be explicit and unbiased

17.3 Practical issues in measuring insurance liabilities

In this section we consider a few of the practical issues to be considered if the three building blocks are to be applied in the measurement of insurance liabilities.

In many instances, due to the current stage of development of insurance markets, market data is not available which causes difficulties in ensuring the consistency between the current estimate cashflows and the discount rate.

The building block that poses the most challenging practical issues and has resulted in most discussion is what should be included within the Risk and Service Margins and how they should be determined.

The discussion paper defines the Risk Margin as:

“an explicit and unbiased measurement of the compensation that entities demand for bearing risk”

Its objective is to convey decision-useful information to users about the uncertainty associated with future cash flows. A few approaches to determining a suitable Risk Margin have been suggested:

- Confidence interval
  - There are established techniques currently in use (e.g. bootstrapping) but further guidance would be required to achieve consistency between insurers.
- Cost of capital
  - There are difficulties in calculating the capital required to support the reserves over time and the associated cost of holding that capital.
- Assumptions based (e.g. proportion of current estimate)
  - This is a simple approach but it fails to meet the IASB’s proposed criteria for a Risk Margin.

Diversification between portfolios cannot be taken into account when estimating Risk Margins, although what this means in practice is still under discussion and many market practitioners are looking forward to clarification from the IASB on this issue.

The Service Margin is an addition to the Risk Margin and is defined as:

“an explicit and unbiased measurement of the compensation that entities demand for providing services other than bearing of risk”

In practice, any such margin is likely to be estimated using an insurer’s own costs unless there is clear indication that they differ from the market norm. The discussion paper states that the IASB does not intend to issue detailed guidance on the calculation of these margins. However, distinguishing separately a Risk Margin from a Service Margin may be inapplicable in practice within the current guidance.

The margins may contain an element of profit but it is not clear from the discussion paper how any additional profit will be treated:

- If the Risk Margin is not calibrated to the premium less acquisition costs then there could be a profit on day 1; and
- Consideration should be given to how profit is recognised over the life of the Risk Margin.

17.4 Impact on insurers

The implementation of IFRS (Phase II) could affect general insurers in the following ways:

- There could be a day one profit at the inception of a contract or a deferral of profit depending on how the margins are unwound over the period of the risk;
- Possible changes in the mix of sales by line of business or product design as insurers move into classes with favourable treatment and away from those with less favourable treatment;
- The supply of investors' capital may change due to potential increased comparability with other companies and markets;
- Reporting of earnings may become more volatile to take account of movements in the market at each reporting date;
- Modelling may become more sophisticated when estimating liabilities. This is already happening due to changes in the way regulatory capital is estimated and the use of capital models by insurers;
- The data required for modelling may need to be more extensive;
- The costs of reporting may increase. However, the additional information available could be embedded in the management processes of companies

17.5 Conclusion

The IASB discussion paper raises a number of technical issues and opens questions relating to how the measurement of insurance liabilities will change under IFRS (Phase II). Although the period to comment on the discussion paper has now ended, there will be further opportunities to influence the standard following the publication of the exposure draft. As a profession these opportunities need to be taken to ensure the new reporting standards are robust, practical and interact with other developments such as Solvency II.