

**Faculty of Actuaries
Students' Society**

**Current Topics 2008 -
General Insurance**

March 2009

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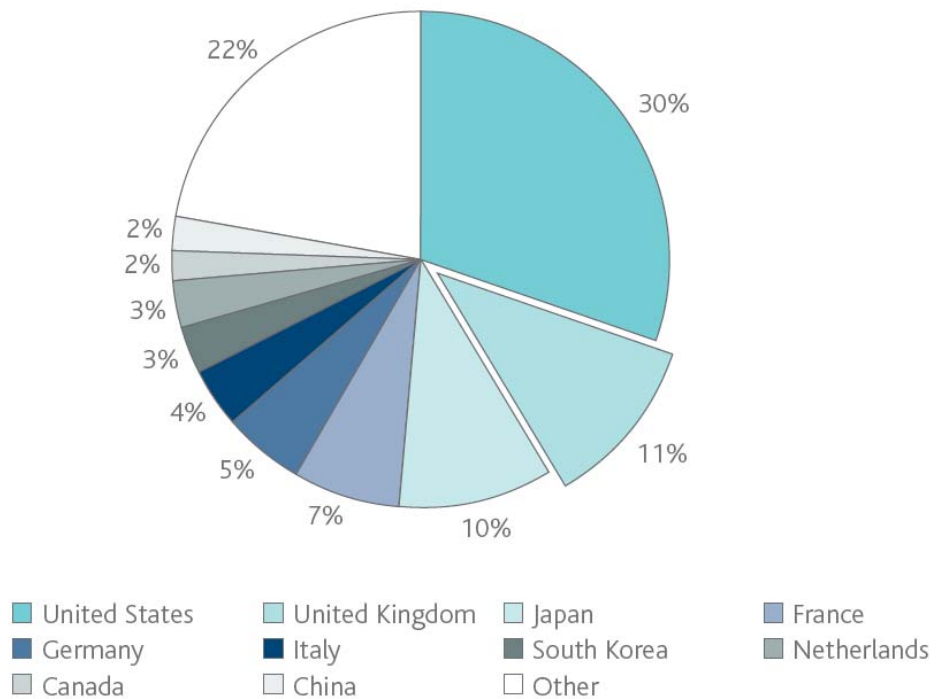
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1. Introduction

- 1.1 This report provides an overview of and key issues facing the UK general insurance industry (including the London Market). In addition, we discuss the most significant catastrophes and large losses that have affected both the UK and worldwide.
- 1.2 General insurance plays a crucial role in the UK economy. The UK insurance industry is the largest in Europe and is now the second largest in the world.

Chart 1.1: 2007 Worldwide Premium Income by Country

Breakdown of worldwide premium income by country, 2007¹



1. Source: ABI

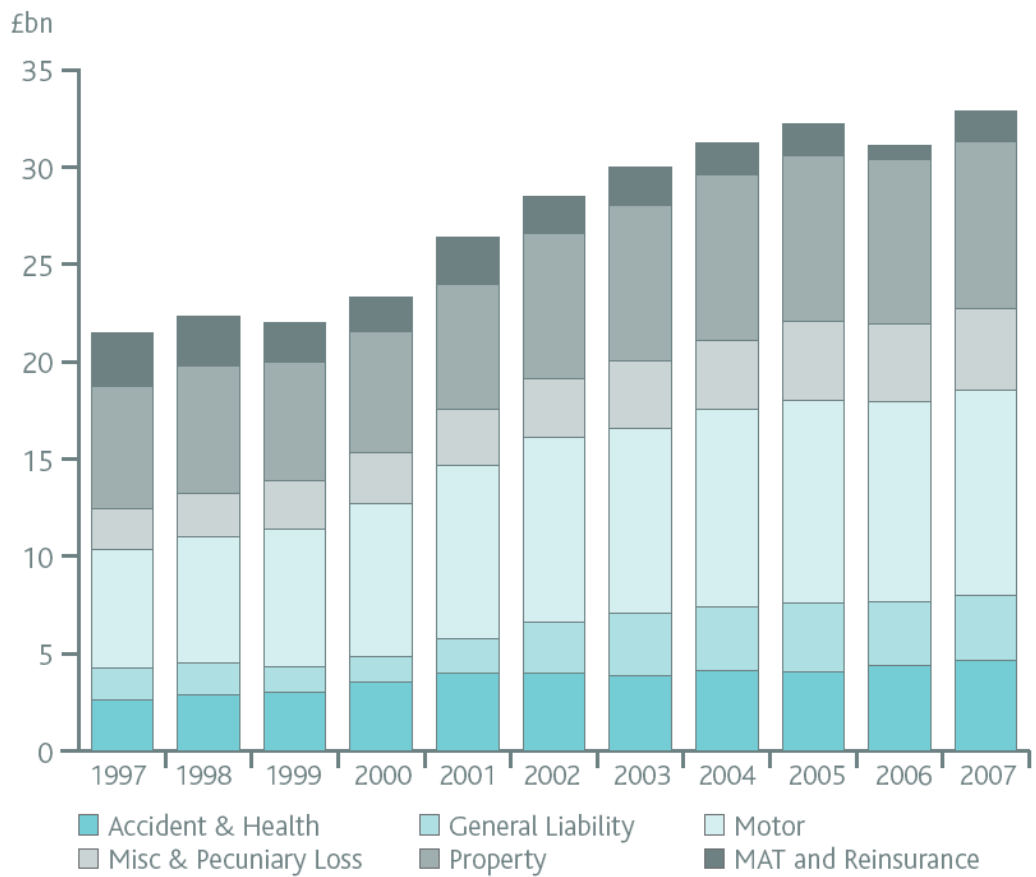
2. Industry Update

General Insurance Business in the UK

2.1 In 2007, the total net written premium for General Insurance Business in the UK (excluding Lloyd's of London) was £32.9bn. Chart 2.1 below shows the split of total premium by insurance type for 1997-2007.

Chart 2.1: Premium split by Insurance Type

Total premium by type of insurance, 1997-2007



Source: ABI

Note1: MAT business is Marine, Aviation and Transport

Note2: Premium figures are net of reinsurance recoveries

2.2 Of the £32.9bn premium written in 2007 for UK risks, 71.4% was written by the top 10 insurance companies. The top 20 companies are shown in Table 2.1 below:

Table 2.1: Top 20 Insurers by NWP

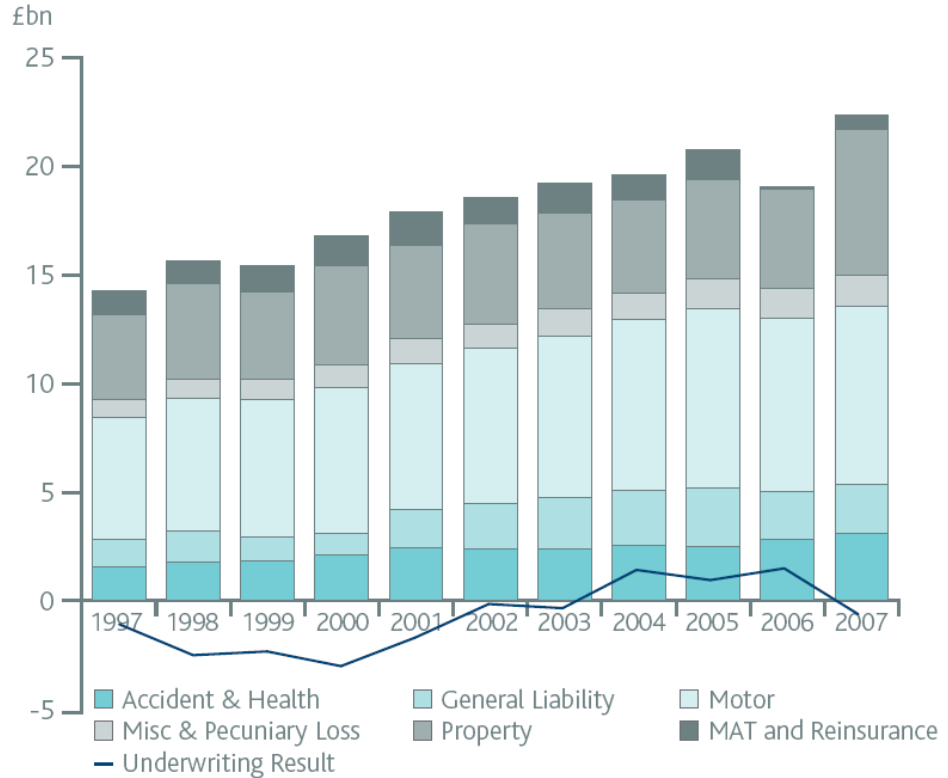
		Total Net Written Premium	Premium (£m)	
2007 (2006)			2007	(2006)
1	(1)	Aviva plc	5,855	5,914
2	(2)	RBS Insurance	4,544	4,438
3	(3)	AXA Insurance	2,969	2,707
4	(4)	RSA	2,604	2,531
5	(5)	Zurich UKGI	2,172	2,240
6	(6)	BUPA	1,546	1,433
7	(7)	Allianz Insurance	1,404	1,260
8	(8)	HBOS	800	871
9	(9)	NFU Mutual	800	735
10	(10)	Fortis Insurance	723	660
11	(12)	Lloyds TSB Insurance	609	590
12	(14)	Brit Insurance	459	433
13	(11)	Barclays Insurance	436	623
14	(13)	CIS General Insurance	396	442
15	(15)	QBE Insurance Group	386	427
16	(16)	Groupama Insurance Company	380	399
17	(17)	LV=	336	343
18	(18)	American International Group	324	311
19	(26)	QUINN-direct	292	200
20	(23)	Standard Life Healthcare	291	249
		Total Net Written Premium (£m):	£32,859	£31,127
		Share of Largest 5 Companies:	55.34%	55.92%
		Share of Largest 10 Companies:	71.43%	71.47%
		Share of Largest 20 Companies:	83.35%	84.45%

Source: ABI

- 2.3 The UK market is very competitive with the larger players shown in Table 2.1 above writing most forms of business. Other smaller insurers may concentrate on specific or "niche" lines of business.
- 2.4 Claims paid have increased by 57% since 1997 with £22.3bn paid in 2007 compared with £14.2bn in 1997. There has been a reduction in underwriting result (premiums less claims and expenses) when compared with 2006. This is driven by the severe flooding experienced by the UK in June and July 2007. See Section 4 for further details of large losses.
- 2.5 Chart 2.2 below displays the breakdown of claims paid by insurance type over 1997-2007 and the UK underwriting results over the same period.

Chart 2.2: Paid Claims Split by Insurance Type 1997-2007

Claims by insurance type, and underwriting result, 1997-2007



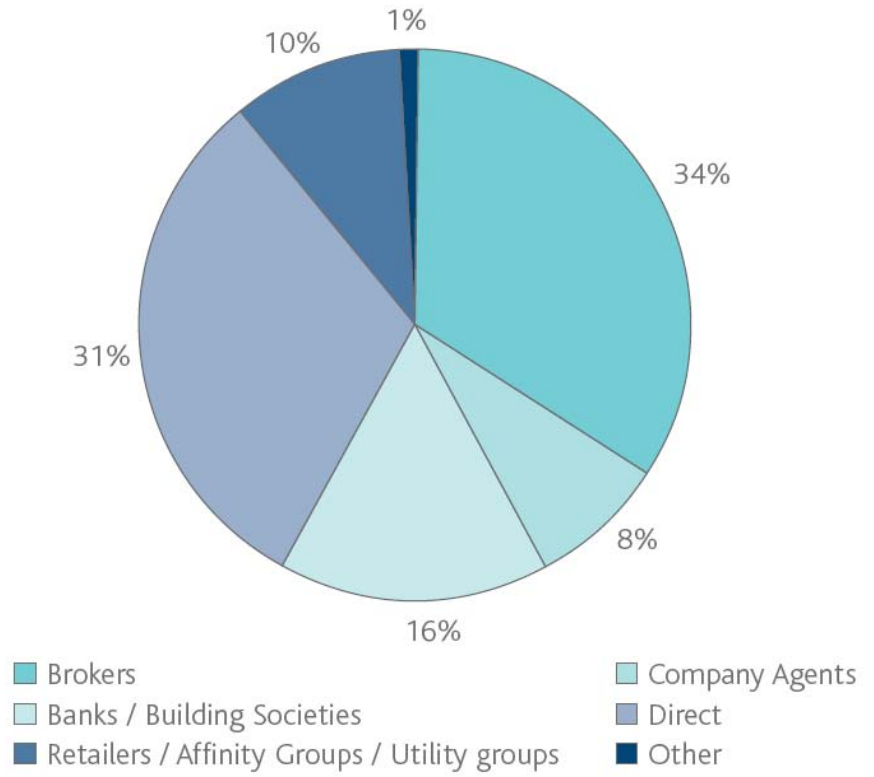
Source: ABI

Distribution Channels

2.6 There are many different ways of purchasing insurance and there has been a marked change in how people purchase insurance over the last 10 years. Chart 2.3 below shows a breakdown of distribution channels used in 2007. There has generally been a shift from brokers (55% in 1997 compared with 34% in 2007) to banks and building societies (5% in 1997 compared with 16% in 2007).

Chart 2.3: 2007 Retail Sales by Distribution Channel

General insurance retail sales, 2007



Source: ABI

3. Lloyd's of London

3.1 In 2007, the total net written premiums for insurance business written through Lloyd's of London was £13.4bn.

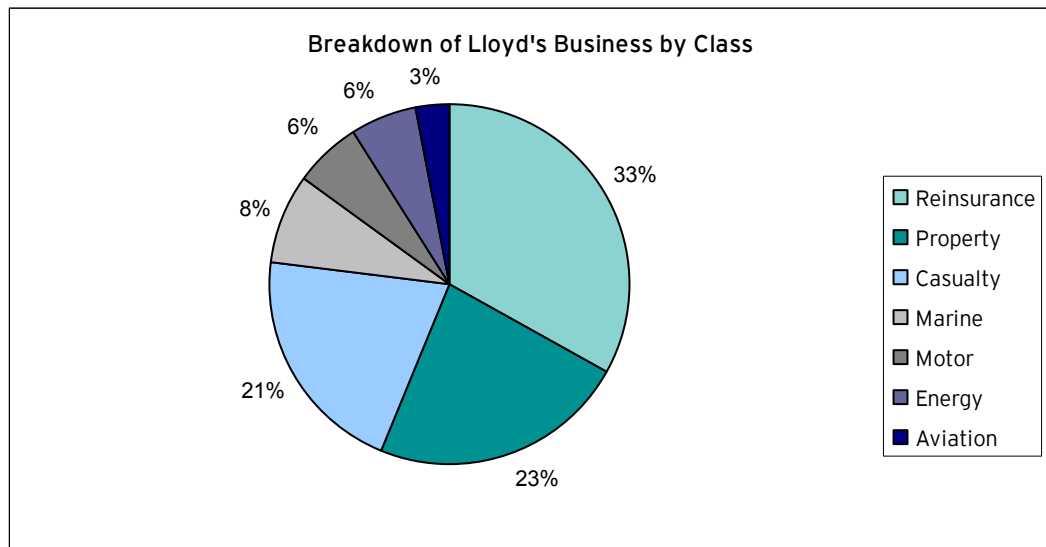
Lloyd's Background

3.2 Lloyd's of London is the world's leading insurance market. Housed in an iconic award-winning building in the City of London, it is one of the world's most famous organisations. It provides a market framework within which insurance may be conducted by its members. It is not a company and as such does not carry any insurance risk. Lloyd's originated in the 17th century where it began as a small coffee house where ship owners could gather to form mutuals between themselves or purchase insurance.

3.3 Today, members of Lloyd's join together as syndicates to insure and reinsure risks. Members of a syndicate share the risk written by the syndicate's underwriters. Each syndicate is managed on a day to day basis on behalf of its members by a managing agent. There are currently over 50 managing agents running 80 syndicates*.

3.4 Risks insured by Lloyd's tend to be very large and complex in nature, generating larger single claims than those of retail business (see Section 2). Chart 3.1 below outlines the major categories of insurance covered by Lloyd's.

Chart 3.1: Lloyd's of London Business split by Insurance Class



Source: Lloyd's of London

Key Insurance Classes at a glance

3.5 Chart 3.1 above shows the wide variety of business written through Lloyd's. Here, we discuss some of the longer tailed classes of business where it can take several years before the true cost of the liabilities is known. In particular, Employer's Liability, Errors and Omissions and Director's and Officers Insurance are particularly long tailed in nature (see details below) and are categorised under Casualty (or 'Liability') business in Chart 3.1 above.

* As at 1 May 2008

Employer's liability

- 3.6 Employer's Liability Insurance provides protection to an employer in the event that they are liable for the bodily injury, disease or death of any employee suffered in the course of employment.

Errors & Omissions ("E&O")

- 3.7 Errors and Omissions Insurance ("E&O") is business liability insurance for professionals. It provides protection to a professional (an individual or a company) from bearing the full cost of defence for lawsuits relating to an error or omission in providing covered Professional Services.

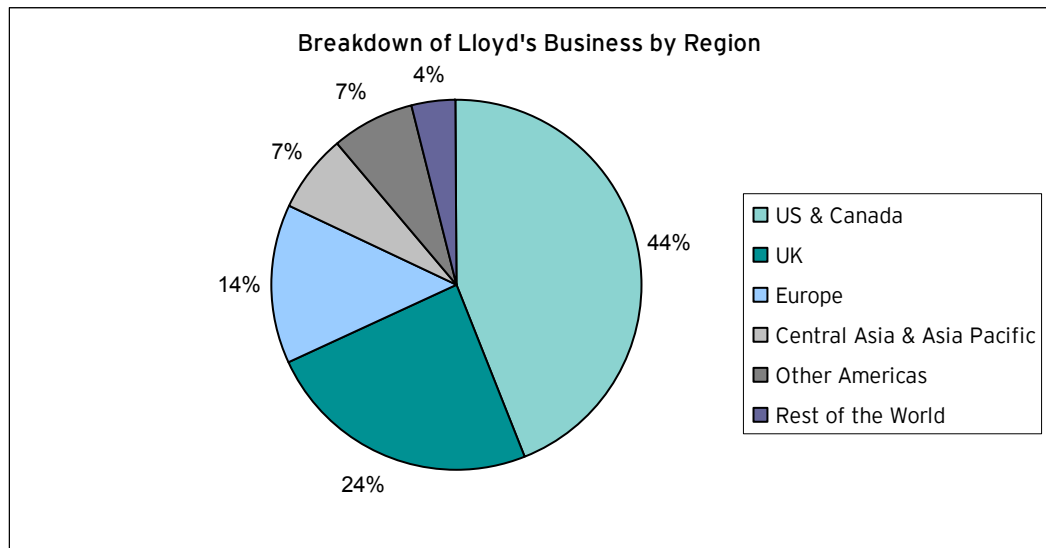
Directors & Officers ("D&O")

- 3.8 Directors and Officers Liability Insurance ("D&O") is insurance payable to the directors and officers of a company, or to the corporation itself, to cover damages or defence costs in the event they are sued for wrongful acts committed while they were with that company.
- 3.9 D&O insurance is usually purchased by the company itself, even when it is for the sole benefit of directors and officers. Only negligence by directors or officers would be covered.

Where does Lloyd's Operate

- 3.10 Lloyd's operates in over 200 countries. Chart 3.2 below shows a breakdown by country of the business written with the most significant exposure from the United States (both direct and indirect business). Lloyd's is currently expanding in emerging markets such as China, Latin America, India and the Middle East.
- 3.11 It provides insurance for the majority of the world's largest companies and insures complex and specialist risks, including:
- ▶ 90% of FTSE 100 companies
 - ▶ 93% of Dow Jones companies
 - ▶ 8 of the world's top pharmaceutical companies
 - ▶ 52 of the world's top banks

Chart 3.2: Lloyd's of London Business split by Region



Source: Lloyd's of London

How the Lloyd's Market works

- 3.12 Clients discuss insurance and reinsurance needs with their broker who brings business into the market on their behalf. The broker will approach several syndicates to see which one can cover the risk in question and on what terms.
- 3.13 Each syndicate has a specialist underwriter who will price, underwrite and handle any claims relating to the particular risk. Large or specialist risks are often pooled across several syndicates.
- 3.14 Each member must provide capital to support their total Lloyd's underwriting business which acts as security for the policies to ensure security of claim payments. This is known as Funds at Lloyd's and determines the amount of insurance business a member can underwrite.
- 3.15 Due to the long tailed nature of the business written at Lloyd's, it can take several years before the true cost of the liabilities is known. For each syndicate year, premiums are accumulated in a fund from which claims and expenses are paid. After 3 years, the profit or loss for a particular year is determined and the year is closed by reinsuring any outstanding liabilities into the following open year of the syndicate. The reinsurance premium paid for this is known as "reinsurance to close" or "RITC". A year may remain open for a period longer than 3 years if the liabilities are particularly uncertain.
- 3.16 See the Lloyd's of London website or the Association of British Insurers website for more information on the above (www.Lloyds.com, www.abi.org.uk).

4. Catastrophes and Large Losses

4.1 In this section we focus on the largest catastrophes in the UK and worldwide over the last 7 years.

Worldwide Losses

- ▶ 2001 Terrorist attack on the World Trade Centre
- ▶ 2005 Hurricanes: Katrina, Rita and Wilma
- ▶ 2008 Hurricanes: Ike and Gustav

UK Losses

- ▶ 2007 UK Floods
- ▶ 2007 Windstorm Kyrill

4.2 See Appendix A for a list of the 40 most costly insurance losses 1970-2007. Subprime claims are discussed further in Section 5.

Worldwide Losses

World Trade Centre ("WTC") - September 11th 2001

4.3 The terrorist attacks in the United States of America on 11 September 2001 have produced one of the largest claims ever to face the insurance industry. In a coordinated suicide attack, two Boeing 767 jets flew into the WTC complex, one into each tower. This led to the collapse of both the North and South Towers and irreparable damage to 5 other buildings within the complex. The attack led to the deaths of over 2,750 people.

4.4 Current market estimates for WTC are approximately \$40bn.

2005 Atlantic Hurricane Season

4.5 The 2005 Atlantic hurricane season was the most active on record. Twenty-six named tropical storms formed, breaking the old record of 21 set back in 1993. Thirteen storms became hurricanes, breaking the old record of 12 set back in 1969. Seven of the hurricanes became major hurricanes.

Graphic 4.1: 2005 Atlantic Hurricane Tracks



Naming of Hurricanes

- 4.6 Since 1953, Atlantic tropical storms have been named from lists originated by the National Hurricane Centre. They are now maintained and updated by an international committee of the World Meteorological Organization (“WMO”). The original name lists featured only women’s names. In 1979, men’s names were introduced and they alternate with the women’s names. Six lists are used in rotation. Thus, the 2008 list will be used again in 2014.
- 4.7 The only time that there is a change in the list is if a storm is so deadly or costly that the future use of its name on a different storm would be inappropriate for reasons of sensitivity. If that occurs, then at an annual meeting by the WMO committee (called primarily to discuss many other issues) the offending name is stricken from the list and another name is selected to replace it.
- 4.8 Several names have been changed since the lists were created. For example, on the 2007 list (which will be used again in 2013), Dorian has replaced Dean, Fernand has replaced Felix, and Nestor has replaced Noel.
- 4.9 In the event that more than 21 named tropical cyclones occur in the Atlantic basin in a season, additional storms will take names from the Greek alphabet: Alpha, Beta, Gamma, Delta, and so on. If a storm forms in the off-season, it will take the next name in the list based on the current calendar date. For example, if a tropical cyclone formed on December 28th, it would take the name from the previous season’s list of names. If a storm formed in February, it would be named from the subsequent season’s list of names.
- 4.10 The table below show the Atlantic Hurricane names applicable for 2008 through to 2013.

Table 4.1: Atlantic Hurricane Names for 2008 - 2013

2008	2009	2010	2011	2012	2013
Arthur	Ana	Alex	Arlene	Alberto	Andrea
Bertha	Bill	Bonnie	Bret	Beryl	Barry
Cristobal	Claudette	Colin	Cindy	Chris	Chantal
Dolly	Danny	Danielle	Don	Debby	Dorian
Edouard	Erika	Earl	Emily	Ernesto	Erin
Fay	Fred	Fiona	Franklin	Florence	Fernand
Gustav	Grace	Gaston	Gert	Gordon	Gabrielle
Hanna	Henri	Hermine	Harvey	Helene	Humberto
Ike	Ida	Igor	Irene	Isaac	Ingrid
Josephine	Joaquin	Julia	Jose	Joyce	Jerry
Kyle	Kate	Karl	Katia	Kirk	Karen
Laura	Larry	Lisa	Lee	Leslie	Lorenzo
Marco	Mindy	Matthew	Maria	Michael	Melissa
Nana	Nicholas	Nicole	Nate	Nadine	Nestor
Omar	Odette	Otto	Ophelia	Oscar	Olga
Paloma	Peter	Paula	Philippe	Patty	Pablo
Rene	Rose	Richard	Rina	Rafael	Rebekah
Sally	Sam	Shary	Sean	Sandy	Sebastien
Teddy	Teresa	Tomas	Tammy	Tony	Tanya
Vicky	Victor	Virginie	Vince	Valerie	Van
Wilfred	Wanda	Walter	Whitney	William	Wendy

Source: National Weather Service

2005 Atlantic Hurricane Katrina

- 4.11 Hurricane Katrina was the eleventh-named tropical storm, third major hurricane, and first Category 5 hurricane of the record-breaking 2005 Atlantic hurricane season. It was the third most powerful storm of the season, and the sixth-strongest Atlantic hurricane ever recorded. Katrina formed over the Bahamas in late August, and crossed southern Florida at Category 1 intensity before strengthening rapidly in the Gulf of Mexico. The storm weakened considerably before making its second landfall as an extremely large Category 3 storm on the morning of August 29 along the Central Gulf Coast near Buras-Triumph, Louisiana.
- 4.12 The storm surge from Katrina caused catastrophic damage along the coastlines of Louisiana, Mississippi, and Alabama. Levees separating Lake Pontchartrain from New Orleans were breached by the surge, ultimately flooding about 80% of the city. Wind damage was reported well inland, impeding relief efforts. Katrina is estimated to be responsible for \$68.5 billion in insured damages, making it the costliest hurricane in United States history; the storm has killed at least 1,836 people, becoming the deadliest U.S. hurricane since the 1928 Okeechobee Hurricane.
- 4.13 Katrina impacted various insurance types and losses included:
- ▶ extensive wind-related property damage
 - ▶ extensive flooding along its path

- ▶ flooding and pollution in New Orleans
- ▶ oil rig and platform damage in the Gulf of Mexico
- ▶ damage to oil refineries along the coastal areas
- ▶ power line damage resulting in extended power outages

2005 Atlantic Hurricanes Rita and Wilma

- 4.14 Hurricane Rita was the fifth major hurricane and second Category 5 hurricane of the 2005 Atlantic hurricane season. It was the second-most powerful hurricane of the season (behind Hurricane Wilma) and the fourth most intense hurricane ever in the Atlantic Basin.
- 4.15 Hurricane Wilma set numerous records for both strength and seasonal activity. At its peak, it was the most intense tropical cyclone ever recorded in the Atlantic basin. It was the third Category 5 hurricane of the season, the only time this has happened in the Atlantic, and only the third Category 5 to develop in October.
- 4.16 Current estimates for Rita and Wilma stand at approximately \$24bn combined.

2008 Atlantic Hurricane Season

Hurricane Ike

- 4.17 Hurricane Ike was the third most destructive hurricane to ever make landfall in the United States. It was the ninth named storm, fifth hurricane and third major hurricane of the 2008 Atlantic hurricane season.
- 4.18 It started as a tropical disturbance off the coast of Africa near the end of August, then tracked south of Cape Verde and slowly developed. On September 1, 2008, it became a tropical storm west of the Cape Verde islands. By the early morning hours of September 5 2008, Ike was a Category 4 hurricane, with maximum sustained winds of 145 mph (230 km/h). That made it the most intense storm in the 2008 Atlantic hurricane season. Ike made its final landfall in Galveston, Texas, United States as a Category 2 hurricane.
- 4.19 Ike was blamed for at least 195 deaths. Of these, 74 were in Haiti, which was already trying to recover from the impact of three storms earlier that year: Fay, Gustav, and Hanna. In the United States, 112 people were killed, with many still missing. Current market loss estimates for Hurricane Ike range from \$15bn to \$21bn.

Hurricane Gustav

- 4.20 Hurricane Gustav was the seventh tropical cyclone, third hurricane and second major hurricane of the 2008 Atlantic hurricane season. Gustav caused serious damage and casualties in Haiti, the Dominican Republic, Jamaica, the Cayman Islands, Cuba and the United States. Gustav triggered the largest evacuation in United States history. Over 3 million people fled the oncoming hurricane and in total, an estimated 153 deaths had been attributed to Gustav in the U.S. and Caribbean.
- 4.21 Current market estimates for Gustav lie in the range of \$2.5bn to \$3.5bn.

UK Losses

2007 UK Floods

- 4.22 Throughout June and July 2007 many areas of the UK suffered severe flooding resulting in damages rising into the billions of pounds and the death of 13 people. Over 180,000 claims

are expected to cost the insurance industry approximately £3bn. This is equivalent to over 4 years worth of bad weather claims.

Windstorm Kyrill

4.23 This severe windstorm in January 2007 caused widespread damage across the UK (and northern Europe) and is expected to cost the insurance industry approximately £2.3bn.

5. Key Issues Facing Insurers

5.1 In this section we highlight some of the key issues facing general insurers today.

Subprime and the ensuing credit crisis

5.2 During 2007 and 2008, the world's financial markets have been impacted by the fallout from 'subprime' losses arising from mortgages in the US and the ensuing credit crisis.

What is subprime lending

5.3 Subprime lending relates to financial institutions lending to homebuyers with poor credit histories who cannot obtain finance from the usual "prime" market. These subprime borrowers are more at risk of default on the loan repayments, such as those with a previous history of default, previous bankruptcy or those with limited credit history.

5.4 A sharp decline in the US housing market in 2006-2007, combined with increasing interest rates ultimately led to the default of these subprime mortgages and has resulted in major adverse consequences for the world's financial markets.

5.5 The insurance industry, whilst not as heavily affected as the banking sector, is likely to be impacted for some time although the ultimate scale of the impact remains uncertain. Overall we have seen a large decline in capital of many banks and institutions with tightening credit around the world.

5.6 General insurers and reinsurers have been affected through their own investments, buyers/sellers of credit protection or in their capacity as professional liability insurers/reinsurers.

Own Investments

5.7 Financial Institutions across the globe, including insurers, have invested in Mortgage Backed Securities ("MBS") or Collateralised Mortgage Securities ("CMS"). The cash flows of these securities are backed by the principal and interest of the mortgage payments. The subprime crisis has led to a significant loss of value of these securities.

Credit Insurers

5.8 Insurers writing credit insurance/financial guarantee insurance have faced an increase in claims as the risk of default on the underlying debt has increased. This has had an adverse affect on outstanding claims reserves.

Professional Liability Insurers

5.9 Insurers with exposure to Director's and Officers and Errors and Omissions business (see Section 3) have been exposed to claims in respect of lawsuits filed against senior executives and firms where shareholders have made significant losses. Companies involved in these lawsuits have been credit rating agencies, mortgage brokers, investment banks and those companies with large investments in Mortgage Backed Securities.

5.10 A possible upside of the subprime crisis could be an increase in investment in the general insurance industry. Some insurance risks, in particular those relating to natural catastrophes, have little correlation to other economic risks and as a result we may see investors seeking to obtain higher returns through direct investment or through the investment in catastrophe bonds.

Recession

- 5.11 The resultant turmoil in the financial markets makes it likely that the frequency of claims on several lines of business will be higher than otherwise expected. More widely, as the global economic downturn deepens this is likely to raise the frequency and severity of claims generally across the insurance market. We consider the impact of the recession on retail and commercial business separately below.

Impact on Retail Business

- 5.12 Increases in unemployment, sickness and bankruptcy rates will have an impact on Payment Protection Insurance ("PPI") where the loss of income could lead to an increased likelihood of defaults on loans, mortgages and credit cards.
- 5.13 PPI has been a problematic area for The Financial Services Authority ("FSA") due to its perceived lack of price transparency when sold alongside loans and a possible lack of understanding amongst consumers. In particular, the FSA has fined Alliance & Leicester Plc £7m for serious failings in its telephone sales of payment protection insurance. These problems may continue as we enter a recession as more claims are made on these policies.
- 5.14 An increase in claim frequency is likely to be seen on personal lines business (motor and household insurance in particular) arising from an increase in:
- ▶ fraudulent claims
 - ▶ propensity to make small claims
 - ▶ arson, theft and burglary rates
- 5.15 The increases described above may be offset by reduced demand due to a general reduction of household incomes. As a consequence of this, we may see:
- ▶ an increase in uninsured drivers
 - ▶ a fall in demand for home contents insurance (building insurance usually a condition of a mortgage contract). There is an added risk here for the consumer that flooding may coincide with the recession.

Impact on Commercial/Larger Risks

- 5.16 As discussed above, commercial business is also likely to see increases in fraudulent claims, the propensity to make small claims as well as an increase in arson, theft and burglary rates.
- 5.17 Other class specific impacts may be:
- ▶ D&O & E&O - Increased claim frequency and severity on these classes of business (see Section 3) due to failing firms and shareholders taking action against the directors and officers of the companies in question.
 - ▶ Marine - During a buoyant economy operators do not stop for repairs, whereas during recessions they dock and start to claim for repairs.
 - ▶ The use of monetary policy to stimulate growth in the economy, e.g. lowering interest rates, could cause large inflationary increases for long tail claims such as asbestos (see Section 5.18) and other industrial disease.

- ▶ Recent decreases in oil and commodity prices will have an offsetting affect to the above.

UK Asbestos

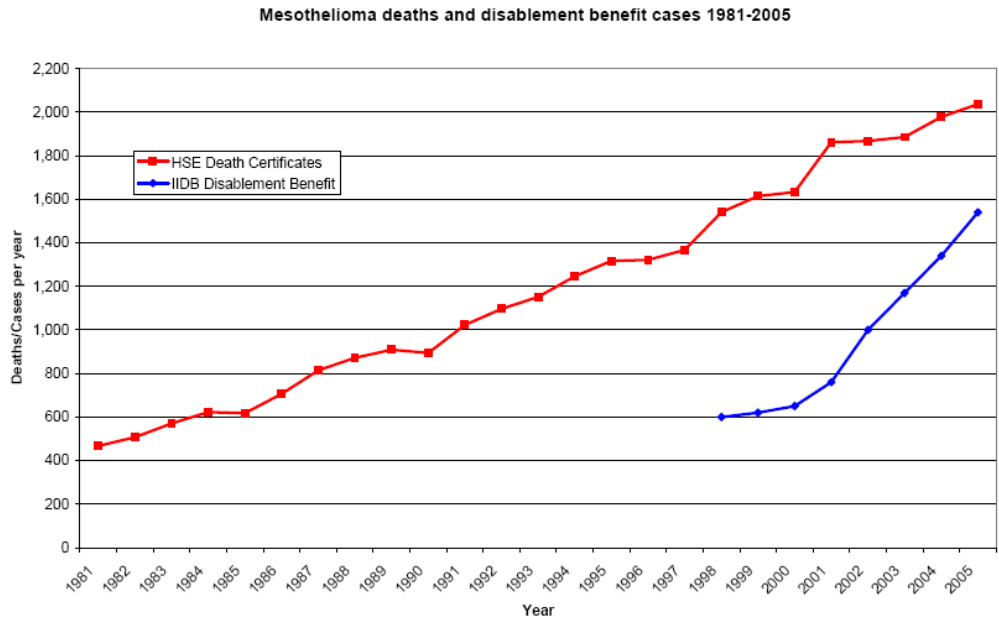
Background

- 5.18 Asbestos is a mineral that was commonly used in the past by the manufacturing and building industry in applications such as pipe and ceiling insulation, fire-proofing, flooring, roofing and many textile products.
- 5.19 However, asbestos was ultimately found to be a highly toxic substance and the cause of serious diseases such as mesothelioma, lung cancer and asbestosis. Such diseases have long latency periods. For example mesothelioma, the most serious asbestos related illness, can have latency periods of around 40-45 years, and is almost always fatal - normally within a year of diagnosis. Asbestos use has been banned in many countries since 1980.
- 5.20 Individuals who have been exposed to asbestos in the work place and have subsequently been diagnosed with an asbestos related disease have claimed against their employer for compensation. In the UK, the employer has then claimed on their Employers' Liability insurance policies. Where a third party (someone not employed by a company) has been negligently exposed, claims can arise on Public Liability policies.
- 5.21 This has led to a number of claims being reported to the insurance industry, but more significantly, the need to hold large reserves for future claims, the number of which is highly uncertain given the long latencies discussed above. The peak of asbestos usage was in the 1960s, with usage dramatically reducing during the 1970s and onwards. However it is difficult to determine exactly when and how quickly asbestos exposure reduced. This means that the estimation of the peak of deaths, especially those from mesothelioma is uncertain.

Mesothelioma developments

- 5.22 There are a number of developments in recent years that have increased the uncertainty regarding the total number and cost of future claims expected to emerge from mesothelioma claims. The most important of which is an apparent trend of an increasing propensity to claim.
- 5.23 The Asbestos Working Party has carried out an investigation into trends in propensity to claim (referred to in their paper as the 'claims to death ratio'). Based on data from the Department for Work and Pensions ("DWP") there is evidence to suggest that the claims to death ratio is increasing. This is shown in Graph 5.1 below which compares the number of mesothelioma deaths with the number of people claiming disability benefit for mesothelioma.

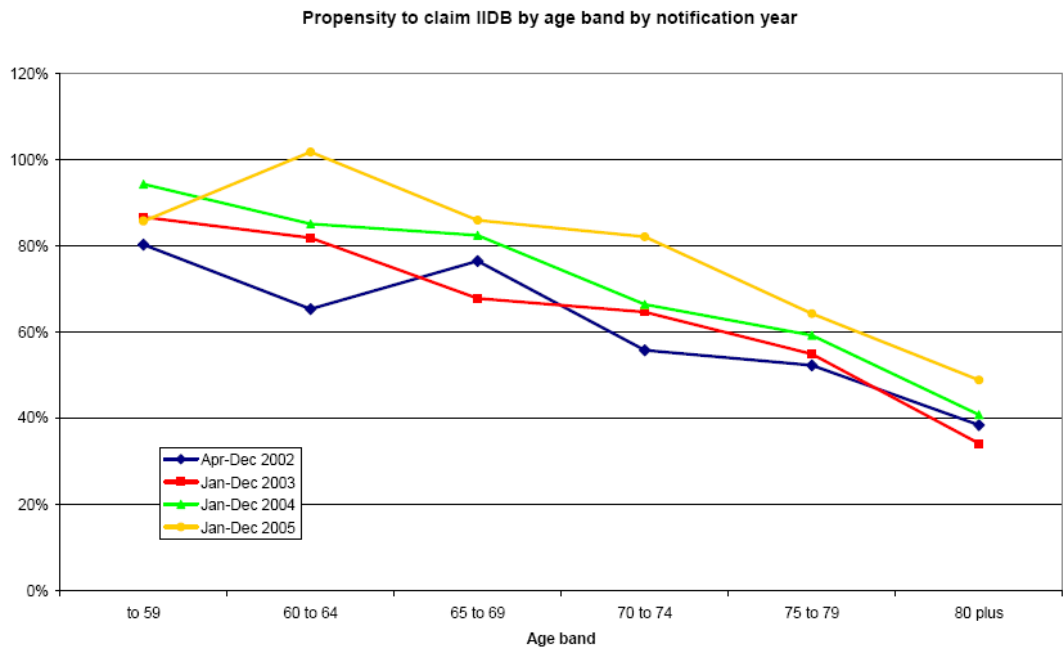
Graph 5.1: Comparison of Mesothelioma Deaths and Disability Benefit Claims



Source: UK Asbestos Working Party Update 2008

5.24 By splitting the analysis into age bands it would appear that older sufferers are less likely to claim benefit entitlement. Graph 5.2 below shows the propensity to claim by age band and notification year, which also highlights the apparent trend of an increasing propensity to claim over time.

Graph 5.2: Propensity to Claim Split by Age Group



Source: UK Asbestos Working Party Update 2008

5.25 Using an alternative data source (the Compensation Recovery Unit), which focuses only on insurance market claims, the working party have estimated that 56% of sufferers made claims in 2007, compared to only 36% of sufferers in 2003. For further information refer to the 2008 Asbestos working party paper (UK Asbestos Working Party Update 2008 <http://www.actuaries.org.uk/?a=138775>)

5.26 Other mesothelioma developments include medical advances in diagnosis and an impending update to the standard model used to project mesothelioma deaths, which is expected to increase the expected number of future deaths and hence increase the number of successful claims.

Pleural Plaques

5.27 Pleural plaques are small areas of calcified scarring around the lungs caused by asbestos exposure. They do not usually cause symptoms and do not impair lung function. However, there is the possibility that having pleural plaques increases the likelihood of an individual contracting a more deadly asbestos related disease such as mesothelioma.

5.28 In October 2007 the House of Lords decision ruled that pleural plaques are non-compensational under the tort of negligence as there is no injury.

5.29 A UK consultation paper published in 2008 by the Ministry of Justice regarding pleural plaques suggested several possible courses of action. The paper highlighted the need to improve the understanding of pleural plaques, in particular to provide support and reassurance to those diagnosed with pleural plaques. It also suggested alternatives including a "no fault" compensation scheme or a possible overturn, although this latter option would have significant legal implications.

5.30 A bill is being put to the Scottish parliament with the aim of making it possible for individuals to claim compensation for pleural plaques under the civil law of Scotland. Such legislation is likely to come into effect in 2009, although when it does it will be retrospective to the house of Lord's judgement in 2007.

Policy wording

5.31 A recent court case between Bolton Metropolitan Borough Council and Municipal Mutual Insurance Ltd has highlighted the uncertainty surrounding policy wording on Public Liability policies.

5.32 Bolton MBC filed a claim against their insurer Municipal Mutual for a mesothelioma claim they were being sued for. The Public Liability policy was on an "occurrence" basis meaning that cover was provided for claims arising out of illnesses occurring during the period of insurance (in this case between 1979 to 1991). The claimant worked on asbestos exposed sites during the early 1960s and so Municipal Mutual argued that this was the period when the illness occurred, and hence they were not liable to pay for the claim.

5.33 However, the Court of Appeal has upheld a decision that for mesothelioma claims the injury "occurs" when the cancerous tumour becomes malignant, which is approximately 10 years before symptoms emerge. In this case, the claimant's tumour became malignant in the period 1979-1981 and so by this latter definition Municipal Mutual was liable.

5.34 The case highlights the importance of different wordings used within Employers' Liability and Public Liability policies which insurers might interpret in different ways. This leads to a greater amount of uncertainty in setting reserves and can result in lengthy litigation. Conventionally, Employers' Liability policies provide indemnity for injury or disease "caused" during the period of insurance, which is understood to relate to the period of exposure. However, an alternative wording is for cover on the basis of injury or disease "sustained" during the period of insurance. Several run-off insurers, in an attempt to reduce

the tail of exposure to risk, have argued that this latter wording is synonymous with occurred. However, it is more common practice to interpret these policies on an exposure basis, and this approach is used by the “on-going” insurance market.

US Asbestos

- 5.35 In the US asbestos claims are also a significant issue with the insurance liabilities spread around the globe. Most claims are made on public/product liability policies rather than Employers Liability coverage as in the UK. Most of these policies now specifically exclude asbestos claims from the coverage offered (and have done since 1986).
- 5.36 Aggregation of claims for reinsurance is another key difference. In the US, claims can aggregate and hence there is the possibility of reinsurance exposure, whilst in the UK this is not possible.

Recent updates

- 5.37 There has been a general trend in the US to control the number and cost of asbestos claims. Some examples of the actions being taken are discussed in the following paragraphs.
- 5.38 In the US the legislative environment differs greatly between different jurisdictions with some states being relatively more “Plaintiff friendly” than others, especially Mississippi, Texas, and Ohio. Such states have been subject to a large number of claim filings in the past, even though the claimant has neither lived nor been exposed to asbestos in the state. However, in recent years there have been attempts to reduce the number of non-malignant claims. For example, in the states where there has been a historically high level of claims the claimant must provide “medical criteria” bills. These bills require the claimant to provide evidence that meets strict medical criteria.
- 5.39 There have also been reforms aimed at reducing the number of class actions filed, whereby a large number of claims are grouped together for trial. These reforms have shown some success in reducing both the number and cost of asbestos claims, in particular those relating to non-malignant illnesses such as pleural plaques. However, offsetting this, the number of malignant claims appears to be increasing as lawyers are focusing on these, usually higher payout, claims.
- 5.40 Several states are either restricting or eliminating joint and several liability. Previously this law had meant that solvent defendants were often obliged to pay a greater share of claim costs if other defendants had become insolvent.
- 5.41 In 2005 a US judge found that a large number of claims had been incorrectly filed and as a result an investigation into several doctors, screeners and lawyers was carried out. Many defendants are also advised to carry out a full audit of their outstanding claims and refuse those claims that had medical evidence from a specified list of doctors.
- 5.42 US Lawyers have started to file claims for subcontractors and members of the public who have been exposed to asbestos in the buildings that they worked in. Such claims have increased in recent years, reflecting the increase in number of typical asbestos defendants who have filed for bankruptcy. Such bankruptcies have also led to an increase in the number of claims to less traditional defendants such as aviation manufacturers.

Solvency II

- 5.43 Solvency margin requirements have been in place since the 1970s and it was acknowledged in the third generation Insurance Directives adopted in the 1990's that the EU solvency rules should be reviewed. The Directives required the Commission to conduct a review of the solvency requirements and following this review, a limited reform was agreed by the European Parliament and the Council in 2002. This reform is known as Solvency I.
- 5.44 In July 2007, the European Commission published the Solvency II Framework Directive Proposal, outlining a significantly more sophisticated approach to insurer supervision and single market harmonisation than the existing Solvency I regime.
- 5.45 Solvency II's key features are its market-based perspective of the insurer's balance sheet and its calculation of the required solvency margin according to the specific risk profile of the firm. For instance, firms that invest in riskier assets will have a higher capital charge. Additionally, it offers specific credit for group diversification. The framework directive defines this approach using a three pillar approach which is similar to the banking sector (Basel 2) but adapted for insurance:
- ▶ Pillar 1: The first pillar contains the quantitative requirements: Valuation principles for assets, liabilities and associated capital requirements to be calculated using a nuanced standard formula or regulator-approved internal models.
 - ▶ There are two capital requirements, the Solvency Capital Requirement (SCR) and the Minimum Capital Requirement (MCR), which represent different levels of supervisory intervention.
 - ▶ The SCR is a risk-based requirement and the key solvency control level. The SCR will cover all the quantifiable risks an insurer or reinsurer faces and takes into account any risk mitigation techniques.
 - ▶ The MCR is a lower requirement and its breach triggers the ultimate supervisory intervention: the withdrawal of authorisation.
 - ▶ Pillar 2: The second pillar contains qualitative requirements: Supervisory review process encompassing capital adequacy, risk management systems and process; in particular, this may lead to additional capital requirements not covered in Pillar 1; and
 - ▶ Pillar 3: The third pillar covers supervisory reporting and disclosure: Disclosure requirements covering certain aspects of capital, risks and risk management. These are intended to facilitate market-based incentives. Firms will need to disclose certain information publicly, which will bring in market discipline and help to ensure the stability of insurers and reinsurers (disclosure). In addition, firms will be required to report greater amount of information to their supervisors (supervisory reporting).
- 5.46 The directive is scheduled to incept in 2012 with its roadmap for implementation spanning the four levels defined in the EU's 'Lamfalussy Process' for financial services legislation. Level 1, the Framework Directive legislation itself, is currently being steered through the European Parliament and Council.
- 5.47 The second level is the technical implementation measures. The Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) is expected to finalise its recommendations in October 2009. It is conducting a series of Quantitative Impact Studies, most recently QIS4, using a detailed standard formula approach to assess the potential financial impact of Solvency II.

- 5.48 Level 3 is the fostering of co-operation between national regulators in order to enforce a consistent interpretation of the Level 2 rules. This is presently in its initial stages. The fourth and final level, after implementation, is the ongoing monitoring of compliance across member states.
- 5.49 Solvency II both mirrors many aspects of the FSA's Internal Capital Adequacy Standards (ICAS) of 2004 and brings a range of new challenges to UK insurers. Like ICAS, Solvency II gauges capital adequacy against the stress of a 1 in 200 balance sheet deterioration (99.5% confidence level) over a one-year time horizon in the presence of all relevant risks (for non-life insurers this usually consists largely of insurance, market, counterparty default and operational risks).
- 5.50 Solvency II is more precise in its interpretation of the insurer's balance sheets, valuing each item according to its market value. Where no market exists, most prominently outstanding claims liabilities, the present value of modelled cashflows is added to a risk margin. This is intended to capture the market price in a transaction between willing parties.
- 5.51 Solvency II also mandates documentation around internal models but then moves significantly beyond ICAS in requiring regulatory approval for use of internal models, assessed partly through comparison with the standard formula approach and a formal 'use test' verifying that the model is embedded across the business from reserving to pricing.
- 5.52 While most larger UK insurers maintain the foundations of a Solvency II model in their ICAS internal processes, there is widespread recognition that all will need to make significant adjustments prior to the 2012 effective date to meet 'use test' requirements in particular, as well as the Pillar 2 principles. This places further emphasis on the standard formula approach for both larger and smaller insurers.
- 5.53 For Lloyd's, with its unique character and risk profile, it is not yet fully apparent how Solvency II will fit into its particular brand of self-regulation, as well as its part-group and part-solo characteristics. Currently granted the right to review its own ICAS submissions (the FSA conducts only sample tests), the review process understands the particular specializations and diversifications within the complex risks underwritten by syndicates. Some Lloyd's syndicates may be particularly concerned by the financial impact of the standard formula approach.
- 5.54 QIS4 has cast further light on the differences between the standard formula and internal models, as well underlining areas where technical issues still need to be resolved and uncovering the state of readiness of European insurers.
- 5.55 Of the 1,412 participants, 89% met the Solvency Capital Requirement (SCR), the 99.5% survival probability measure, and 99% met the Minimum Capital Requirement (MCR), the ultimate floor for intervention; however, the derivation of MCR relative to SCR is yet to be finalised. The other headline results were:
- 5.56 Around half estimated a saving of 20% when using their internal model compared to the standard formula. In many cases, insurers cited that the standard formula failed to capture their risk profile or take account of the insurance cycle in calculating volatility. However, no internal models were believed to be compliant, principally for failure to meet the 'use test' Many insurers view the key challenge presented by Solvency II as being that of installing and fitting a Pillar I and II compliant internal model and/or risk management process into their daily business activities.
- 5.57 For groups the capital savings from internal models were not as pronounced. Overall, group diversification benefits were 21% on average.
- 5.58 On average, QIS4 took 3.2 person months to complete.

- 5.59 Many smaller insurers lacked appropriate data to complete actuarial valuations of liabilities at the level required to complete the template; while larger insurers often commented that their valuation basis was significantly more granular. Proportionality remains a concern for many participants.
- 5.60 Technical issues were also raised regarding the precise methodology for calculation of the risk margin, eligibility of own funds and sufficiency of geographical diversification. In some countries, compatibility of the QIS4 balance sheet with local accounting practises is not assured, for instance due to different protocols such as using historical values for assets.
- 5.61 The two main areas of debate during the Directive's journey through the various chambers of European politics have been the "group support" concept and pro-cyclicality. "Group support," a key tenet of the original proposal, was heavily smothered in an amendment proposed in December 2008 which prohibited cross-border diversification effects leaving each solo entity to cover its own capital requirement.
- 5.62 The current economic downturn has, for some, unmasked an apparent pro-cyclicality in the Directive with insurers being vulnerable to intervention owing to temporary depressions of asset values in a worldwide recession.
- 5.63 The precise nature of the final Solvency II directive remains unclear but the key principles remain constant: a focus on market-based valuation, risk-based capital requirements and integrated risk management systems. The overriding conclusion from QIS4 has been that most insurers will have to devote a considerable tranche of resources to developing the latter in order to avoid a large financial impact in 2012. A recent surge in the appointment of Chief Risk Officers and upper level buy in to understanding the QISs and the Directives has been testament to this.

6. Important Information

- 6.1 This report necessarily represents only part of the information which we considered in carrying out our work, being that which we considered to be most relevant to our understanding of your needs.
- 6.2 The information in this report will have been supplemented by matters arising from any oral presentation by us, and should be considered in the light of this additional information.
- 6.3 The information in this report is confidential and it should not be provided to anyone other than the intended recipients without our written consent.
- 6.4 If you require any further information or explanations relating to this report, you should contact us.
- 6.5 Key Contacts:
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Appendix A Insurance Losses 1970-2007

Table A1: Top 40 most costly insurance losses 1970-2007*

*Sigma Report No 1/1008

The 40 most costly insurance losses 1970-2007

Insured loss ¹⁸ (in USD m, indexed to 2007)	Victims ¹⁹	Date (start)	Event	Country
68 515	1 836	25.08.2005	Hurricane Katrina; floods, dams burst, damage to oil rigs	US, Gulf of Mexico, Bahamas, North Atlantic
23 654	43	23.08.1992	Hurricane Andrew; floods	US, Bahamas
21 999	2 982	11.09.2001	Terror attack on WTC, Pentagon and other buildings	US
19 593	61	17.01.1994	Northridge earthquake (M 6.6)	US
14 115	124	02.09.2004	Hurricane Ivan; damage to oil rigs	US, Caribbean: Barbados et al
13 339	35	19.10.2005	Hurricane Wilma; torrential rain, floods	US, Mexico, Jamaica, Haiti et al
10 704	34	20.09.2005	Hurricane Rita; floods, damage to oil rigs	US, Gulf of Mexico, Cuba
8 840	24	11.08.2004	Hurricane Charley	US, Cuba, Jamaica et al
8 599	51	27.09.1991	Typhoon Mireille/No 19	Japan
7 650	71	15.09.1989	Hurricane Hugo	US, Puerto Rico et al
7 413	95	25.01.1990	Winter storm Daria	France, UK, Belgium et al
7 223	110	25.12.1999	Winter storm Lothar	Switzerland, UK, France et al
6 097	54	18.01.2007	Winter storm Kyrill; floods	Germany, UK, NL, Belgium et al
5 659	22	15.10.1987	Storm and floods in Europe	France, UK, Netherlands et al
5 650	38	26.08.2004	Hurricane Frances	US, Bahamas
5 066	64	25.02.1990	Winter storm Vivian	Europe
5 031	26	22.09.1999	Typhoon Bart/No 18	Japan
4 492	600	20.09.1998	Hurricane Georges; floods	US, Caribbean
4 220	41	05.06.2001	Tropical storm Allison; heavy rain, floods	US
4 174	3 034	13.09.2004	Hurricane Jeanne; floods, landslides	US, Caribbean: Haiti et al
3 937	45	06.09.2004	Typhoon Songda/No 18	Japan, South Korea
3 614	45	02.05.2003	Thunderstorms, tornadoes, hail	US
3 515	70	10.09.1999	Hurricane Floyd; heavy rain, floods	US, Bahamas, Columbia
3 508	167	06.07.1988	Explosion on platform Piper Alpha	UK
3 411	59	01.10.1995	Hurricane Opal; floods	US, Mexico, Gulf of Mexico
3 365	6 425	17.01.1995	Great Hanshin earthquake (M 7.2) in Kobe	Japan
2 989	45	27.12.1999	Winter storm Martin	Spain, France, Switzerland
2 818	246	10.03.1993	Blizzard, tornadoes, floods	US, Canada, Mexico, Cuba
2 662	38	06.08.2002	Severe floods	UK, Spain, Germany, Austria et al
2 589	26	20.10.1991	Forest fires which spread to urban areas, drought	US
2 577	-	06.04.2001	Hail, floods and tornadoes	US
2 488	4	25.06.2007	Heavy rainfall, floods	UK
2 443	30	18.09.2003	Hurricane Isabel	US, Canada
2 404	39	05.09.1996	Hurricane Fran	US
2 372	20	03.12.1999	Winter storm Anatol	Denmark, Sweden, UK et al
2 365	4	11.09.1992	Hurricane Iniki	US, North Pacific Ocean
2 282	-	29.08.1979	Hurricane Frederic	US
2 255	49	19.08.2005	Heavy rainfall, floods and landslides	Switzerland, Germany et al
2 217	23	23.10.1989	Explosion in petrochemical plant	US
2 196	220 000	26.12.2004	Earthquake (M _w 9), tsunami in Indian Ocean	Indonesia, Thailand et al

¹⁸ Property and business interruption, excluding liability and life insurance losses
US natural catastrophe figures: with the permission of Property Claim Services (PCS)/incl. NFIP flood losses (see page 42 "Terms and selection criteria")

¹⁹ Dead and missing