



## Insurance and The Stock Market - The Asset Test

**AON**

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METRICA

## Insurers' Performance – The Stock Market's View

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## Foreword

In the aftermath of the 11 September 2001 terrorist attacks on the US, Aon Limited commissioned Oxford Metrica to assess the impact of those events on the international (re)insurance and stock markets. Since that report was published, the continued decline in worldwide stock markets has made a bad situation even worse for (re)insurers. The problems they are now facing on the asset side of their balance sheets are as big, if not greater than, those on the liabilities side, forcing major changes to the structure of the industry.

In a follow up to its initial research, Oxford Metrica has again been commissioned by Aon to produce a second report which examines the effect the latest developments have had on some of the world's leading insurers and reinsurers. This shows that despite significant hardening of the (re)insurance market, carriers are still struggling to rebuild their balance sheets to enable them to succeed in this ever-changing environment.

As the WTC disaster so tragically demonstrated, we live in a world of growing risk exposures and increasing loss volatility. New threats lie ahead, and the (re)insurance industry will have to face new challenges. We are pleased to share these research findings with you and trust you will find them informative and thought-provoking.



Dennis L. Mahoney  
Chairman and Chief Executive Officer  
Aon Limited

## Introduction

While the events of 11 September 2001 caused losses of a previously unimagined nature, the sharp decline in worldwide stock markets in 2002 led to even bigger losses (on their investment portfolios) for some of the world's leading insurers and reinsurers than those created by the terrorist attacks. As if this were not bad enough, the need also to make significant increases to reserves for long tail liabilities such as asbestos has created a nightmare scenario of unprecedented proportions for the industry.

Following the 1 January 2003 renewals, we thought it an appropriate time to step back and take a high level overview of the effect of these various developments.

### Tighter conditions

Conditions within the insurance industry have been hardening for nearly two years. The first signs of the end of the extended soft market of the mid to late 1990s came during the 1 January 2001 renewals, following a run of catastrophe losses and the first falterings of the world's investment markets, which soon turned into a seemingly relentless descent. There were a number of catastrophe losses in 2001 due to natural perils such as tropical storm Alison, but it was 11 September that redefined the world's, and the insurance industry's, concept of risk. The World Trade Center (WTC) disaster, apart from being such an appalling human tragedy, was a unique insurance loss in terms of the cause, scope and size:

- Cause – the first major catastrophe caused by terrorism within the US.
- Scope – almost every major class of insurance was impacted from property, business interruption, aviation, liability, through to workers' compensation and life.
- Size – current estimates of insured losses are around US\$40 billion.

Because of the timing and initial uncertainty over the eventual cost of WTC losses, reinsurers had limited time to reassess fully and reflect the changed perception of catastrophe risk exposures in the 1 January 2002 renewals. Clearly, pricing was increased, coverage restricted and terms and conditions tightened across most classes of business. Also greatly increased attention was paid to monitoring accumulations of risk, both within classes and across classes. These stricter conditions continued through the July 2002 renewals and are likely to intensify further for the 1 January 2003 renewal season.

*Source for all financial data for this study: Annual reports and financial statements (2001). Currency conversions have been made where applicable using exchange rates at balance sheet dates.*

### Emerging resurgent

Experience clearly varies in different classes of business in different countries, but overall the insurance market has survived remarkably well, and has emerged resurgent. Insurers and reinsurers are now looking to several years of sustained pricing, and hopefully few catastrophe losses, to rebuild their balance sheets. Therefore they are determined to underwrite for profit, targeting combined ratios of 100% or less and greatly reducing their reliance on investment income. This means that underwriters are reappraising what lines of business they write, how much they will write and at what price, adopting a “back to basics” approach. Underwriters are “unbundling”, i.e. separating and specialising in classes of business, in order to achieve greater clarity and better pricing of risk. This also means that they are requiring much more detailed risk information, both to understand better the risk they are assuming and to be able to model and monitor accumulations of risk exposure within their portfolios.

Buyers of insurance and reinsurance are paying more attention to the security and stability of their carriers – the so-called “flight to quality”. With increasing premium rates, and in some areas limited capacity, most buyers will consider and take higher deductibles or retentions in order to mitigate the overall impact on premium spend – and many buyers are in turn making much greater use of formalised self-financing vehicles, such as captives or protected cell captives.

## 2001/2002 – A Nightmare Year for Insurers

Despite rising premium rates, insurers have suffered a very difficult financial year. It began with the tragic events of 11 September 2001 (Cat 9/11) followed by the proliferation of major governance failures typified by Enron’s bankruptcy, ever-increasing claims associated with asbestos exposure and a declining stock market. These dimensions of performance are analysed in the following pages.

### The Impact of Cat 9/11

The sample of firms selected for this analysis includes the 10 (re)insurers with the largest insurance claims associated with Cat 9/11. These firms each incurred net, post-tax claims of at least US\$500 million; presented in Table 1. The claims estimates are all shown net of reinsurance or retrocession and after tax. Also presented are the cash resources of each firm, as reported in their 2001 financial statements. Only Munich Re and The St Paul Companies are unable to cover their claims exposure with their cash balances.

Table 1

Estimated Claims Relating to Cat 9/11

US\$million		
Company	Claims estimate	Cash resources
1. Munich Re	1,959	1,661
2. Swiss Re	1,777	5,920
3. Berkshire Hathaway	1,500	5,313
4. Allianz	1,335	133,245
5. XL Capital	796	1,864
6. Zurich Financial	706	8,726
7. St Paul	612	151
8. ACE	559	671
9. AIG	533	698
10. AXA	500	15,710

Significant net claims were incurred also by Hartford Re (US\$440 million after tax), Chubb (US\$420 million after tax), and Employers Re (US\$386 million after tax), a wholly-owned subsidiary of General Electric (GE). The Lloyd’s Market also suffered a combined net loss of US\$2.9 billion pre-tax.

Most of these firms incurred additional losses, on top of the insurance claims, as a result of the disaster. For example, Travelers Property Casualty (then a wholly-owned subsidiary of Citigroup and so excluded from the study) incurred net claims of US\$502 million after tax and additional after tax losses of US\$200 million in reduced revenue and additional expenses.

## 2001/2002 – A Nightmare Year for Insurers (continued)

### The Impact of Enron's Bankruptcy

2001 also saw the high profile demise of Enron. Its bankruptcy affected insurers in potentially two ways. Firstly, some firms were exposed to surety bond losses. Secondly, several investment portfolios, particularly those in the US, suffered as Enron's share price plummeted. The St Paul Companies stated its net Enron-related loss at US\$102 million, after tax. This figure comprised US\$83 million coverage for gas supply bonds and US\$19 million in investment losses. Chubb suffered surety bond losses of US\$143 million, net of reinsurance and after tax, and Berkshire Hathaway's General Re reported a loss of US\$46 million from Enron-related liability coverages.

In addition to the direct Enron-related losses, the prevalence of other high profile governance failures – such as WorldCom, Global Crossing and Tyco – impacted stock market performance negatively and severely. These failures have produced a widespread loss of investor confidence in corporate America's ability to report accurate accounting numbers. The distinction between prudent earnings management and fraudulent earnings manipulation has been called into question. Even companies where no wrongdoing is suspected, but whose operations are complex, have suffered in the aftermath of Enron. Two prominent companies which appear to have been penalised in the markets for financial complexity are AIG and GE. The leaders of both firms – Maurice Greenberg and Jeffrey Immelt, respectively – have responded rapidly with substantive attempts to improve transparency and access to information.

### The Impact of Rising Asbestos Claims

It is estimated that US insurers ultimately will pay approximately US\$65 billion in asbestos claims, of which approximately US\$22 billion has been paid already.\* Moreover, it is estimated that these insurers currently hold approximately only US\$13 billion in reserves for asbestos claims.

Allianz recently increased its asbestos reserves by US\$750 million. This reserve strengthening is supplementary to an increase of US\$800 million in 1995 and a further US\$250 million in 2000. Earlier this year, The St Paul Companies paid out US\$987 million to settle a case with buildings products firm, Western MacArthur. Latterly, an additional lawsuit has been filed against The St Paul on behalf of shareholders who claim that the company inflated its stock price artificially by failing to disclose adequate financial information on asbestos claims.

In 2002, both Chubb and RSA more than doubled their asbestos reserves; Chubb by US\$625 million and RSA by £371 million (US\$581 million).

\* Source: Tillinghast-Towers Perrin

### The Impact of Declining Stock Markets

The underwriting losses of insurers have been aggravated by widespread falling stock values, reducing insurers' ability to produce impressive results from the contribution of strong investment returns. However, firms vary in their exposure to equities; from Berkshire Hathaway with over 40% of its investment portfolio in equities to ACE, AIG and XL Capital, each with under 5% exposure. These asset allocations between bonds, equities and cash are shown in Figures 1a and 1b.

Figure 1a  
Asset Allocation

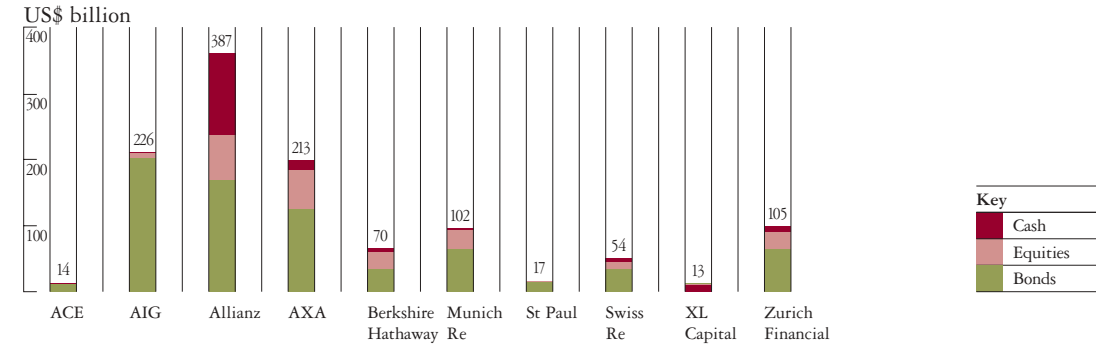
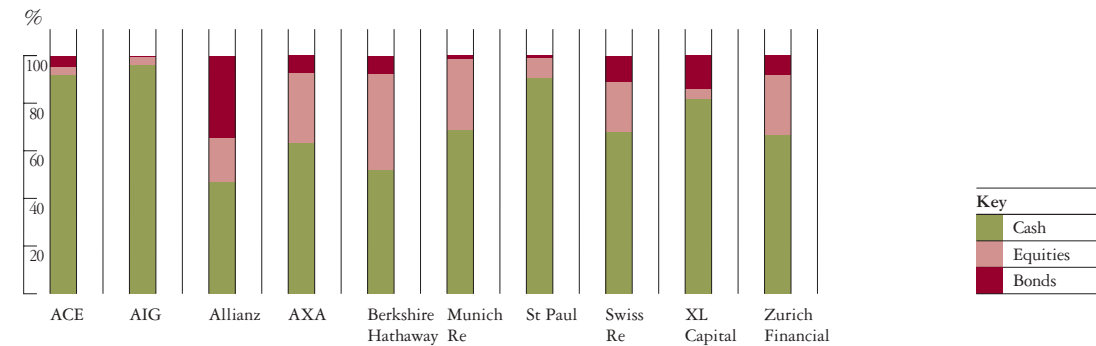


Figure 1b  
Relative Asset Allocation



## 2001/2002 – A Nightmare Year for Insurers (continued)

Table 2 shows the actual dollar falls in the value of firms' equity portfolios from 2000 to 2001. These are presented also in percentage form. Of the top 10 (re)insurers exposed to Cat 9/11, only AXA and AIG achieved positive returns. Coincidentally perhaps, these are also the two firms with the lowest exposure to Cat 9/11. The firms from the top 10 that suffered the biggest monetary falls in their invested equity portfolios are Berkshire Hathaway, Allianz, Munich Re and Swiss Re. They are also the four firms with the largest exposure to Cat 9/11.

Table 2 also reveals the scale of the impact on insurers of the fall in equity markets. In the lower half of the table, these losses simply dwarf the impact of Cat 9/11 (Table 1).

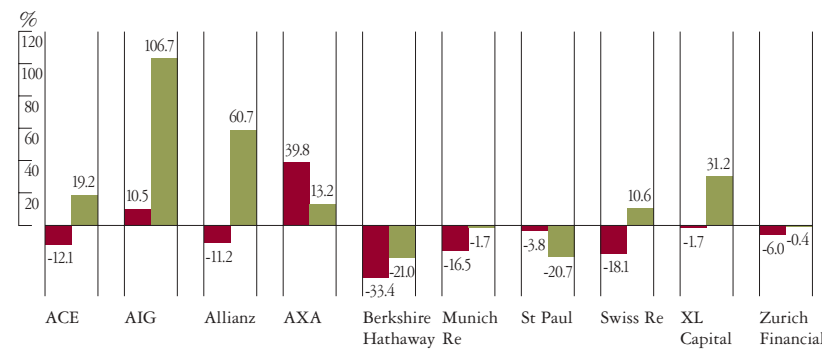
**Table 2**  
The Decline in Value of Insurers' Equity Portfolios

Company	Change in Equity Portfolio 2000-2001 (US\$m)	Change in Equity Portfolio 2000-2001 (%)
AXA	15,131	39.8
AIG**	756	10.5
XL Capital	-10	-1.7
St Paul	-56	-3.8
ACE	-64	-12.1
Zurich Financial	-2,516	-6.0
Swiss Re	-2,952	-18.1
Munich Re	-8,133	-16.5
Allianz	-13,954	-11.2
Berkshire Hathaway	-14,373	-33.4

Of course, the change in value of a firm's equity portfolio also reflects switches out of equities and into cash or bonds, for example, so it is necessary to consider Table 2 in the context of overall investment portfolio returns.

Figure 2 presents graphically both the percentage change in firms' equity portfolio values from 2000 to 2001 and the change in firms' investment portfolio returns, including those on bonds, equities and cash. Despite drops in the value of their equity holdings, ACE, Allianz, Swiss Re and XL Capital all managed to generate a positive aggregate result.

**Figure 2**  
The Change in Insurers' Investment Portfolios, 2000-2001



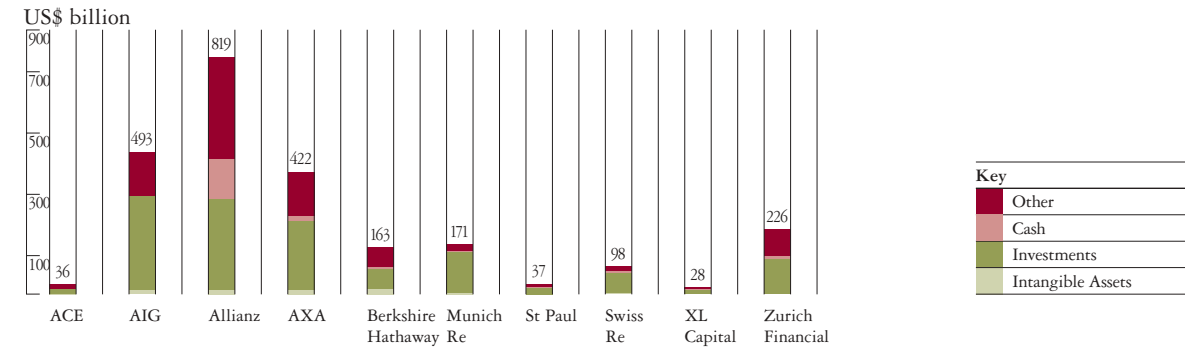
The increase in Allianz' cash balances (and, consequently, total investment portfolio) is almost entirely due to its acquisition of Dresdner Bank. More than half the increase in AIG's bond portfolio is due to its acquisition of American General.

\*\* Without the contribution from its acquisition of American General, AIG still would have shown an increase in the value of its equity holdings.

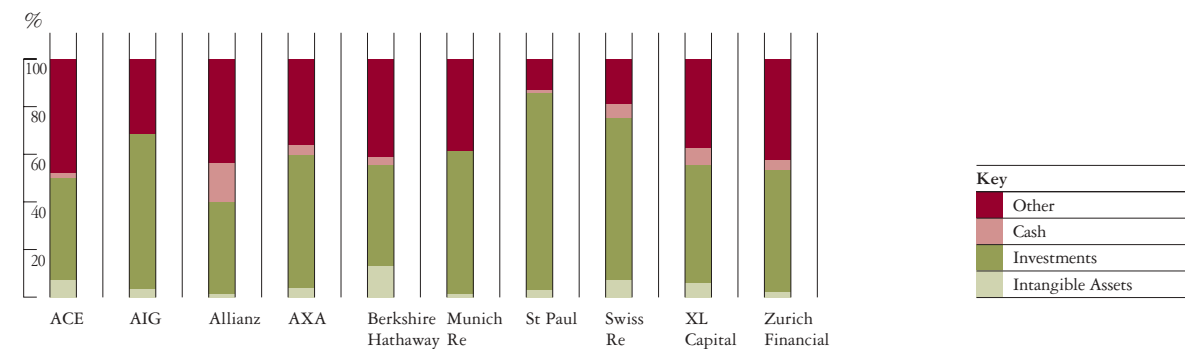
## How Strong are Insurers' Balance Sheets?

Figures 3a to 4b present the balance sheets of the top 10 insurers by their assets and then by their liabilities.<sup>†</sup> In all cases, the firms carry significant reserves that are more than sufficient to absorb the estimated net claims presented in Table 1 and any additional Enron-related exposures.

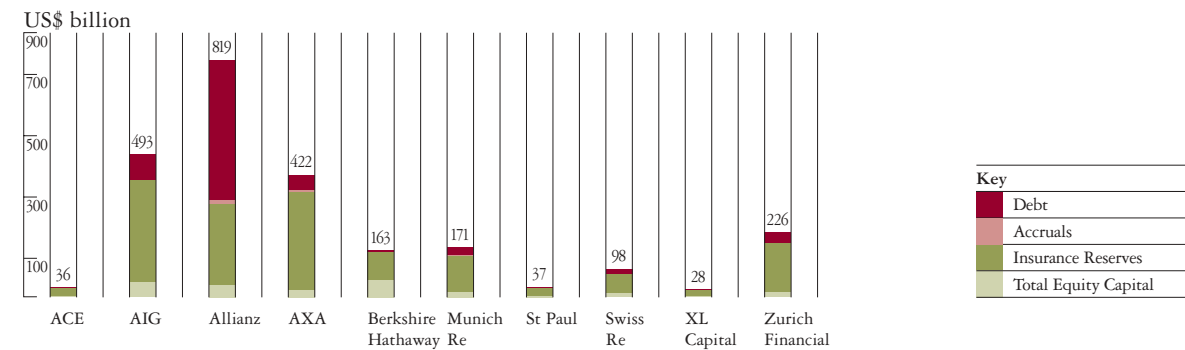
**Figure 3a**  
Insurers' Assets



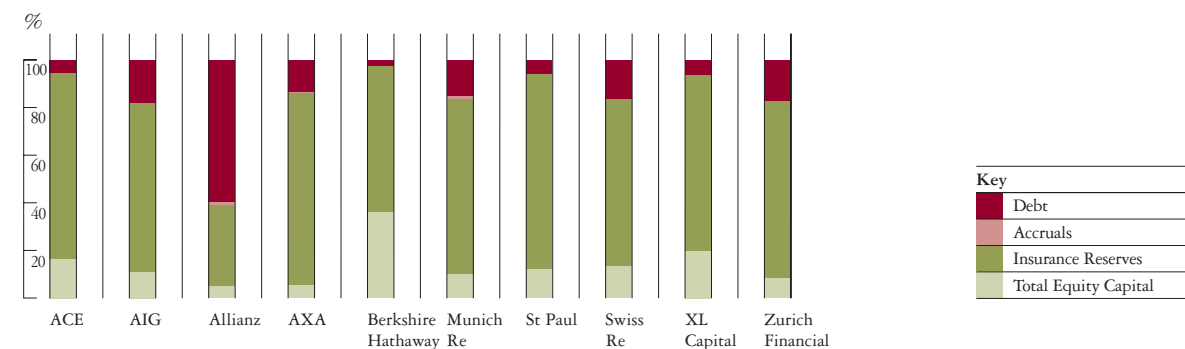
**Figure 3b**  
Insurers' Assets



**Figure 4a**  
Insurers' Liabilities



**Figure 4b**  
Insurers' Liabilities



<sup>†</sup> The size and structure of Allianz' balance sheet has changed significantly since its acquisition of Dresdner Bank in 2001.

## The View from the Rating Agencies

Against such a financially uncertain background, it is not surprising that the balance of rating action by the four main agencies – Standard and Poor's, Moody's, AM Best and Fitch – has been downwards. Table 3 shows both the current\* financial strength ratings awarded to the group of insurers analysed and any rating action since 11 September 2001. Those shaded burgundy indicate a downgrade of one 'notch', those shaded green indicate an upgrade of one notch, and those with text in white indicate a movement of two or more places. A negative sign in parentheses indicates that the firm has been placed on negative credit watch and 'NR' indicates that no comparable ratings were available.

**Table 3**  
Rating Action on Financial Strength since Cat 9/11

Company	S&P	Moody's	AM Best	Fitch
1. AIG	AAA	Aaa	A++	AAA
1. Berkshire Hathaway	AAA	Aaa	A++	NR
3. Swiss Re	AA+	Aaa	A++	AAA
4. Munich Re	AAA	Aa1	A++	AA+
5. AXA	AA	Aa3	NR	AA
6. Allianz	AA	NR	A++(-)	AA(-)
7. XL Capital	AA	Aa2	A+	AA
8. ACE	A+	Aa3	A+	A+
9. St Paul	A+	Aa3	A	NR
10. Zurich Financial	A+(-)	A1	A	NR

\*31 October 2002

The rating landscape reveals only two carriers with top ratings; AIG and Berkshire Hathaway. In an uncertain environment, the financial strength of insurers becomes increasingly important. Swiss Re and Munich Re each has lost one of their prized triple-A ratings; in the latter's case, two. In contrast to the general trend, both the Bermudian companies have been upgraded since Cat 9/11.

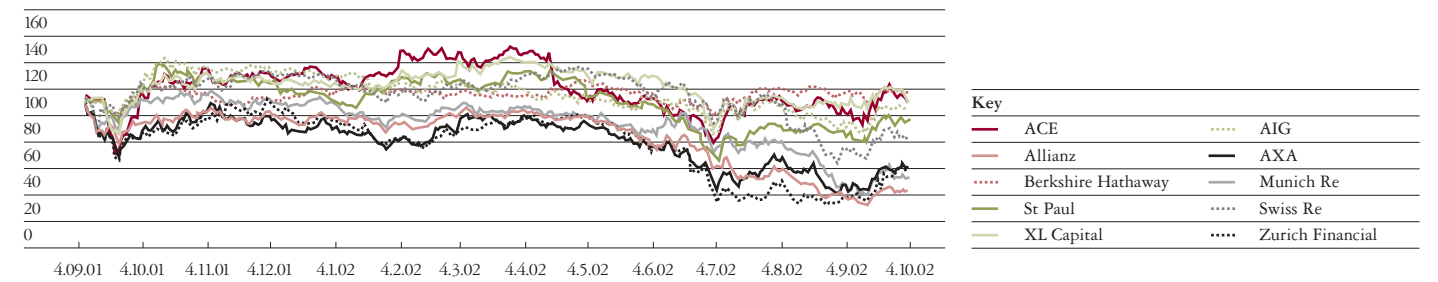
## The View from the Stock Market

What is the net effect of the multitude of factors impacting the general insurance market? The most transparent verdict is provided by the stock market as it forms a collective opinion as to the future cash flow potential of each (re)insurer. The stock price performance since 10 September 2001 is presented in Figure 4 and Figure 5 for the top 10 firms.

**Figure 4**  
Change in Market Values since Cat 9/11

Company	MCap at 10 Sep 01 (US\$m)	MCap at 30 Oct 02 (US\$m)	% change
1. Berkshire Hathaway	103,915.60	112,067.63	7.8
2. ACE	7,636.26	7,483.54	-2.0
3. XL Capital	10,264.18	9,928.73	-3.3
4. AIG	173,122.75	166,666.56	-3.7
5. St Paul	8,619.05	7,570.33	-12.2
6. Swiss Re	26,617.47	21,142.95	-20.6
7. Zurich Financial	20,609.18	12,996.19	-36.9
8. AXA	40,746.66	24,514.86	-39.8
9. Munich Re	43,849.32	22,671.27	-48.3
10. Allianz	62,620.95	27,176.95	-56.6

**Figure 5**  
The Impact on Stock Prices (indexed)

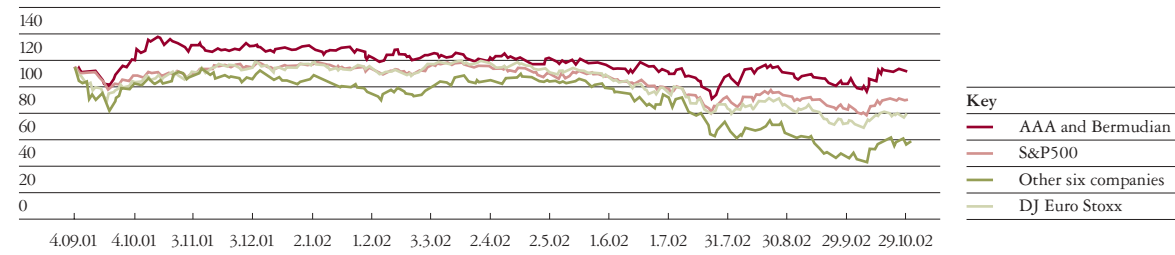


Berkshire Hathaway is the only firm in the top 10 to have exceeded its pre-Cat 9/11 stock price levels. Allianz is at the other end of the ranking, having lost more than half its market value.

## The View from the Stock Market (continued)

The two firms leading the ranking in Table 3 (AIG and Berkshire Hathaway) and the two Bermudians in the portfolio (ACE and XL Capital) are the clear winners in the shareholder value performance ranking. This becomes even clearer when their prices are indexed and tracked against the remaining six firms in the portfolio, the S&P500 Composite market index and the Dow Jones Euro Stoxx index; shown in Figure 6.

**Figure 6**  
Recoverers and Non-Recoverers in Insurance



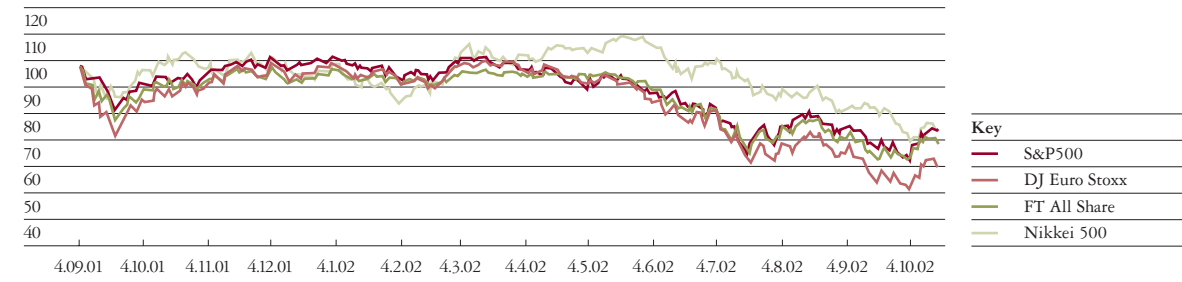
Consistent with previous Oxford Metrica research into the shareholder value effects of reputation crises,\* investors have used the Cat 9/11 crisis as an opportunity to adjust their expectations of future cash flow performance from these firms. This process results in a re-rating of insurers' senior management by investors and produces two distinct groups of firms, recoverers and non-recoverers. This distinction begins to emerge within the first few trading days of a crisis. The recoverers in this case are the triple-A rated carriers and the Bermudians, all of which have outperformed the market index since 11 September 2001.

\* *Reputation & Value: the case of corporate catastrophes* by Rory F Knight and Deborah J Pretty, Oxford Metrica (2001).

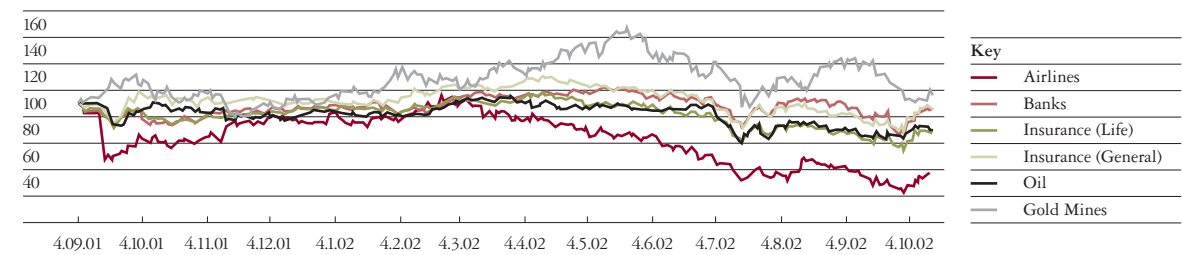
## The Macroeconomic Context

Figures 7 to 11 show the performance of selected stock markets, sectors, commodities and currencies over the last year. Despite the initial drop in market values following the 11 September tragedy, the markets prove to be remarkably resilient and recover much of the lost value. From May 2002, however, the markets decline considerably, continuing the bear market that has been evident since early 2000.

**Figure 7**  
Market Performance

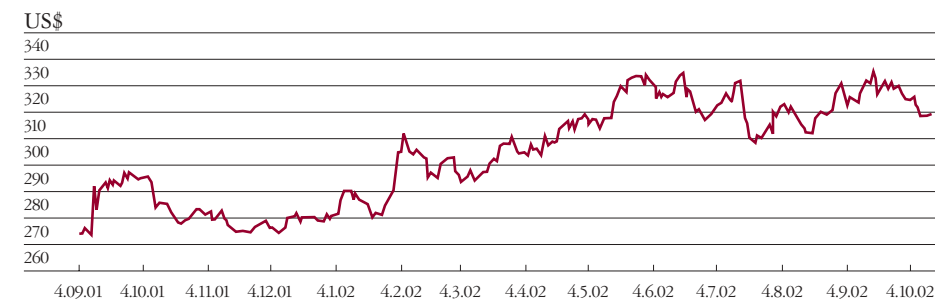


**Figure 8**  
Sector Performance



Tracing stock performance across key sectors in Figure 8 reveals considerable variation. Gold mining firms have outperformed consistently, fuelled by strong gains in the gold price, shown in Figure 9.

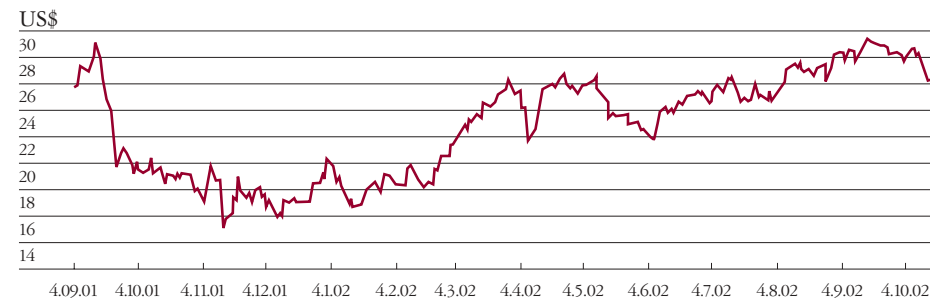
**Figure 9**  
Gold per Troy Ounce



## The Macroeconomic Context (continued)

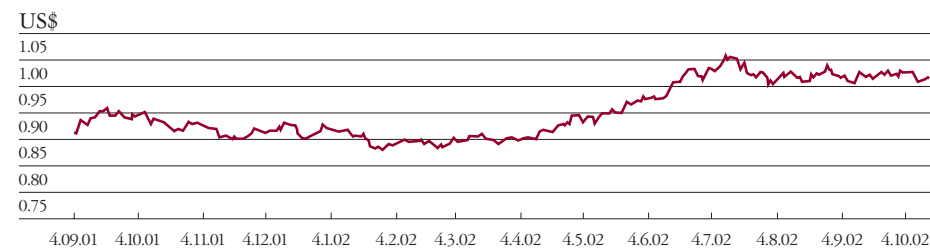
In contrast, the weaker oil price shown in Figure 10 has not helped the oil majors which continue to demonstrate unsettled performance amid uncertainty relating to a potential war against Iraq.

**Figure 10**  
Brent Crude – physical delivery \$ per barrel



The airlines still are struggling with continued and dramatic under-performance since 11 September 2001. As a sector, general insurers have returned approximately to their pre-11 September levels, though, as shown in the previous section, this aggregate view conceals some significant differences between firms. The stock performance of the general insurance sector contrasts with the life assurance sector where values have yet to be restored to 11 September 2001 levels. The general insurers have been able to exploit rising premium rates in many lines of business. Unlike the general (re)insurers, the life assurers face longer-term obligations, also reflected in the composition of their investment portfolios.

**Figure 11**  
US \$ Price of €1



After an initial weakening of the dollar against the euro following 11 September, the dollar recovered to pre-event levels only to weaken again from around May 2002. This pattern, shown in Figure 11, is consistent with the stock market performance presented in Figure 7.

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