Reputation & Value

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Reputation & Value

the case of corporate catastrophes

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Acknowledgements

What is the relationship between reputation and value? This paper is the culmination of five years' work into providing insights to this question. We realise that this is an ongoing project and that this is likely to be the first of many research papers we write on the topic. We have benefited greatly from interacting with companies affected by reputation crises, with colleagues in the academic world, and with leaders in the field of insurance.

In particular, we should like to acknowledge AIG Europe's contribution to the debate on reputation risk, its potential impact on companies and how the protection of this risk will develop in future.

Contents

Information and data used in this study are taken exclusively from public sources.

This report has four key objectives:

1 To explore the relationship between corporate reputation and shareholder value,

2 To measure the contribution of reputation equity to shareholder value performance,

3 To evaluate patterns of stock market reaction to reputation damage and to determine the drivers of reputation recovery, and

4 To analyse the roles of strategic stakeholders, public perception and brand value.

A conceptual exposition of reputation and value addresses the first objective. The second objective is met through conducting a value analysis of the largest 500 European companies. The relationship between intangible assets and share performance is explored, and the market premium credited to firms with strong intangibles is measured. The third objective is achieved by modelling a portfolio of 25 reputation crises and identifying the significant variables that drive recovery. Finally, the value reactions to selected crises are modelled individually and presented with associated commentary.

Key results:

- Firms with strong reputation equity can outperform the market by over 100%.
- Catastrophe insurance alone is insufficient to protect shareholder value.
- Reputation and value recovery appear to be a function of managerial ability.
- In the event of a crisis, reputation equity and value can be enhanced with careful management.
- The influence of strategic stakeholders, public perception and brand value are considerable.

Policy implications:

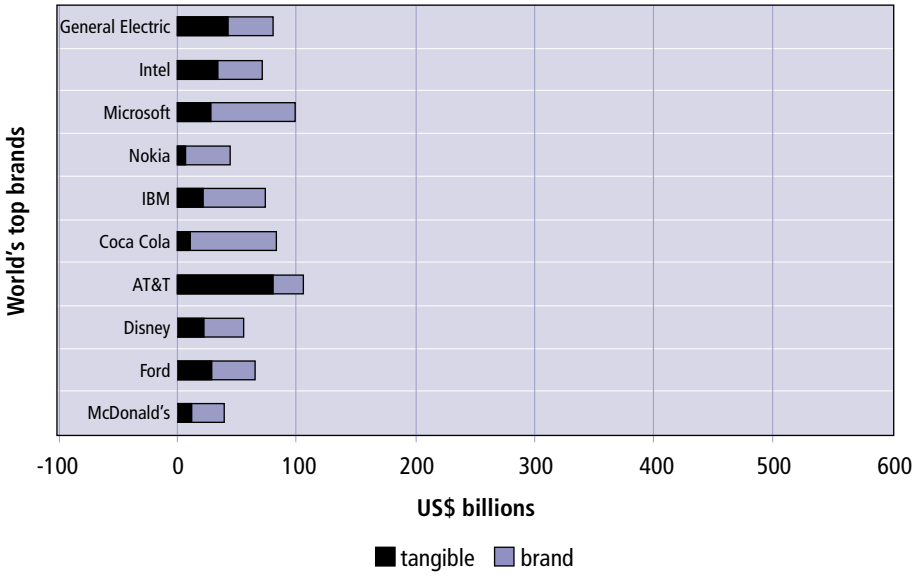
- Reputation requires active management.
- Reputation management is not PR.
- Crises are an opportunity for CEOs to build substantive reputation equity.
- Reputation is the single most important variable in value creation or destruction.
- Reputation management requires focused attention on strategic stakeholders, risk perception and brand value.

1 Reputation Equity and Shareholder Value

It is generally believed that a strong corporate reputation will create value for shareholders. A high profile corporate name is more likely to generate sales, customer loyalty and sustained market share than a generic name recognised by few. These value drivers translate into improved cash flow performance and, ultimately, value for the firm's shareholders. Shown in Figure 1 are the world's most valuable corporate brands.

Figure 1: The World's Top 10 Brands

Source: Interbrand/Citibank



Eighty-five per cent of firms consider brands (corporate or product) to be their most important asset, according to an international survey[1] of senior executives. This mirrors the results of a UK survey[2] where respondents ranked 'loss of reputation' as the greatest risk facing their organisation.

There exist several measures of firm performance, but shareholder value is the most comprehensive. It is the only metric which reflects inherently a long-term view and, therefore, requires the most complete information. Earnings per share, for example, tends to be myopic in nature and neglects balance-sheet management. In addition, discounted cash flows (or 'value') are correlated strongly with the actual market value of companies, since investors evaluate management decisions based on estimated long-term cash flows, rather than on estimates of short-term earnings.

The stakeholders of a firm include all those with an economic claim against the firm's assets. As residual claimants, shareholders hold the strongest incentive to maximise the long-term value of those assets. In order to assess the effect of a management decision on shareholders' claims, the most complete information is required (as to the effects on all the other stakeholders' claims). Shareholders, therefore, represent the only stakeholder for whom maximisation of return is in the best interests of *all* stakeholders

[1] Knight, RF & Pretty, DJ, (2000), A Survey of Brand Risk Management, *The Journal of Brand Management*, Volume 7, number 5.

[2] *Biennial Risk Management & Risk Financing Survey* by Aon (2001)

Finally, value is an appropriate measure of performance since it is shareholder returns which attract capital. Investors require a reward to compensate them for taking risk. If this reward proves inadequate (less than their opportunity cost of capital) in the long-run, investors will employ their capital elsewhere in search of better returns.

The pursuit of shareholder value represents a long-term and comprehensive approach to maximising claims for all stakeholders in the firm, and to attracting capital for future value creation. Shareholder value could be thought of as having three components: tangible value, premium value and latent value. These components are illustrated in the equation below.

$$\text{Value} = \frac{\text{Future Cash Flows}}{\text{Cost of Capital}} + \text{Growth Opportunities} + \text{Latent Value}$$

[Tangible Value] [Premium Value] [Latent Value]

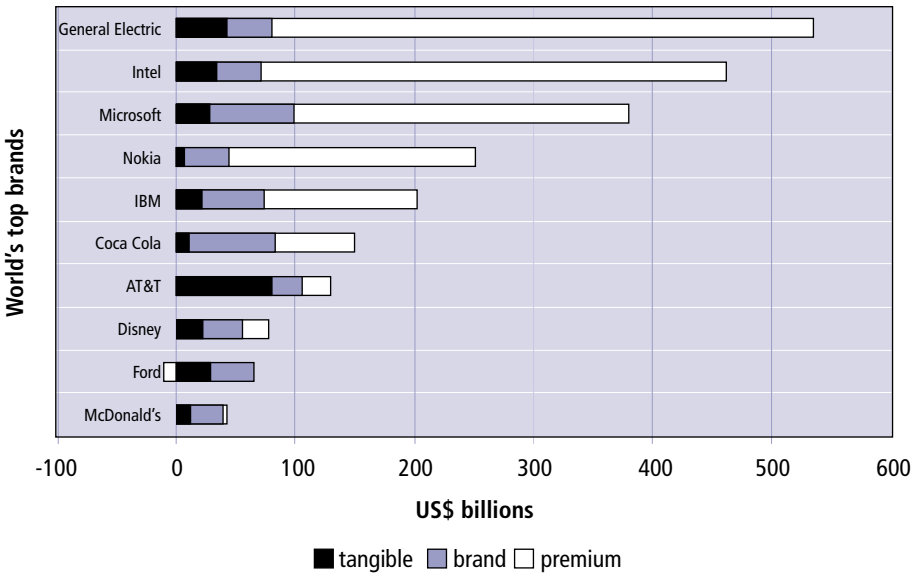
Tangible value reflects the bedrock of real and tangible assets, and is measured usually as book value. Premium value represents the value in excess of book value at which the firm trades in the open market. This element of value is the source of a firm's competitive advantage. The value drivers here include, for example, the firm's reputation, its brands, intellectual property, innovation, potential growth, global reach, managerial expertise, and the skills and experience of the workforce. These intangible assets are a source of sustainable competitive advantage for a firm and enhance shareholder value. Latent value represents the potential or 'hidden' value within a firm. Sources of hidden value might include under-leveraged assets, operating efficiencies yet to be realised, under-promoted brands, an unmotivated workforce, innovation without patents, or misallocated resources.

Presented in Figure 2 are the elements of the value equation as they relate to the world's top ten brands. 'Tangible' value represents the book value of the corporation. 'Brand' value is that measured by Interbrand/Citibank in their brand survey of July 2000. 'Premium' value in the chart is that element of premium value from the equation above (market value[3] minus book value) which is not represented by the brand. Latent value is not shown as, by definition, it has yet to be realised.

It can be seen, in the majority of cases, that there is considerable reputation equity beyond that generated by the corporate brand. An exception is Ford Motor Company whose brand has been valued such that it appears greater than the excess of market value over book value. This highlights the necessity for caution when interpreting results from survey-derived brand values and from within a current stock market valuation context.

[3] Taken on 21 July, 2000.

Figure 2: The Elements of Value



As a percentage of total market value, Ford and McDonald's have the greatest brand values, each with over two-thirds of their market value being represented by their corporate brand. In contrast, the brand values for both Intel and General Electric represent under 10% of their market value, suggesting that their reputations with investors go far beyond their brand names.

'Reputation equity' can be thought of as being premium value (including, but not limited to, brand value) plus latent value. Corporate reputation is an intangible asset offering premium value growth opportunities to the firm's shareholders. Effective corporate governance and superior management expertise will enhance the reputation assets of the firm and aid the release of latent value. Of course, reputation comprises many different factors. Ultimately, however, it represents the confidence investors place in the future of the business. Listed below are some key questions for any firm's Chief Executive Officer relating to reputation equity and value.

- What is your reputation worth?
- What are the drivers of reputation equity?
- How is the value of reputation sustained?
- If catastrophe strikes, how is reputation protected? Or even enhanced?
- Does reputation equity form part of your enterprise risk and value strategy?

Reaching a complete answer to these questions is not a perfect exercise but is essential for today's CEO seeking to manage reputation risk and realise latent value.

2 Measuring Reputation Equity

The general claim that corporate reputation creates shareholder value seldom is validated. While many companies believe corporate reputation to be their most important asset, very little useful information relating to reputation is disclosed in firms' annual reports and financial statements. This leaves investors trying to second-guess the true worth of corporate reputation and its ability to generate cash flow.

In a seminal work[4] by Tobin in 1969, it was demonstrated that firms with a high ratio of replacement cost to book value, Tobin's *q*, are more likely to create shareholder value than firms with low replacement costs. Given the practical difficulties of measuring replacement costs, the *ValueCreation-Quotient*™ (VCQ™) seeks to operationalise Tobin's *q*. The VCQ is calculated as the ratio of the market value of claims on a firm's assets (market capitalisation plus the balance-sheet value of debt) to the capital absorbed (cumulative capital raised and retained) by the firm. The VCQ is a cash-based measure which combines the capital history of a firm with a forward-looking market view of its ability to generate future cash flow.

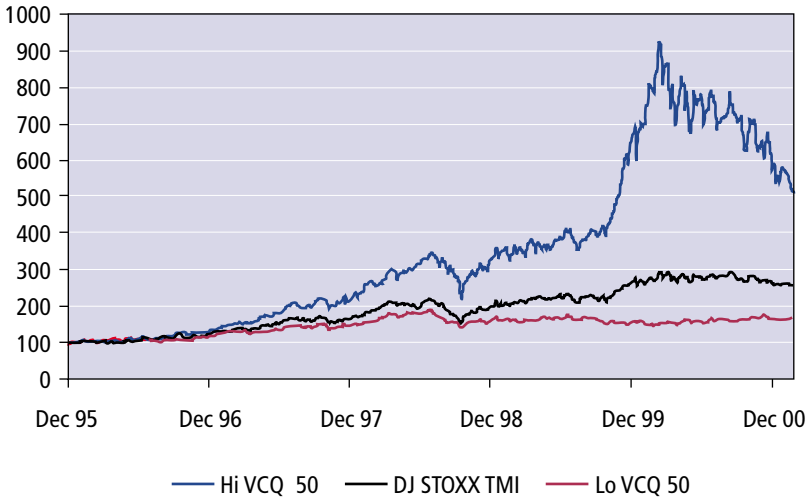
The VCQ, therefore, is a measure of reputation equity (premium value plus latent value) – the stock market's evaluation of a firm's package of assets – and reflects investors' confidence in future value generation. A firm's reputation may include brand value, superior management skills, knowledge and intellectual capital, innovation, strong relationships with stakeholders, efficiency, global reach and many other intangible assets. Essentially, these are all sources of a firm's reputation equity which will be reflected in value.

Value creation is defined as a firm's ability to generate a return on its capital in excess of its cost of capital. Firms with a VCQ > 1, therefore, indicate value creation; VCQ = 1 indicates value maintenance; and VCQ < 1 indicates value destruction. The VCQ was calculated for the largest 500 firms in Europe (by market capitalisation) and then ranked. Presented in Figure 3 is the share performance of the 50 firms with the highest VCQ and the performance for the 50 firms with the lowest VCQ in the ranking, over the last five years.

The graph tracks an investment strategy where US$100 is invested at 1 January 1996 and held until 16 February 2001. A fund tracking the Dow Jones Stoxx Total Market Index (with 95% European stock coverage) would have been worth US$245. A portfolio of the 50 lowest VCQ firms would be worth US$160. The portfolio of 50 high VCQ firms would have been worth an impressive US$501.

[4] Tobin (1969), "A General Equilibrium Approach to Monetary Theory", *Journal of Money, Credit, and Banking*, Volume 1, February

Figure 3: The Reputation Equity Premium



It is clear that the share performance of firms with the highest VCQs far exceeds the index. Those firms with low VCQs, in contrast, underperform the market. Similar results have been found both in country-specific analyses and other regional analyses. The results are not significantly affected when the returns are risk-adjusted.

These results are consistent with the assertion that a strong corporate reputation creates value for the firm's shareholders. High reputation equity gives investors confidence in the firm's ability to generate cash flow. This expectation is reflected in a higher share price which, in turn, reaffirms the reputation equity position. Thus, a virtuous cycle results through the generation of reputation equity and value. This raises a question as to whether investors reach an accurate assessment of the value of reputation equity. The corollary, however, is that should a firm's reputation be eroded or damaged, shareholder value is destroyed. The management of reputation risk is crucial to the maintenance of the value advantage.

3 Managing Reputation Risk

Corporate catastrophes often carry tragic consequences in terms of human lives lost, social damage and environmental cost. It is important to keep focused on this reality. Catastrophes also provide a unique opportunity to evaluate financial markets' response to major events which carry implications for a firm's reputation. Do such catastrophes always reduce reputation equity? From the research summarised below, it appears that catastrophes appear to affect returns in rather complex ways which seem to result in a re-evaluation of management – which may be positive or negative. In addition, the findings indicate that the impact of catastrophes on shareholder value is not strongly influenced by the existence of catastrophe insurance cover.

The research summarised here aims to identify the value impact of catastrophes by focusing on 25 major corporate catastrophes with reputational implications and tracing their impact on stock returns[5]. The selection of catastrophes is based on four criteria:

1 The disasters are man-made as opposed to natural.

2 Each involves a publicly-quoted company.

3 Each has received headline coverage in world news.

4 Each has occurred since 1980.

A full list of the crises selected for analysis is presented in Table 1. Seven of the crises studied are from the oil/gas/chemical industries and eleven are product-related incidents. Overall, five events are attributable to deliberate acts of tamper or terrorism and, in a further three, sabotage was suspected. Thirteen of the firms are American, one is Japanese and the remaining eleven are European; British, Dutch, French, German, Swedish and Swiss. Thus, whilst relatively small, the catastrophe portfolio is international and constitutes a reasonably representative sample across industry sectors and major classes of loss.

[5] The opening stage of this research project, based on a portfolio of 15 catastrophes, was published in *Risk Financing Strategies – The Impact on Shareholder Value* by DJ Pretty (RIRG, 1999). The larger portfolio of 25 events produces a consistent but more pronounced set of results.

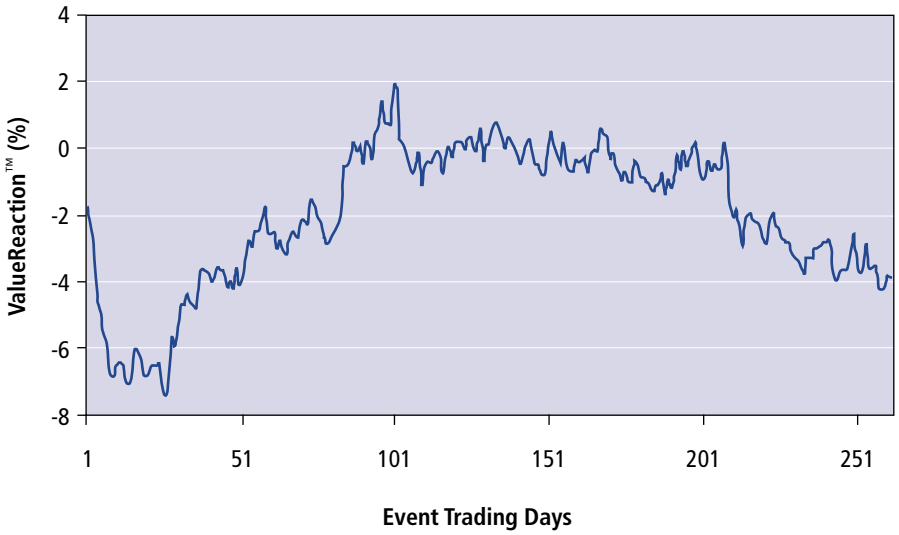
Table 1: Selected Reputation Crises

Date	Company	Crisis	Industry	Parent Country
07/08/00	Bridgestone	Firestone tyres	automotive parts	Japan
25/07/00	Air France	Concorde crash	airlines	France
10/06/99	Coca Cola	Health scare	beverages	USA
01/03/99	Bank of Scotland	Robertson deal	banking	UK
29/10/97	Daimler-Benz	Mercedes A-class	automobiles	Germany
29/04/96	Astra	Sexual harassment	pharmaceuticals	Sweden
26/05/95	Philip Morris	Filter contamination	tobacco	USA
30/04/95	Royal Dutch/Shell	Brent Spar	oil	Neth./ UK
22/11/94	Intel	Pentium flaw	electronics	USA
25/08/93	Heineken	Defective glass	beverages	Netherlands
06/08/92	Maytag	Hoover promotion	appliances	USA
10/04/92	Commercial Union	IRA bomb	insurance	UK
17/07/90	Eli Lilly	Prozac fears	pharmaceuticals	USA
10/02/90	Source Perrier	Benzene contamination	beverages	France
23/10/89	Phillips Petroleum	Pasadena explosion	oil	USA
19/09/89	Upjohn	Halcion allegations	pharmaceuticals	USA
24/03/89	Exxon	Valdez oil spill	oil	USA
21/12/88	Pan Am	Lockerbie air crash	airlines	USA
06/07/88	Occidental	Piper Alpha explosion	oil	USA
05/05/88	Shell Oil	Norco explosion	oil	Neth./UK
06/03/87	P&O	Herald of Free Enterprise	transport	UK
01/11/86	Sandoz	Rhine pollution	chemicals	Switzerland
11/02/86	Johnson & Johnson	Tylenol poisoning	pharmaceuticals	USA
03/12/84	Union Carbide	Bhopal gas leak	chemicals	USA
30/09/82	Johnson & Johnson	Tylenol poisoning	pharmaceuticals	USA

As would be expected, in all cases the catastrophe had a significant, negative, initial impact on stock returns. Figure 4 shows the average impact of the twenty-five catastrophes on stock returns for one calendar year (261 trading days) following each event[6]. The value reaction shown in the graph indicates the extent to which the firm's share price outperformed, or underperformed, market expectations. A horizontal line at zero would indicate share performance in line with investors' expectations. All market-wide influences are stripped from the analysis and the returns are risk-adjusted.

After a sharp, initial, negative impact of approximately 7% of stock value, there is on average an apparent full recovery to market expectations in under five calendar months (100 trading days). This suggests that the net long-term impact on stock returns, whilst negative at -4% by the end of the first post-event year, is not significantly negative. However, as will be demonstrated, the ability to recover the lost shareholder value over the long-term varies considerably across firms.

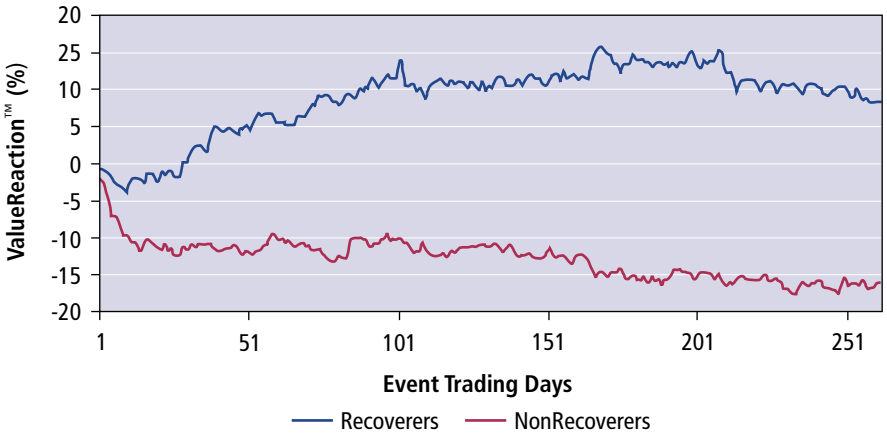
Figure 4: Impact of Catastrophes on Shareholder Value



Firms affected by catastrophes appear to fall into two relatively distinct groups – Recoverers and NonRecoverers. The initial loss of stock value is approximately 3% on average for Recoverers and about 12% for NonRecoverers. So, very early on, the stock market begins to make its judgement as to whether a firm is likely to sustain its ability to generate cash flow in future, following the crisis. Figure 5 shows that by the fiftieth trading day, the average cumulative impact on stock returns for the Recoverers is 5%. Thus the net impact on stock returns by this stage actually is positive. The NonRecoverers remained more or less unchanged between days 5 and 50 but suffer a net negative cumulative impact of over 15% up to one year after the catastrophe.

[6] Regarding the Firestone and Concorde cases, where one calendar year has yet to pass, the average figures are adjusted accordingly.

Figure 5: Recoverers and NonRecoverers



It could be argued that firms with particularly strong reputation equity might benefit from this accumulation of goodwill in times of crisis. Alternatively, the firm's reputation has further to fall. What appears to happen is that the recovering firms (the Recoverers) are particularly strong Recoverers where they have this bank of reputational credit. Equally, those firms with strong reputations that do not recover value efficiently following a crisis are extreme NonRecoverers. Thus, the strength of reputation equity serves to exaggerate the differential between Recoverers and NonRecoverers.

There are two elements to the catastrophic impact. The first is the immediate estimate of the associated economic loss. Although the cash flow impact is not known with certainty at the time of the catastrophe, the stock market will form a collective opinion and adjust price accordingly. These direct factors usually will have a negative impact on stock returns, but this impact will be cushioned by the extent to which insurance recoveries reduce the cash outflows.

The second element of impact hinges on management's ability to deal with the aftermath. Although all catastrophes have an initial negative impact on price, paradoxically they offer an opportunity for management to demonstrate its talent in dealing with difficult circumstances. A re-evaluation of management by the stock market is likely to result in a re-assessment of the firm's future cash flows in terms of both magnitude and confidence. This in turn has potentially large implications for reputation equity and shareholder value. Effective management of the consequences of catastrophes would appear to be a more significant factor in value recovery than whether catastrophe insurance hedges the economic impact of the catastrophe.

Chief Executives must do all that is reasonably possible to prevent and mitigate the effects of catastrophes. Just as importantly, they must be able to demonstrate openly that the critical steps are taken in the aftermath of the disaster. Honesty, transparency and effective communication have a clear and fundamental financial value. Relevant and timely information must be given: management must respond honestly and rapidly in a non-defensive way. Ultimately, they should be able to demonstrate their ability to deal with challenging circumstances. Success in this regard gives investors confidence in managers' ability to manage risk and ultimately will create value for shareholders.

4 The Impact on Strategic Stakeholders

The impact of a corporate catastrophe on reputation equity seldom is limited to the directly crisis-struck firm. In many cases, there is a strategic stakeholder – a key supplier or key customer, a strategic ally or partner – whose business is affected as a direct consequence of the crisis. Reputation loss travels. This section of the report considers this phenomenon explicitly by analysing cases involving strategic alliances and supply chain management.

An increasing amount of business is conducted through strategic alliances between firms. It is estimated that the alliance activities of the largest 1,000 US firms will account for 35% of their total revenue by 2002 – up from 21% in 1997 and less than 2% in 1980[7]. Some industries are more used to strategic alliances and joint ventures than others. The airline industry is well-known for its structure of alliances whilst the oil industry has significant joint venturing activities in offshore drilling, for example. The Piper Alpha disaster of 1988, representing the largest offshore oil disaster, affected all four firms involved; Occidental (the operator), Texaco, Union Texas Petroleum and Thomson North Sea.

Within supply chain management, there are numerous examples where vulnerable links in the supply chain have ruptured with significant consequences for the supplier and the supplied. Last year, Ericsson stock suffered a tumble following a fire at one of its key supplier's semiconductor plants. The case almost mirrors the events of three years earlier when Toyota suffered a sustained halt in production after a weekend fire broke out at its key supplier of brake valves. Aggressive cost-cutting at many firms has concentrated the supply chain into fewer and fewer hands; in some cases, into a single source of supply. This associated increase in reputation risk requires careful management.

Profiled below are two cases from last year where a strategic stakeholder's reputation was affected by a corporate crisis. The first case evaluates the reputation impact on both Air France and British Airways following the tragic crash of Concorde. The second case describes the recall of Firestone tyres and the associated impact on Ford Motor Company, whose sports utility vehicles are fitted with Firestone tyres.

Burst Tyres and Deflated Reputations

In the summer of the year 2000, we witnessed two tyre-related crises within two weeks. Each had tragic consequences. On 25 July, a Concorde of Air France crashed with the loss of 113 lives. It is now believed that the cause of the disaster was a piece of scrap metal from a previous aeroplane that had strayed on to the runway, bursting one of Concorde's tyres as it took off from Charles de Gaulle airport, just outside Paris.

On 7 August, Firestone tyres were withdrawn from sale in the US by retailer Sears, Roebuck and Company. Under investigation by US safety authorities,

[7] Harbison, JR & Pekar, P Jnr, (1998), *Smart Alliances: A practical guide to repeatable success*, San Francisco: Jossey-Bass.

the tyres have been implicated now in 174 deaths and hundreds of injuries. The accidents involved tyres which had separated from their casings and lost their tread, resulting from "a direct correlation between heat and performance". Two days later, Firestone announced a voluntary recall of 6.5 million tyres in the US.

The two cases display four clear similarities:

1. Each case is associated with large loss of life.
2. Each involves tyres – a technical, safety failure as opposed to, for example, a health-related crisis such as benzene-contaminated Perrier water in 1990 or Coca Cola's beverages perceived to be contaminated (but not) in northern Europe in 1999.
3. Each involves a strong product brand – Concorde and Firestone – for parent companies Air France and Bridgestone, respectively.
4. And in each case, the crisis involves a second company with an economic interest in the outcome of the case. Like Air France, British Airways operates Concorde jets, whilst the majority of Firestone tyres recalled were fitted to Ford Explorer sports utility vehicles (SUVs).

However, four key differences separate the cases:

1. The Concorde crash was a sudden and unexpected loss, whereas the allegedly defective Firestone tyres had produced complaints for several years.
2. Concorde crashed on home soil, whereas the Firestone accidents occurred many thousands of miles away from Bridgestone's domicile in Japan.
3. There is no close substitute for Concorde travellers; there are numerous suppliers of quality tyres.
4. The post-loss communications and crisis management initiatives embarked upon by the respective companies, Air France and Bridgestone, were strikingly different.

Case Study 1

Strategic Co-operation

The attention of the world's media on the Concorde tragedy exceeded that afforded to other aviation disasters. The 30-year old supersonic jet represented a triumph of aviation engineering. The spotlight was firmly on Jean-Cyril Spinetta, chairman of Air France, to deal effectively with the crisis.

Monsieur Spinetta reacted effectively in the aftermath of the crash. First, Spinetta was visible at the crash site in Gonesse, signalling that he was involved personally. Second, M. Spinetta grounded Air France's fleet of Concordes immediately, stating that safety was his overriding concern. Evidence of a rapid, credible response is a mark of successful crisis management. Third, Spinetta handled the families of the victims sensitively by attending services for the victims in France and Germany. Fourth, Air France was not defensive about compensation and volunteered an interim payment to the victims' families ahead of any compensation deal.

Shown in Figure 6 is the shareholder value reaction to Air France, following the crash of Concorde. As in the previous section, market-wide factors are removed from the analysis and the returns are risk-adjusted.

Figure 6: Air France

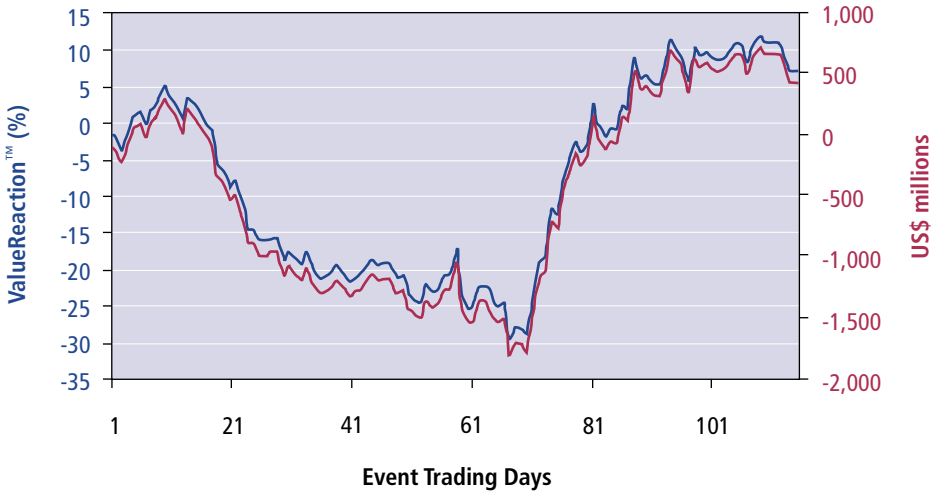
The horizontal line where abnormal returns equal zero indicates investors' pre-loss expectations of share performance. Performance above zero, therefore, represents unexpectedly good performance; below zero indicates underperformance. Air France drops 5% approximately in the first few trading days following the loss and proceeds to outperform market expectations.

Where abnormal returns start to fall slightly (trading day 31), the adverse price movement is reflecting the growing fuel crisis in France when road hauliers

blockaded fuel supplies. As this second crisis deepened, Air France was forced to suspend many of its domestic flights. The second, steeper fall (trading day 58) reflects also the rising price of fuel. Despite the continued (perceived as) high oil price, the immediate crisis is averted and Air France's shares respond positively once more.

The corporate impact of the Concorde crash was not restricted to Air France. As British Airways also operates a Concorde fleet, safety concerns and lack of consumer confidence affected this company too as a direct consequence of the crisis, even though the firm was not involved in the accident itself. Figure 7 illustrates the value reaction.

Figure 7: British Airways



The air crash had a detrimental effect on British Airways stock. BA did not ground its Concorde fleet immediately after the crash. This may have been a contributory factor to the sharper fall in British Airways' share value and the longer period required for the price to recover. It is estimated that maintaining the grounded fleet of seven Concordes has cost BA over US$60 million and a further US$16 million in proposed modifications. Hence the reverse in trend (trading day 71) with the news that Concordes could be back in operation by summer 2001. The first test flight following the tragedy took place on 18 July 2001.

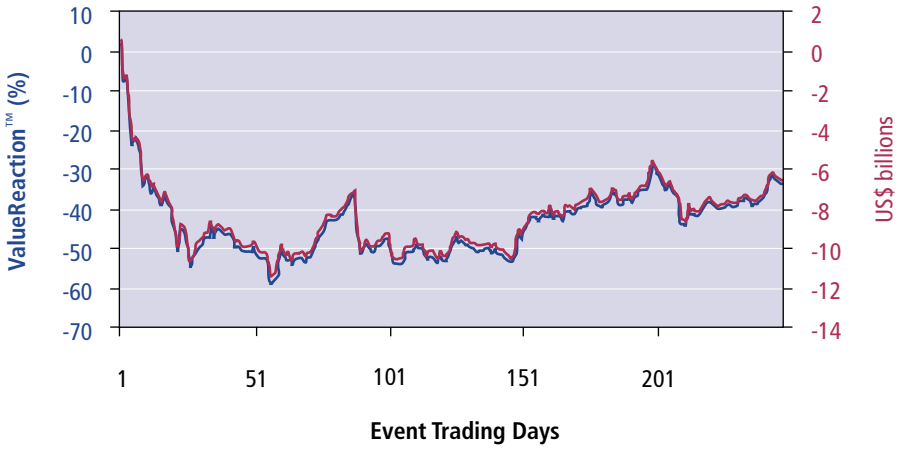
Case Study 2

Supply Chain Management

Bridgestone Corporation, the Japanese parent company which bought Firestone in 1988, declined to comment following its recall of 6.5 million tyres on 9 August 2000. Ironically, it was a recall of 14.5 million tyres costing about US$150 million in 1978 that triggered the decline in Firestone's profits which culminated in its takeover by Bridgestone. Within a few weeks, accusations were emerging that lawsuits relating to the tyres had been made against Firestone dating back to 1996 and that the recall was not broad enough.

Moody's downgraded Bridgestone's long-term debt rating from A2 to Baa1, as analysts focused on the long-term damage to consumer confidence in the Firestone brand and potential litigation costs. Analysts estimate the latter as between US$772 million – US$2.84 billion. In the commercial market, sales of Firestone tyres fell 40% over September/October. Sales in the US fell 18%. Analysts commented that Firestone could lose up to 7% of market share in the US to rivals. Shown in Figure 8 is the reaction by investors.

Figure 8: Bridgestone Corporation



The stock market reaction was severe: 50% of value is wiped off Bridgestone shares. One journalist summarised the case for Bridgestone as,

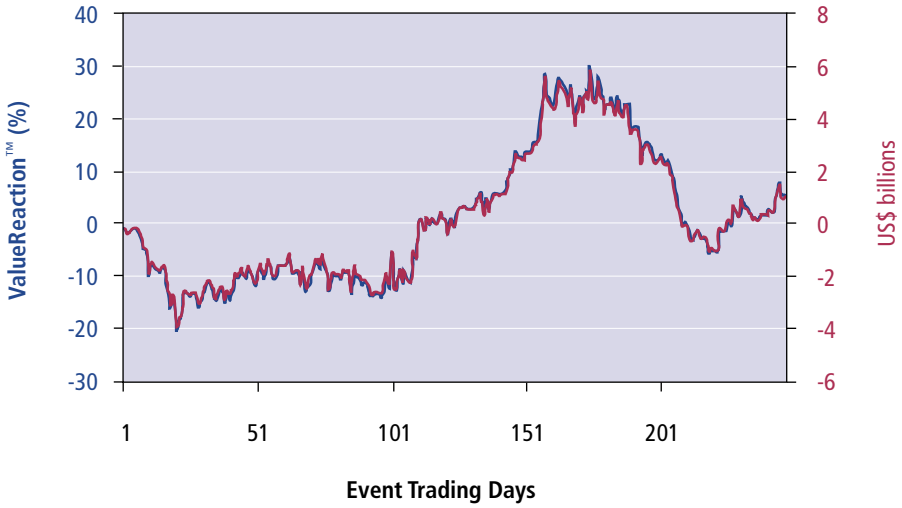
"a recall of 6.5 million tyres, a barrage of bad publicity, an ear-bashing from US lawmakers, ballooning lawsuits and possible criminal charges".

The second sharp drop in value (in absolute terms, down over 20% from trading day 85 to 90) was due to a claim by a lawyer leading a class action that punitive damages could reach US$50 billion. On 10 October, Bridgestone announce a major reshuffle of senior management of its US operations. The chief executive of the US Firestone division, Masatoshi Ono, was replaced by a marketing executive from within the company, John Lampe.

This was viewed by industry analysts that a more consumer-orientated executive was required to improve communications with customers and US federal agencies. President Yoichiro Kaizaki resigned 11 January 2001.

The impact of the recall crisis spread beyond Bridgestone and key purchasers of the product were affected also. The majority of tyres were fitted to Ford Explorers so Ford became involved in the crisis via its supply chain. The consequences of the crisis were serious for Ford. To make more tyres available, the company was forced to halt production at at three plants for more than a week – at an estimated cost of US$250 million. Ford Chief Executive Jacques Nasser issued a statement emphasising the importance of safety and trust and launched a US$5 million advertising campaign. With the cause of the tyre problems still unclear, the value impact on Ford was significant and is shown in Figure 9.

Figure 9: Ford Motor Company



Abnormal returns dropped by 20% (US$10 billion) in the first calendar month following the recall but proceeded to recover about half of this lost market value.

As this report is being written, a second recall is unfolding. On 21 May 2001 (trading day 205), Bridgestone severed its American ties with Ford as the firm prepared for a US$3 billion recall of 13 million tyres the following day.

Conclusion

The cases of Concorde and Firestone illustrate the lessons for senior management of strategic stakeholders. Effective risk management strategies must take into account the risk quality of a firm's key stakeholders; partners, suppliers, customers. Failure to do so can result in a ripple effect across national and industry boundaries, all emanating from a single crisis.

Through social interaction, people reveal a sense of how they perceive the world. Our perception of risk is formed by our personal experiences and those to whom we listen, by both our formal and informal education, and by broader cultural influences of communication around us. Whilst different people will perceive different levels of danger from the same risk exposure, and indeed will react in different ways even when the perception coincides, when a group dynamic is introduced, these disparate views tend to converge and then amplify. These views may or may not bear a strong relation to the physical reality of the situation. This simply is human nature.

When managing reputation risk, it is essential that a firm's strategy encompasses the potency of public perception. Presented in this section are three well-known reputation crises which each had a severe and negative effect on the respective firm's share price, despite each firm's original statements being vindicated by the experts.

Case Study 3

Perceived Health Risk

Belgium was recovering from a food scandal over carcinogenic dioxin in animal feed when a second food scare erupted. The first scare resulted in a ban on poultry, eggs, pork and beef after they were found to be contaminated with dioxin. The integrity of food was high in Belgians' consciousness.

On 10 June, the second health scare hit when 39 Belgian schoolchildren were sent to hospital with symptoms of headaches, nausea, vomiting and stomach cramps. One common denominator was the consumption of Coke. Coca Cola confirmed that a strange odour was associated with their bottles of Coke and withdrew 2.5 million of them from Belgian shelves. The company maintained that the quality of the beverage was beyond reproach and posed no health risk and, further, that the incident was isolated and restricted to Belgium.

Within a week, the Belgian recall was extended to include 15 million cans and bottles of Coca Cola's branded drinks; Coke, Diet Coke, Fanta and Sprite. By this stage, approximately 100 Belgian schoolchildren had been affected. On 16 June, it was reported that 80 people in northern France had been affected by the illness. The French government withdrew 50 million cans and bottles from the country's shelves and the Luxembourg government also ordered a recall. Analysis by Coca Cola revealed two separate problems: an 'off-taste' produced by defective carbon dioxide that had been used in the Antwerp plant in Belgium, and an offensive odour arising from fungicide-impregnated wooden pallets that had been used in Dunkirk, France.

Saudi Arabia banned the import of all Coca Cola drinks manufactured in Belgium, Switzerland issued a warning on how to recognise those from Belgium, and the Netherlands, Spain, Germany, Latvia and the Ivory Coast recalled Coca Cola products shipped from Belgium.

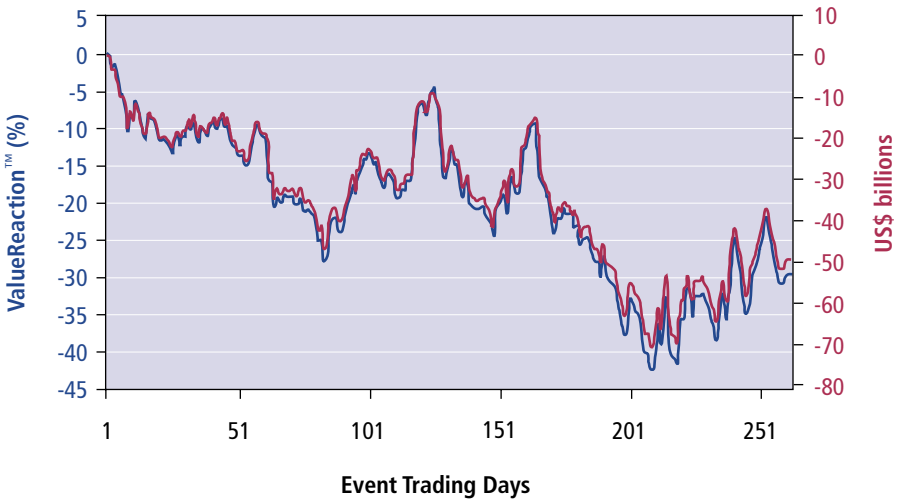
Provided a causal link could be made between consumption of Coca Cola's products and the symptoms of the illness, the company was willing to refund Belgians' medical costs. Coca Cola's Chairman, Doug Ivester, previously had issued a statement from Atlanta expressing regret for the problems and on 22 June a full page apology appeared in the Belgian Press:

"To all Belgians, I want to say that I am personally sorry for any discomfort and uneasiness that have occurred. My colleagues and I are working without interruption to regain your confidence. To those who have suffered, particularly children, we express our sincere apologies".

Ivester said later in an interview that it was under the Belgian Health Minister's guidance that Press interviews were not given at the start of the crisis. Coca Cola released a review by a Dutch toxicologist of three laboratory analyses which concluded that the fungicide was not present in sufficient quantities to make people sick.

On 24 June, a group of Belgian toxicologists concluded in a letter to *The Lancet* that the crisis was the result of "a collective psychosomatic reaction" or "mass sociogenic illness", induced not least by the recent dioxin scare in Belgium which broke people's trust in food quality.

Figure 10: Coca Cola Company



Ultimately, 17 million unit cases of Coca Cola's products were destroyed, resulting in a total recall cost of approximately US$250 million. The longer-term impact on the public perception of the brand's integrity potentially could be much more damaging.

"The biggest risk is not to earnings; the risk is to perceptions about the integrity of the product", beverage analyst for Merrill Lynch

The Coca Cola crisis perhaps can be summed up in two words: context and perception.

Case Study 4

Perceived Environmental Threat

On 30 April 1995, environmental activists from the pressure group, Greenpeace, scaled and occupied the disused Brent Spar oil platform in the North Sea. The platform, operated by Shell UK Exploration and Production (Shell) and owned jointly with Exxon, was due for deep sea disposal later in the year, following permission from the UK Government. The Brent Spar – a 19-year-old, 14,500 tonne floating oil storage system – had been decommissioned since 1991 and was the first of 400 North Sea facilities to be abandoned.

Greenpeace demanded that Shell revoke its decision to dispose of the structure at sea, asserting that it contained over 5,000 tonnes of oil, over 100 tonnes of toxic sludge and more than 30 tonnes of radioactive scale, harmful to the marine environment, and that the decision had been made on the basis of cost alone. Shell responded by stating that Government permission had been granted only after, "extensive studies over several years" had confirmed that disposal at sea "would have negligible environmental impact" and after "a full evaluation of the technical, environmental, safety and cost factors" had been undertaken. Indeed, 3 years of investigation and 30 independent scientific studies established deep-sea disposal as the preferred environmental choice.

Within days, despite having known of the impending decision for months and having signed up to the Oslo-Paris Convention which allowed deep-sea dumping, European politicians were pressing the UK Government to make a U-turn. Following a 23-day occupation of the rig, police and Shell employees were able to remove the twenty-two protestors, whereupon their leader commented,

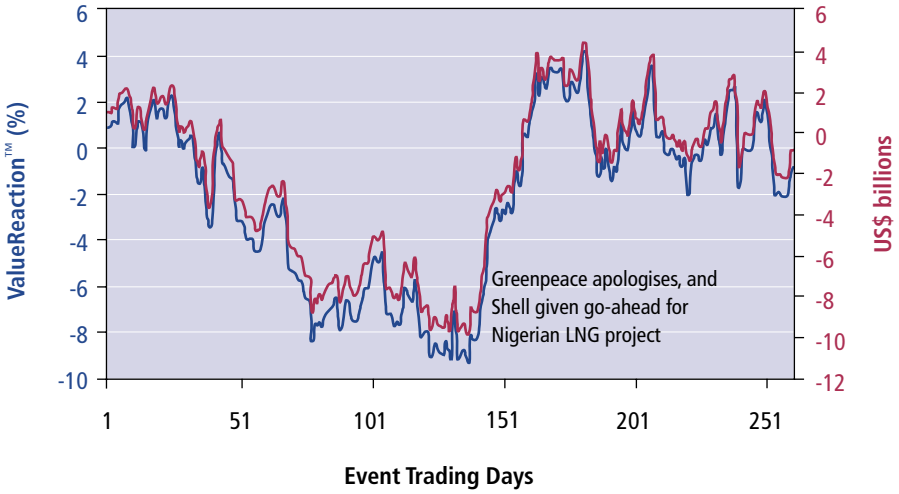
"It's nice to hit one of the multinationals which has a big public image".

Six weeks following the original occupation by Greenpeace – a few minor occupations followed – a German Shell petrol station was firebombed, and another torched, in protest against deep-sea disposal. Boycotting of Shell petrol stations is estimated to have cost the company between £10 million and £15 million per day.

On 20 June 1995, still maintaining that deep sea disposal was the most environmentally-friendly option, Shell announced it would dismantle the Brent Spar on land. The U-turn was seen as a triumph for European environmentalists, pressure groups and consumer power. On 29 June, the science journal, *Nature*, published an article in which geologists claimed that disposal in deep water would have caused negligible environmental damage, if any, and marine life even may have been enriched. By contrast, dismantlement on land could cause severe damage to the local ecosystem.

On 4 September, Greenpeace apologised to Shell, admitting that its allegations as to the contents of the Brent Spar were false and due to "a sampling error". On 18 October, DNV published its findings that Shell's estimates of oil (53t), sludge and scale aboard the Brent Spar were indeed "broadly correct". The leader of the investigation said of the sludge and scale, "If all the numbers were multiplied by 10, there would still be no environmental significance".

Figure 11: Shell Transport and Trading



As reported in *The Times* (1 June 1999),

"The essence of risk for most companies – as it was for Shell – is the hazard itself, which is defined in technical terms. For the public, however, risk is not technical at all. It is influenced by factors such as fairness and trust. So problems arise when companies fail to see the gap between their own perception of risk and that of outsiders".

Disposal of the Brent Spar was completed on 11 July 1999. It now forms the base of a new quay for the port of Mekjarvik, near Stavanger. The cost of this option is estimated at £23-26 million. The unique nature of the Brent Spar resulted in a unique disposal solution. Different solutions will be required for other rigs. The debate continues.

Case Study 5

Perceived Breach of Contract

It began with a £500,000 national TV campaign on 6 August 1992. Hoover publicised to UK consumers its promotional offer of two free flights to Europe for any customer who spent more than £100 on one of its products. More than 100,000 people registered for the offer. This initial promotion, which ran between August and October, was followed by a similar offer (and a £1 million TV campaign) for November and December, this time with free flights to Orlando or New York.

By early December, allegations against Hoover as to the viability of the offer were appearing in the national Press. Hoover responded by reiterating that the offer was genuine and was,

"fully funded by Hoover – we have our reputation to think of".

It was estimated that between 20,000 and 30,000 customers were disappointed in their quest for free flights. In addition, customers issued complaints that the cost of accommodation, which they were to organise themselves, was substantially higher than under the equivalent package deal. The UK Government Department of Trade and Industry turned down a request for an inquiry into Hoover, since the small print in the offer stated clearly that the flights were "subject to availability . . . and cannot be guaranteed".

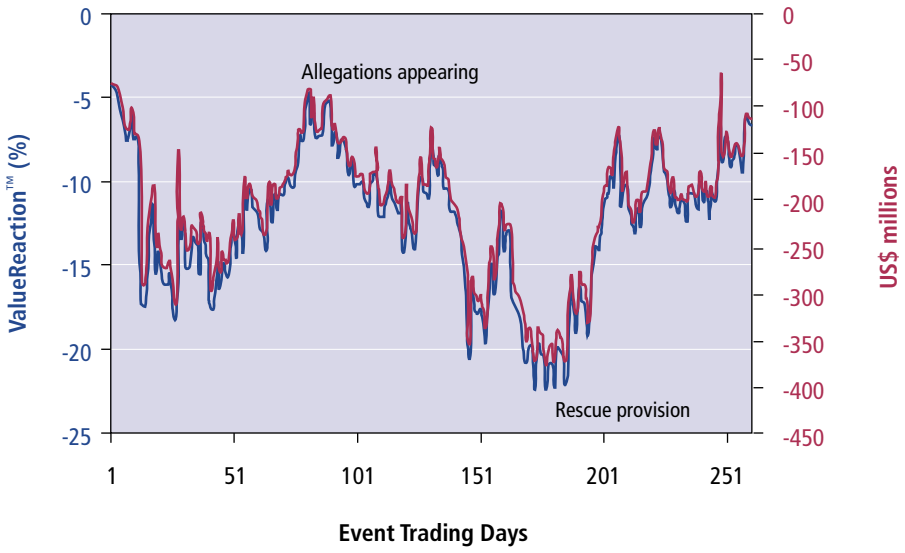
On 30 March 1993, Hoover admitted that the promotion had resulted in "tremendous difficulties in administration and implementation, plus significant unanticipated costs". The US parent company, Maytag, established a £20 million rescue provision and sacked three senior Hoover executives: the European president, the vice-president of UK marketing and the director of marketing services. Fears were expressed, particularly in Scotland, over extensive job losses.

In early August, an individual case against Hoover for breach of contract was lost in Court. On 29 September, British trading standards officers ruled out any legal action against Hoover under the Trade Descriptions Act. It was argued that there was no intention to defraud customers and that,

"once the scale of the marketing debacle became apparent, Hoover took vigorous action to redeem the situation. But it has been a costly exercise, both in financial terms and in the long-term damage to their reputation and credibility".

Hoover acknowledged that "a gigantic and costly mistake" had been made. Full financial statements for the Maytag Corporation disclosed in April 1994, revealed the cost to date as £48 million, nearly half of 1993 group profits, used to purchase flight tickets for an estimated 220,000 customers. An additional £7 million was spent on an image-building campaign commencing on 6 January 1995.

Figure 12: Maytag Corporation



On 30 May 1995, Maytag sold Hoover Europe to Italian white goods company Candy for US$170 million. The price represents a US$130 million loss for Maytag. Maytag insisted that the divestment was unrelated to the promotion and reflected only a desire to concentrate on the North American market. Journalists focused on the plunge in Hoover's market share – drops of 12% and 30% in the key upright and premium upright markets respectively, over one year – and commented that, "the long-term effect to the Hoover name is difficult to calculate".

Conclusion

These cases illustrate graphically the inordinate effect public perception can have on reputation equity in times of crisis. The public responds not only to the perceived physical threat and its potential consequences, but also to the perceived credibility and trustworthiness of senior corporate management. Any betrayal, real or perceived, sensed by the public will translate into lower expectations of future cash flow by investors. It is these expectations that CEOs must seek to manage effectively.

Where a crisis strikes at the heart of a firm's brand, the value impact – either positive or negative - can be particularly acute. This was illustrated clearly when Perrier water, promoted on the basis of its natural purity, became contaminated with benzene in 1990. The firm lost 40% of its shareholder value and was bought by Nestlé. In contrast, Commercial Union stock fared well following the terrorist bomb explosion in 1992. The CU demonstrated its skill in crisis management and efficient claims handling, and investors were impressed. It is important, therefore, for a firm to know how various stakeholders perceive its brand and reputation, and to be prepared for specific erosion or damage to the key drivers of brand value.

Previous international survey research[8] measures the core qualities of brand value across different geographic regions and industry sectors. The results reveal some striking contrasts. On average, the emphasis on trust in UK firms is greater than that in either Continental Europe or the United States. In mainland Europe, firms focus more on their internal expertise which is driven largely by technical excellence and design. In contrast, the Americans focus most on responding to the customer with high quality service; the qualities of convenience, enabling and empowerment drive the weighting.

Across industry sectors, there also emerge stark contrasts. For example, brand values in the banking sector appear to be driven by ethics, integrity and security, whereas telecom and utility firms tend to reflect values of reliability, performance, efficacy and consistency in service. Unsurprisingly, the core brand value dominating the retail sector reflects a customer focus; service, convenience, value-for-money and support.

It is vital that businesses identify the key drivers of brand values in their own particular industry sector so managers are able to recognise and assess the relative threat to reputation posed by crises that may occur.

This section of the report focuses on two reputation crises which strike at the core of the firm's reputation equity. The first involves a UK bank, the Bank of Scotland, where the ethical stance adopted by the bank was in direct opposition to that held by its customers. The second case relates to an American technology firm, Intel Corporation, whose microprocessor was found to be flawed.

[8] Knight & Pretty, *op.cit*.

Case Study 6

A Breakdown in Trust

Following its success in establishing Sainsbury's Bank with the supermarket in 1997, the Bank of Scotland (BoS) intended to extend its direct banking expertise to the US markets. On 1 March 1999, the bank announced a joint venture with Robertson Financial Services of the US, owned by the television evangelist Pat Robertson. Support and processing services would be provided by Marshall & Illsley, a Wisconsin bank holding company, and Robertson would hold "a substantial minority" interest in the new venture, the New Foundation Bank. The oldest bank in Scotland, the BoS was established in 1695 by the former Scottish Parliament.

Within days of the announcement, equity analysts expressed doubt over the deal and Scottish newspapers voiced concern with headlines such as:

Bank's Venture With Far-Right Zealot Sets Alarm Bells Ringing
The Scotsman, 3 March

Heaven Can Wait While Profits Build
Scotland on Sunday, 7 March

Unions And Kirk Join Clamour Over Bank's Deal With Preacher
The Scotsman, 9 March

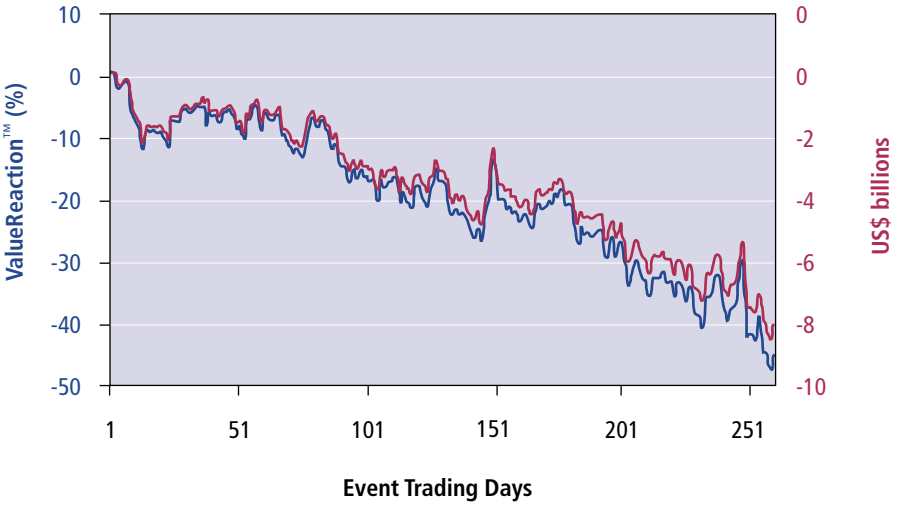
Robertson's loud and hostile views on homosexuals, liberals, Hindus, Muslims, abortion, and the role of women, and his conspiracy theories became public knowledge in Scotland. Meanwhile, some of his past business ventures were under investigation by the US Internal Revenue Service. Many individuals and organisations threatened to withdraw their accounts from the BoS, and "ethical investors" threatened to sell their shares.

In its first public response to criticism against the deal, the BoS stated on 23 March that there would be no reversal in its decision to form a joint venture with Robertson; "his religious and moral stance is a personal matter for him and not the bank". On 22 April, the BoS continued to defend its joint venture with Robertson but made explicit the risk to the bank's reputation. Peter Burt, Chief Executive of the BoS, commented,

"There's a reputational risk to almost every area we do business, such as some building projects. It is a question of trying to behave responsibly and in a way that society as a whole accepts. Most new initiatives upset some special interest groups. It would be almost impossible to run a business if you tried to please everyone".

On 4 June, senior BoS executives met with Robertson in Boston, Massachusetts. The official termination of the proposed venture was announced the following day. The Board of the BoS told shareholders at its annual meeting on 16 June, "Our judgement was wrong and for that the board apologises".

Figure 13: Bank of Scotland



At the time, Press comment suggested it was "difficult to quantify the impact of protest on a company's bottom line" and the bank "had a lot of work to do in terms of rebuilding confidence and trust". Although the BoS asserted in March that it had undertaken "due diligence in all respects", the due diligence failed to take into account sufficiently the reputation risk to the BoS and its shareholders.

Case Study 7

A Breakdown in Reliability

A subtle flaw in Intel's Pentium microprocessor was discovered by a mathematics professor when conducting a theoretical analysis of prime numbers. Responding to a CNN report on the defective chips on 22 November 1994, Intel stated that the problem, "would pop up once every nine billion times", when conducting complex divisional equations.

Computer users were quick to accuse Intel of irresponsibility in failing to issue a general notice when the flaw was discovered. Such accusations were made on the Internet, and its computer-related newsgroups became increasingly heated on the subject. This prompted Intel, on 29 November, to issue a public statement on the Internet, followed by a personal statement from the company's Chief Executive, and to establish various hotlines to handle queries. As Intel's Chief Operating Officer, Craig Barrett, observed,

"The Internet is a very effective communications vehicle among the technical community in the US. You combine the Internet with the popular Press and you get instantaneous exposure".

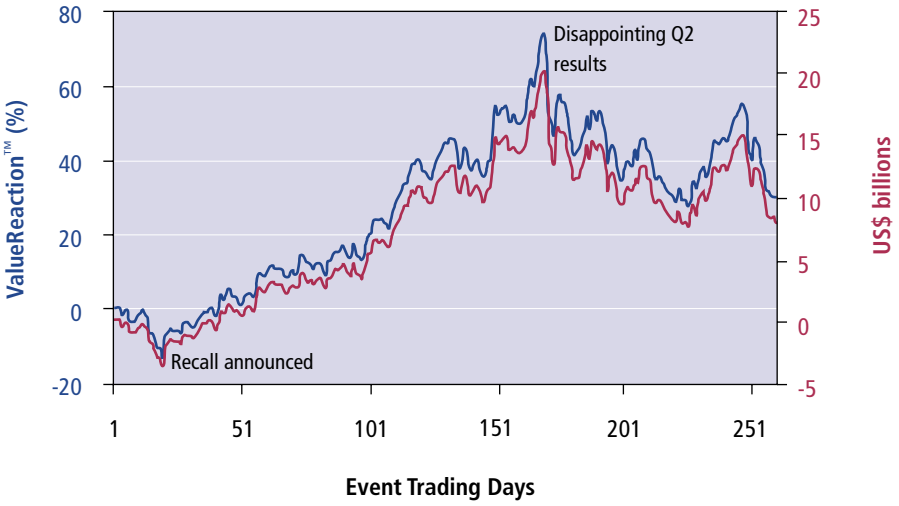
One crisis management expert commented,

"What's at stake here is their [Intel's] credibility. What people think about your company is based on how you handled your last crisis".

Meanwhile, Intel planned to manufacture the flawed chip into the following year whilst the modified version was phased into circulation. By mid-December, American lawyers had filed suits against Intel. Intel continued to deny the charges strongly. On 20 December, Intel announced its replacement of all Pentium microprocessors for any consumer wishing to swap for a modified chip, and the company's Chief Executive, Andrew Grove, issued a public apology:

"Our previous policy was to talk with users to determine whether their needs required replacement of the processor. To some people, this policy seemed arrogant and uncaring. We apologise".

Figure 14: Intel Corporation



Analysts reacted favourably to the decision to replace the chip. The ultimate charge against Intel's fourth-quarter earnings for replacing the faulty chip was US$475 million. Intel announced that, in future, it would launch an early-testing programme which would enable sophisticated users to experiment with the new product prior to its market debut.

Intel was the first manufacturer of microprocessors to brand (using the name Pentium) rather than number its product. In addition, the company had spent millions of dollars since 1991 on its 'Intel Inside' marketing campaign. These branding efforts generate both substantial rewards for the firm's shareholders and yet also significant reputation risk from the associated high visibility.

Conclusion

It is vital for businesses to be aware of how stakeholders perceive the values which drive the firm's brand. This insight allows firms to assess the sensitivity of an event which potentially may damage brand integrity. In such cases where the fundamental values of a firm are brought into doubt, senior management must be especially vigilant in protecting reputation equity. The future of the firm depends on it.

The ValueCreationQuotient™ (VCQ™)

The VCQ is calculated as the ratio of the market value of claims on a firm's assets (market capitalisation plus the balance-sheet value of debt) to the capital absorbed (cumulative capital raised and retained) by the firm. All goodwill write-offs and other negative reserves were reinstated. The metric thus combines the capital history of the firm with market expectations of future cash flow. It is assumed that a firm's market value represents a reasonable approximation of the net present value of a firm's future cash flows. The VCQ is a decisive measure of corporate success since it gauges the competitive advantage of a corporation over time by measuring its ability to generate and realise cash flows at a rate exceeding its cost of capital.

On first glance, it may appear that those firms with the oldest capital will tend to have a spuriously high VCQ. This potential bias is offset by two factors. Firstly, these older firms have had longer to accumulate retained earnings and secondly, the value of these older firms will tend to be more adversely affected by the need to raise new capital sooner than other firms.

ValueReaction™

In order to measure the value reaction to an event, it is necessary first to extract the effect of other events that may impact shareholder value simultaneously. This is accomplished in two phases. The first phase is at the individual company level and involves filtering out from share price movements the effects of market-wide factors. The result of this process is the estimation of so-called abnormal returns for a period immediately following the event. These abnormal returns are presented on a risk-adjusted basis. In the second phase, these abnormal returns are aligned on the event day (trading day 0) and then accumulated over what is now event time, resulting in a value reaction from trading day 0 known as cumulative abnormal returns.

The raw data on share prices and market indices underlying the study were obtained from Datastream financial database. The market index chosen varies according to the stock market in which the shares are traded. The market index selected for each country is presented in Table 2.

Table 2: Selected Market Index

Country	Market Index
France	SBF 250
Germany	DAX Composite
Japan	Nikkei All Stocks
The Netherlands	CBS All Share General
Sweden	Affarsvarlden General
Switzerland	SBC General
United Kingdom	FTSE All Share
United States	S&P 500 Composite

Press information relating to the case profiles was obtained from *Reuters Textline*, the international newspaper and newswire archive.

Rory F Knight, MA (Oxon), MCom, PhD, CA
Chairman, Oxford Metrica

Rory Knight has extensive experience of working and consulting in the financial and corporate sectors. He is Director of a number of technology companies. For five years, he was Dean of Templeton College, University of Oxford, where he was responsible for Templeton's overall strategy and direction. He is Dean Emeritus at Templeton and Fellow in Finance and is co-author of *Financial Performance* (Butterworth-Heinemann, 2000).

Dr Knight's work on shareholder value has been published internationally with particular acclaim given to his extensive public company quantitative analysis based on the *ValueCreationQuotient*™ (VCQ™). Previously a Deputy Director in the Swiss National Bank (SNB), his role included providing policy advice on international financial matters and he retains significant links with central banks around the world. He acts as an advisor to a number of multinationals and is on the board of an international investment fund. He was formerly a Professor of Finance in IMD, Lausanne and IMI, Geneva. He has been and is currently a visiting professor at a number of institutions worldwide including the Amos Tuck School (Dartmouth), the Australian Management School, the Drucker School; Ecole Nationale des Ponts et Chaussées (Paris), EOI (Madrid), HEC, INSEAD, the Singapore Institute of Management, Stanford, Tongji University (Shanghai), UCLA, and the University of Cape Town.

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Deborah Pretty has worked for several years in finance and corporate risk management, establishing integrative frameworks and connections between risk and value for many major multinationals. For three years, she was Marsh Research Fellow at Templeton College, University of Oxford, where she undertook extensive empirical research in strategic risk and finance. She is author of *Risk Financing Strategies – The Impact on Shareholder Value* (RIRG, 1999).

Dr Pretty has written widely for academic and professional journals and presents her research regularly at international conferences and corporate symposia worldwide. Her prior experience as an Assistant Director in Sedgwick Energy (risk advisors and insurance brokers to the oil industry) included advising on risk retention strategies; risk finance and alternative risk transfer; insurance economics; financial modelling; and involvement in strategic planning. She was concerned primarily with developing corporate strategy, new business and new products, and was responsible for contributing to the risk finance reviews of several major corporations. Previously, she was a risk finance analyst with Tillinghast-Towers Perrin (actuarial consultants) in London and the United States, conducting quantitative analysis for many of the large reinsurers and insurers worldwide.

Oxford Metrica is an independent strategic advisor. The firm has been established to serve the needs of corporations to develop policies and procedures that deal with risk, value, reputation and governance – the strategic aspects of financial performance. The firm provides analytical, advisory and transactional services to financial and corporate clients worldwide.

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