



sigma

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The economics of liability losses – insuring a moving target

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Summary

Growing liability claims costs have raised concerns amongst insurers throughout the world, particularly amongst those that have had to increase reserves for prior underwriting years. This *sigma* examines, from a broad international perspective, the magnitude of liability losses, and investigates why they have developed so rapidly.

Liability claims constitute one-sixth of non-life claims.

In the largest 10 non-life insurance markets worldwide, liability claims totaled USD 84 billion in 2002, and USD 67 billion of this was attributable to the US. On average this makes up one-sixth of all non-life claims.

Claims are growing 1.5 to 2 times as fast as GDP.

The costs of general liability claims grew faster than overall economic activity in most major economies. Long-term estimates suggest that claims are growing 1.5 to 2 times as fast as nominal GDP, due to social and legal trends. Insurers must fully recognize these dynamics in their pricing.

The US has the largest liability problem.

The US tort system, which has generated escalating losses, has become a major worry. With costs estimated at 2.2% of GDP, it is twice as expensive as the liability systems of most other industrialized nations. Non-US corporations are exposed to the risks of the US tort system through exports, offices or factories in the US. The most problematic lines of business are product liability, medical malpractice, directors & officers (D&O), errors & omissions (E&O), and employment practices liability.

The US tort system needs restructuring.

The tort system raises basic social policy concerns: a system in which less than half of the funds from litigation go to compensating the victims, as in the US, is highly inefficient and needs rethinking. There is also a real risk that US-style tort rules might spread to other parts of the world.

Unexpected risk developments pose a major challenge to insurers.

Liability relating to emerging risks likewise poses a major challenge to the insurance industry, since it cannot be assessed using traditional actuarial methods. Insurers must encourage risk prevention measures, limit accumulation risk, and collect a risk premium that factors in the possibility that a risk complex might develop unexpectedly.

Political solutions are needed.

It is vital that political steps are taken to shape the liability landscape of the future. US tort reform initiatives have primarily tried to limit lawyers' fees and non-economic compensations, including punitive damages. Other initiatives have attempted to rebalance the odds in mass tort litigation. Multiple corrective steps must be taken if the tide of liability claims is to be brought back to a reasonable level, however the outlook is uncertain. We remain pessimistic about the prospects for Europe in light of the European Commission's tendency to pass legislation designed to expand liability.

Insurers must be vigilant in pricing and offering cover for liability risks.

So what can the industry do? It must better understand, monitor, and price for escalating liability claims costs. To keep rapidly changing casualty risks insurable, insurers must also pay closer attention to wording and policy language. Insurance can only operate within the limits of insurability. If a peril grows too uncertain and its limits cannot be well defined by contract design and wording, insurers should cease writing cover.

Introduction

Tort law is particularly relevant to liability issues.

There are two fundamental types of law: statutory and common law. Statutory laws are enacted by parliaments or governments, while common law is determined by court decisions and evolves over time. Within this, there are two main branches: criminal and civil law. Criminal law primarily applies to acts committed against public interests, while civil law focuses on acts against individual interests. Civil law itself comprises contract law, which applies when there is a contract between the parties, and tort law, which applies when the disputing parties' relationship is not governed by a contract. Tort law, which is particularly relevant to liability issues, applies when plaintiffs seek compensation from another party for injuries or damages resulting from alleged negligence, intentional interference and other wrongful acts perpetrated by the defendant.

Rising liability costs stem from economic, social, and legal cost factors and the growing demand for liability insurance.

The growth in liability claims is influenced by economic factors, such as interest rates, medical expenses, property values and wages; societal trends and longer life spans; expenditures associated with the legal system; and the amount of liability insurance cover. Rising medical costs, property values and wages will affect the *severity*, or value of claims. Societal trends can impact both the severity and the *frequency*, or the number of claims filed each year. The cost of settling legal claims may rise or fall irrespective of changes in economic factors, depending on changes in legal practice and legislation. Society decides what injuries should be compensated, under what circumstances and in what amounts through the courts and the legislative process. Recently, demand for liability insurance cover has been rising faster than economic growth in most major countries, increasing the volume of liability claims to insurers. The US has the largest tort system in the world, and many of the legal developments in the US are now spilling over into other countries and economic areas, increasing the global demand for liability insurance.

Structure of this *sigma*

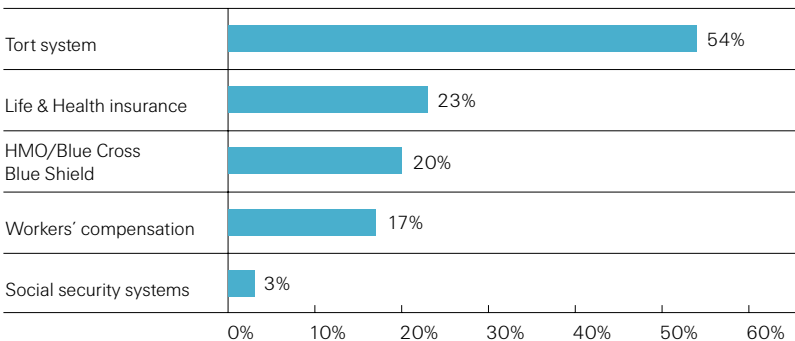
This publication is divided into the following sections: 1) The high costs of the US tort system are compared to other personal injury compensation systems in the US and to tort systems around the world. 2) The strong growth in liability claims in various countries is examined from a long-term perspective, comparing claims with macroeconomic factors, and reviewing recent developments. 3) This section examines the drivers of legal developments affecting liability and compares US trends with those observed in other parts of the world. Section 4) gives examples of how governments have responded to the burden of rapidly rising tort costs, while 5) looks at the challenges faced by the insurance industry – strong claims inflation and increasing uncertainty regarding loss potential. 6) The final Outlook section reviews current and potential developments in claims exposure.

The US tort system is the most expensive in the world

The costs of the US liability system are estimated at 2.2% of GDP in 2002, compared with 0.6% in 1950.

The US civil liability system is the starting point for our analysis of liability developments. A frequently quoted study by Tillinghast estimated the cost of the US liability system at USD 233 billion in 2002 – a 13% increase over 2001. Tort costs accounted for 2.2% of GDP, compared with 1.4% in 1970 and 0.6% in 1950.¹ The tort system produces benefits by providing incentives to reduce dangerous and harmful activities, but there are substantial economic costs associated with it. With an estimated cost ratio (administrative costs as a percent of total payouts) of 54%, the tort system consumes more administrative resources than it pays to claimants. The costs are much higher compared to non-fault based systems in the US that compensate for personal injury or sickness, for example.

Figure 1
Cost ratios of US systems compensating for personal injury and illness



Sources: See Appendix

US workers' compensation insurance, with its 17% cost ratio, provides a benchmark for judging the costs of the tort system.

Private health insurance, public health insurance, non-fault occupational injury and disease schemes (eg workers' compensation in the US), and social security disability programs are larger in scale and provide compensation at significantly lower administrative costs than the tort system (see Appendix). An economic analysis of the costs of the US tort system by the Council of Economic Advisers refers to the cost ratio of the workers' compensation system as a benchmark for the tort system, since it also compensates for personal injury and loss of income, but without relying on litigation as the basic mechanism for allocating funds. The 2002 cost ratio in workers' compensation was 17% of the total costs of the system², significantly lower than the 54% of the tort system.

The Tillinghast approximation of total tort costs may be an underestimate, according to the CEA.

Compensation for non-economic damages comprises 24% of total tort costs. Some research considers those payments as economically wasteful, based on empirical studies suggesting a weak performance of juries in allocating non-economic awards.³ The Council of Economic Advisers specifies a cost component not considered in the Tillinghast estimate. Tort costs are similar to a tax on

¹ See Tillinghast (2003).

² Source: A.M. Best "Aggregates & Averages, 2003 edition", excluding taxes.

³ See for example Hersch/Viscusi (2002).

firms, causing them to alter their behavior – beyond a desirable degree of precaution – in order to avoid paying the costs. The Council of Economic Advisers estimates that there is an extra 28% in so-called “deadweight loss”, using as a benchmark the extra costs from changes in corporate behavior induced by corporate income taxes. This raises the estimate for the total costs of the tort system to USD 298 billion, or 2.8% of GDP. Table 1 below combines the components of the Tillinghast estimate and the Council of Economic Advisers analysis of costs within the tort system. It is important to note that all of the figures quantifying the size of the tort system measure the current payments or loss estimates on earlier years’ liability-generating activities. The liability exposure of current economic activities is underestimated, since there is a manifestation and reporting gap with liability claims.

Table 1
Cost components of the US tort system:
comparison of the Tillinghast and Council
of Economic Advisors (CEA) concepts

2002 data	USD billions	in % of Tillinghast	in % of CEA estimate	in % of GDP
Awards for economic loss	51	46 %	36 %	1.0 %
Awards for non-economic loss	56			
Benchmark costs [1]	21	54 %	42 %	1.2 %
Excess costs [2]	105			
Tillinghast estimate	233	100%	78%	2.2%
Deadweight loss [CEA]	65	28 %	22 %	0.6 %
Total	298	128%	100%	2.8%

[1] It is assumed that administration, claimants’ attorney fees and defense costs of 17% of awards are “efficient”.

[2] Administration, claimants’ attorney fees and defense costs in excess of benchmark costs.

Sources: Tillinghast (2003), Council of Economic Advisors (2002), own calculations.

Tillinghast estimated in 1998 that the tort system was much larger in the US than in Europe.

An older international comparison by Tillinghast, based on 1998 data, suggests a large disparity between US and European countries. Only Italy was close to the US with tort costs of 1.7% of GDP, compared to 1.9% for the US. Germany followed with 1.3%, and other European countries clustered around 1%.⁴ These data include the large quantity of low-severity auto liability claims, which frequently are not allocated through the court system, but settled by insurance companies. In the area of non-motor liability claims the gap between the US and Europe is even wider.

Commercial liability claims, as a share of GDP, are 2–3 times higher in the US than in Europe.

Commercial insurance data provide another way to compare liability costs by country. Commercial liability claims provide only a partial picture of the cost of the liability system to businesses, since they exclude much of the litigation costs. They also do not include costs associated with defensive behavior in order to avoid the threats of a litigious environment. These direct claims incurred vary widely by country as a share of GDP, with the US leading by far with 0.64% of 2002 GDP. Germany, the UK, and Italy follow at around 0.2% of GDP. These figures imply US liability costs are three times the relative size of

⁴ See Tillinghast – Towers Perrin “US Tort Costs 2000”.

Europe's, while the 1998 Tillinghast study implied they were about twice the size. The overall size of general liability claims in the 10 biggest non-life insurance markets was USD 84 billion in 2002, about 16% of total non-life insurance claims, and 0.37% of GDP in these countries. As the motor liability insurance market is larger than that of general and commercial liability, its claims of USD 152 billion were almost double the size of general liability claims. This *sigma* only looks at general liability costs.

Table 2
The volume of liability insurance claims

	Claims incurred in 2002				Motor liability	Total non-life
	USD billions 2002	Average loss ratio 1997–2002	% of total non-life	% of GDP	USD billions	USD billions
US	66.7	99.7%	21%	0.64%	86.4	318.0
Canada [1]	1.3	73.5%	7%	0.18%	3.4	18.8
Germany	4.2	65.1%	10%	0.21%	11.1	40.8
UK [1]	3.1	99.0%	12%	0.20%	15.2	25.9
France	2.8	113.2%	9%	0.19%	6.5	30.6
Italy	2.3	102.0%	10%	0.19%	13.0	22.3
Spain [2]	0.5	na	4%	0.08%	3.9	12.7
Netherlands [3]	0.4	na	3%	0.18%	3.1	14.1
Japan [2]	1.5	53.7%	5%	0.04%	7.2	32.4
Australia [3] [4]	0.9	124.2%	15%	0.25%	2.1	6.1
10 Countries [5]	83.8	98.2%	16%	0.37%	151.9	521.8

[1] Net after reinsurance, [2] Claims paid, [3] Motor incl. hull, [4] 2001, [5] Average loss ratio weighted by claims incurred

Sources: National Insurance Supervisory Authorities

Liability claims grow faster than GDP in North America, Europe and Japan

Commercial liability lines cover various risks and their claims development differs.

Commercial liability lines comprise a variety of covers for different risks: commercial general liability (premises liability), product liability, professional liability (including D&O), financial liability (or E&O), and medical malpractice insurance. Other miscellaneous liability covers include environmental impairment liability and employment practices liability. The US line of business classification in Table 3 separates some of these covers, others are subsumed under the large line "other liability". Recent trends in claims development differ substantially between the lines, with medical malpractice, D&O, E&O, and employment practices emerging as the most problematic in terms of new claims inflation. The recent high loss ratios in product liability are primarily due to adverse development of old underwriting years.

Table 3
The US liability lines

US liability lines	Direct premiums written, USD billions		Direct claims incurred, USD billions		Average loss ratio	Average operating margin [2]
	2003	growth [1] 1999–2003	2003	growth [1] 1999–2003	1999–2003	1999–2003
Other liability [3]	49.6	15.4%	42.6	15.5%	96.2%	–2.2%
Product liability	3.9	15.4%	5.7	18.1%	184.0%	–70.5%
Medical malpractice	10.2	10.9%	10.9	12.9%	118.0%	–16.9%
Commercial multi-peril, liability portion	12.5	5.5%	10.3	4.1%	83.8%	–0.7%
All commercial liability lines	76.2	12.8%	69.5	13.1%	101.0%	–7.4%

[1] Compound annual growth rates, [2] Defined as (underwriting result + allocated investment income) in % of NPE, [3] Includes D&O, E&O, and employment practices liability

Source: A.M. Best, *Aggregates & Averages*

Problem lines in the US: medical malpractice, D&O and E&O, employment practices liability

Medical malpractice insurance has suffered from high loss ratios over the last decade.

Medical malpractice insurance covers doctors and other professionals in the medical field for liability claims arising from their treatment of patients. The line has suffered from poor results over the last decade due to exceptional claims inflation. Average loss ratios in US medical malpractice insurance were 100% between 1993 and 2002, with a peak of 134% in 2001 and 124% in 2002, despite dramatic rate increases.⁵ Soaring jury awards and increased litigiousness are key drivers of the medical liability insurance crisis.⁶

⁵ Source: A.M. Best, *Aggregates & Averages 2003*.

⁶ See Insurance Information Institute "Medical Malpractice" in *Hot Topics & Insurance Issues*, June 2004.

Frequency and severity of medical malpractice claims are rising.

According to the broker AON, medical malpractice claims costs have increased at a steady 10% since 2000 and are likely to rise at the same rate in 2004. The frequency, or number, of claims is growing at 3% a year; claim severity is likewise increasing by 7% annually.⁷ This trend has been persisting for more than just the last few years: data from Jury Verdict Research show that by 2002 the median jury awards in medical malpractice litigation more than doubled to USD 1 million, from USD 473 000 in 1996. There is also a continuing trend toward larger verdicts. 54% of all medical malpractice awards are now over USD 1 million, compared with just 36% between 1995 and 1997.⁸ Data from A.M. Best indicate that total payments to plaintiffs grew at a compound annual rate of 8% since 1992 to USD 5.8 billion in 2002. Including the insurance industry's administrative expenses and self-insurance of physicians and hospitals, Tillinghast estimated medical malpractice costs at USD 24.6 billion in 2002. Compound annual growth has been 9% since 1980.⁹

The rise in medical malpractice litigation is changing the way medical services are provided.

Medical malpractice is one of the most extreme examples of just how severely the liability system can impact society and the way it operates. A survey by Harris Interactive revealed that malpractice litigation was a key concern among most physicians. Some 76% of doctors stated that their concerns about malpractice litigation had impaired their ability to provide quality care to patients and had caused them to practice "defensive medicine", generating higher healthcare costs. 79% of the surveyed doctors admitted ordering unnecessary tests, while 74% referred patients to specialists more frequently than they would have done had they relied solely on their professional judgment.¹⁰ Some doctors are refusing to engage in risky specialties – such as gynecology – or are even giving up practicing altogether. Nursing homes are increasingly cutting back on beds and pulling out of states known to have high litigation costs.¹¹

D&O liability insurance is also suffering from soaring claims ratios.

The D&O and E&O lines of business have also suffered from a severe wave of claims costs. D&O claims were fueled primarily by securities fraud class actions. In 2001 more than 300 lawsuits were filed, alleging fraud in the process of initial public offerings. 2002's major class actions were dominated by allegations of bias in research. And in 2003, a number of cases involving market-timed trading in the mutual fund industry were brought to court. After several years of escalating class action filings and rising settlement figures, the number of securities class action cases now seems to have stabilized.

⁷ See AON, "Hospital Professional Liability and Physician Liability: 2003 Benchmark Analysis Highlights", January 2004.

⁸ See Jury Verdict Research "Current Award Trends in Personal Injury," 43rd Edition, 2004.

⁹ See Physician Insurers Association of America, press release from 4 May, 2004.

¹⁰ See Harris Interactive "Most Doctors Report Fear of Malpractice Liability Has Harmed Their Ability to Provide Quality Care" in *The Harris Poll* # 22, 8 May 2002.

¹¹ See *Best Week*, 19 July, 2004, p. 3.

Average US securities fraud claims rose to USD 23 million in 2003.

These class actions hit the D&O insurers hard. The US Insurance Information Institute reported that D&O insurers have already paid over USD 5 billion on policies sold three to five years ago, as a result of reporting inflated revenues and earnings. Yet only USD 1.5–2 billion premium revenue was collected in total by D&O insurers during this period.¹² The average settlement values for shareholder claims increased to USD 23 million in 2003, compared with USD 19 million in 2001 and USD 18 million in 2000.¹³ Consequently, annual D&O insurance premium rate increases averaged 26% in 2002 and 2003.¹⁴ Corporations also needed to cut back their purchase of D&O coverage.

Many potential D&O claims are still unresolved.

In the course of 2003, both the settlement amount and potency of the cases continued to increase.¹⁵ More than 1000 cases remained unresolved at the beginning of 2004 and none of the high-value suits, including that involving the collapse of Enron, had been settled. Furthermore, more institutional investors are starting to file individual claims against defendant companies, which will ultimately cost more than class actions. New Sarbanes-Oxley requirements relating to internal loss control come into effect in 2004 and may result in an increase in D&O as well as E&O claims, according to the broker Willis.¹⁶ Additional risks will also arise as a result of measures currently being taken by the SEC, state attorney generals, and the plaintiffs bar. The effects of these changes will not only be felt by US companies. In 2003, several foreign companies settled securities litigation cases in the US. Examples include Ahold, DaimlerChrysler AG, and Vivendi. Investigations also commenced at Nortel, Holliger, and Parmalat in 2004.¹⁷

Tighter anti-discrimination legislation is setting the scene for an increase in employment practices liability claims.

Recent changes to employment law have opened the doors to a wave of employment practice liability claims. Laws such as the Americans With Disabilities Act of 1990, the Civil Rights Act of 1991, and the Family And Medical Leave Act of 1993 have contributed to a dramatic increase in claims involving not only wrongful termination, but also discrimination and sexual harassment. A strong increase in the average size of awards has also contributed to soaring claims costs. Jury Verdict Research data indicate that the median compensatory jury award in employment practices claims increased from USD 93 000 in 1994 to more than USD 250 000 in 2003.¹⁸

Employment practices liability claims may also rise in Europe.

Developments in European law are also affecting employment practices liability. Several EU directives and additional national legislation have created a raft of new anti-discrimination laws. Tougher requirements for employers, coupled with a general increase in litigiousness in Europe, mean that employment practices claims are likely to become more frequent and more severe in the future.

¹² See *Insurance Day*, 8 July 2004.

¹³ See PricewaterhouseCoopers (2004).

¹⁴ Source: Council of Insurance Agents and Brokers, quarterly rate surveys.

¹⁵ See PricewaterhouseCoopers (2004).

¹⁶ Source: Willis, press release of 19 April 2004.

¹⁷ See PricewaterhouseCoopers (2004).

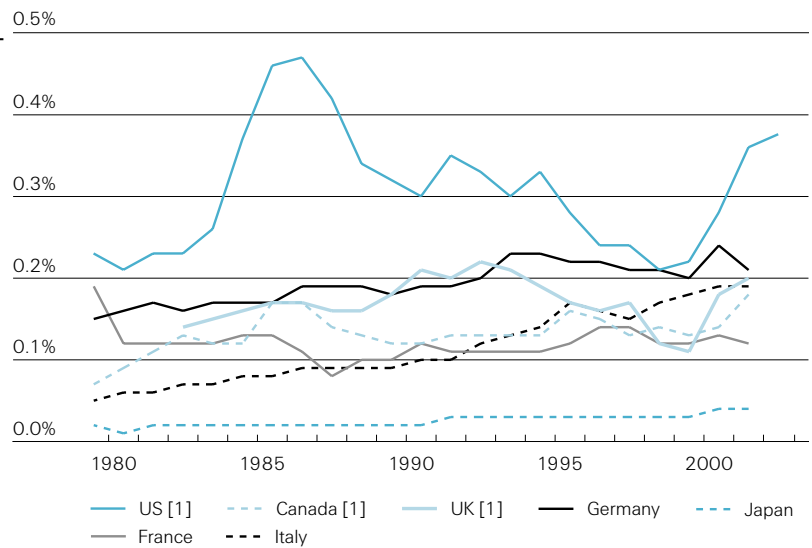
¹⁸ See Jury Verdict Research "Current Award Trends in Personal Injury." 43rd Edition, 2004.

Long-term growth in claims exceeds GDP growth

Over the long run, growth in liability claims exceeds nominal GDP growth.

Over the long term, incurred claims have grown faster than GDP in all markets, as can be seen in Figure 2.¹⁹ Deviations from the long-term trend are determined by a number of factors, such as reserve and interest rate changes and fluctuations in medical inflation. US liability claims peaked during the US liability crisis in the late 1980s, when a spike in general inflation, asbestos claims, and Superfund legislation drove up the mean and variance of expected liability claims. The sharp increase observed during the last few years is partially due to reserve additions.

Figure 2
Commercial liability claims in % of GDP 1980–2002



[1] Net claims

Source: Swiss Re Economic Research & Consulting

GDP elasticities of liability claims range from 1.2 to 2.2.

The GDP elasticity of general liability claims is around 1.5 in the US and Canada and ranges from 1.2 to 1.4 in the larger European economies (see table 4). This means that in the US and Canada, for example, for every 1% increase in nominal GDP, general liability claims rise by 1.5%. Japan experienced the highest growth in relation to GDP with an elasticity of 2.2, which suggests it was catching up from a very low level of liability claims.

¹⁹ The data reflect the accounting view (calendar-year basis as opposed underwriting year basis).
Source: Swiss Re Economic Research & Consulting.

Table 4

Long-term growth trends of liability claims in major markets

	US [1]	Canada [1]	UK [1]	Germany	France	Italy	Japan [2]
Period	1955–2003	1975–2002	1983–2002	1971–2002	1971–2002	1970–2002	1970–2002
Compound annual growth rate							
– Liability claims	10.6%	11.3%	8.8%	7.4%	9.4%	15.9%	13.8%
– Nominal GDP	7.1%	7.3%	6.7%	5.2%	8.0%	11.6%	6.1%
– Health expenditures	10.2%	9.4%	8.7%	7.4%	10.2%	na.	8.3%
Elasticity [3] of liability claims versus:							
– Nominal GDP	1.51	1.55	1.31	1.43	1.17	1.38	2.24
– Health expenditures	1.04	1.19	1.02	1.01	0.93	na.	1.66

[1] Net after reinsurance, [2] Claims paid, [3] % increase in liability claims when nominal GDP or health expenditures increase by 1%.

Sources: Liability claims from insurance supervisory authorities, GDP from Oxford Economic Forecasting, Health expenditures from OECD health data 2004.

Liability claims are not strongly correlated with macroeconomic variables.

Of the macroeconomic variables analyzed, medical inflation and total health expenditures had the highest correlation with liability claims (see Table 5). Looking at long-term elasticities, health expenditures seem to be growing at a similar pace as liability claims. A statistical analysis of claims growth, however, reveals that macroeconomic variables explain only a small fraction of the variation in liability claims growth. In a pooled regression of general liability claims growth in the US, Canada, the UK, Germany, France, Italy, and Japan, only general consumer price inflation and factors explaining cyclical swings proved to be statistically significant.

Table 5

Low correlation of US general liability claims growth with macroeconomic variables

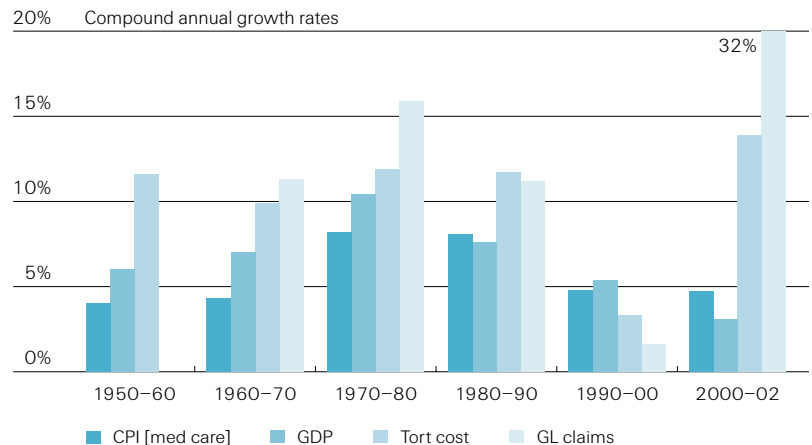
General liability claims growth correlation with	1960–2002
CPI inflation	0.08
Medical inflation	0.18
Growth in health expenses nominal	0.24
10-year government bond yield	0.09
GDP growth real	–0.11
GDP growth nominal	0.06

Source: Swiss Re Economic Research & Consulting

The 1990s were a period of unusually low claims growth in the US.

In the US, liability cost growth was exceptionally low during the 1990s, lower even than inflation, let alone nominal GDP. There were two effects at work here. Firstly, during the first half of the 1990s, new claims and reserves for old claims were declining from the excesses of the liability crisis of the late 1980s. The positive claims development fueled competition in the US property/casualty industry and offset the trend towards a hard liability market in the mid 1990s, restricting the hard market to the property cat market. Secondly, in the late 1990s, rates and new reserves were reduced in the soft market as cash-flow underwriting and robust investment incomes dominated insurers' behavior.

Figure 3
Long-term analysis of US claims development



Sources: Tillinghast, Swiss Re Economic Research & Consulting

US liability claims have skyrocketed since 2000.

By 2001/2002 liability claims costs rebounded strongly, despite the declining trend in core inflation. The sharp increase in costs during the years 2001–2003 is, in part, attributable to adverse reserve developments caused by the under-reserved underwriting years 1997–2000. Indeed, there are still some considerable uncertainties regarding certain risks written during the years 1997–2001.

Certain characteristics of liability insurance cause cycles

Liability insurance differs from property insurance in several respects that make the associated underwriting process more risky:

- 1) Property insurance is first-party insurance. It gives financial protection for goods which belong to the policyholder. Liability insurance, by contrast, compensates for claims made by a third party who suffers loss due to a policyholder's actions. In property insurance, claims cannot exceed the value of the insured goods. Liability losses have no such cap and therefore often exhaust the policy limits.
- 2) The probabilities associated with property losses are assessed on the basis of natural science (causal relationship between event and loss, value of destroyed material, etc). Liability losses are evaluated on the basis of social science and law. This involves interpretation of the applicable law and a subjective judgment as to the extent of fault and negligence. Clearly, this process is impacted by changes in the social and political environment and it is therefore very difficult to predict the mean and variance of liability losses with any degree of certainty.

Underwriting liability risks is, by its very nature, riskier than underwriting property risks.

3) Claims settlement takes longer in liability than in property insurance, since it frequently concerns personal injury claims in which medical treatment and rehabilitation span long periods of time. The process often involves time-consuming litigation which can last several years, particularly if appealed. Insurers put aside funds to cover expected future claims payments in the form of claims reserves. Table 6 shows that liability claims reserves may amount to up to six times the annual premiums, whereas property claims reserves are usually below the premium level. These funds are generally invested, and this brings additional risk for liability insurers in the form of uncertain asset valuation and investment income if they are not invested in government bonds with matched durations.

Table 6
Claims reserve in liability and property insurance [1]

Direct business 2002	General liability	Property
US	264%	43%
Canada	211%	36%
Germany	241%	71%
France	539%	102%
Italy	348%	76%

[1] Loss and loss adjustment reserves in % of premiums.

Sources: A.M. Best for the US and Canada, National Insurance Supervisory Authorities.

Annual accounting uses claims data that are distorted by reserves changes.

Uncertainties arising from the long run-off tail of liability claims create reserving cycles. Since the size of liability claims is usually known only several years after the claim has occurred, it is difficult to set accurate loss reserves at the end of the year in which the liability risk was underwritten. Only a portion of claims has been reported by the time the annual statements are filed; the rest (the so-called IBNR²⁰ reserves) is estimated by the insurers' actuaries. In US medical malpractice, for instance, claims paid at the end of the accident year only make up 4–6% of premiums earned, about 50% in the third year after the accident, and usually about 85–95% of premiums after 10 years.

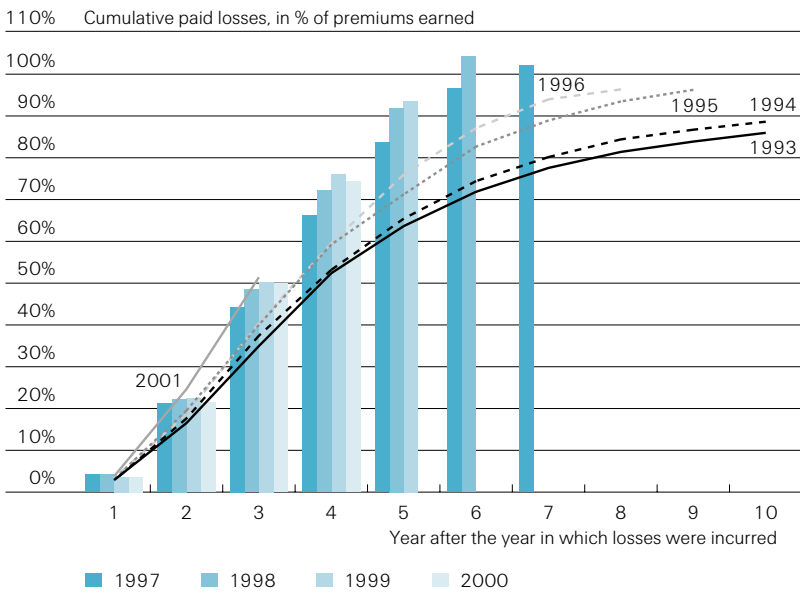
Assessing liability claims is difficult: claims paid develop very slowly, and claims run-off patterns are not stable over time.

The initial decision on how high or low to set loss reserves is based on experience but may, ultimately, turn out to be redundant or deficient, depending on the stage in the underwriting cycle. Insurers frequently fail to put aside sufficient reserves during soft market years, when terms and conditions are more generous and exposure is greater, and set reserve levels too high during hard market years, when tight terms and conditions restrict their exposure. The dynamic developments of liability risks, together with changing terms and conditions, make it difficult to estimate claims based on past experience. Figure 4 shows that medical malpractice claims of the underwriting years 1997 through 2000 developed faster than in previous underwriting years, indicating a different claims development pattern. This illustrates the uncertainty insurers face in underwriting and reserving for long-tail risks.²¹

²⁰ Incurred But Not Reported

²¹ For a general analysis of the underwriting cycle, see Swiss Re *sigma* No 4/2002 "Global non-life insurance in a time of capacity shortage" and Swiss Re *sigma* No 5/2001 "Profitability of the non-life insurance industry: it's back-to-basics time".

Figure 4
Claims development in US medical malpractice

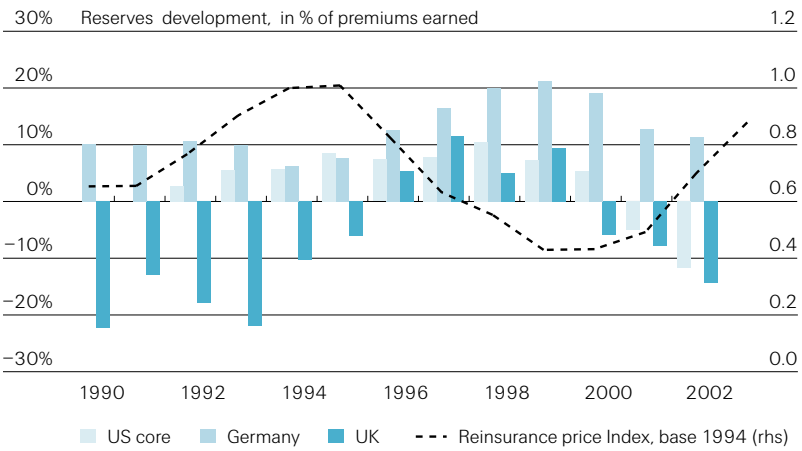


Source: A.M. Best

Liability insurers released core reserves in the late 1990s, supporting net income.

Figure 5 shows the cyclical pattern of general liability insurance reserve changes in the US, the UK and Germany.²² All three countries show run-off profits in the late 1990s (because the emerging claims experience from earlier years was better than expected), and increasing reserves for prior underwriting years in the early 2000s. German insurers were the only ones who did not increase previous years' reserves. On average they released 12% of premiums. They managed their reserves in a cyclical fashion, releasing 20% of premiums in the soft market of the late nineties and only 6% in the hard market of 1994.

Figure 5
General liability insurance reserves development in % of NPE



Sources: A.M. Best Swiss Re Economic Research & Consulting

²² The data reflect the accounting view of loss and loss adjustment expense reserve changes per calendar year. Source: Swiss Re Economic Research & Consulting.

Liability claims are projected to climb more rapidly than GDP.

Table 7
Short-term vs. long-term liability claims growth in the US, the UK and Germany

Adjusted short-term claims growth exceeds long-term predictions

GDP elasticities from Table 4 suggest a long-term growth trend of US general liability claims of 8 to 9%. With slightly smaller GDP elasticities and lower nominal GDP growth, the elasticities imply general liability claims growth of 5–7% for the European countries in this analysis. Tillinghast projects US tort costs will increase by 6–11% in 2004 and 2005, which would entail a similar pattern of rising liability claims.²³

Annual average general liability claims growth	US	UK	Germany
1960–2002 [1]	10.9%	8.8%	8.7%
2001–2002	32.3%	27.2%	5.2%
2001–2002 adjusted for reserve additions [2]	14.7%	12.9%	12.5%
Implied growth from long-run elasticity for 2001–2002	5.0%	6.2%	2.9%

[1] UK: 1984–2002, [2] Excluding extraordinary and cyclical reserve changes.

Sources: National Insurance Supervisory Authorities, Synthesis Non-Life.

Short-term claims growth exceeded long-term trends even after adjusting for adverse developments.

However, short-term trends suggest a much more severe development of claims costs. US general liability claims skyrocketed by an annual average of 32% in 2001 and 2002, while UK general liability claims grew by 27% and German claims by 5%. Even after adjusting for the substantial reserve additions of the recent years, US claims growth was 15% – well above the long-term trend. At almost 13% (adjusted for reserve additions), UK and German claims growth also exceeded its long-term growth trend.

If the legal system is experiencing a structural shift, long-term elasticities may underestimate future liability claims growth.

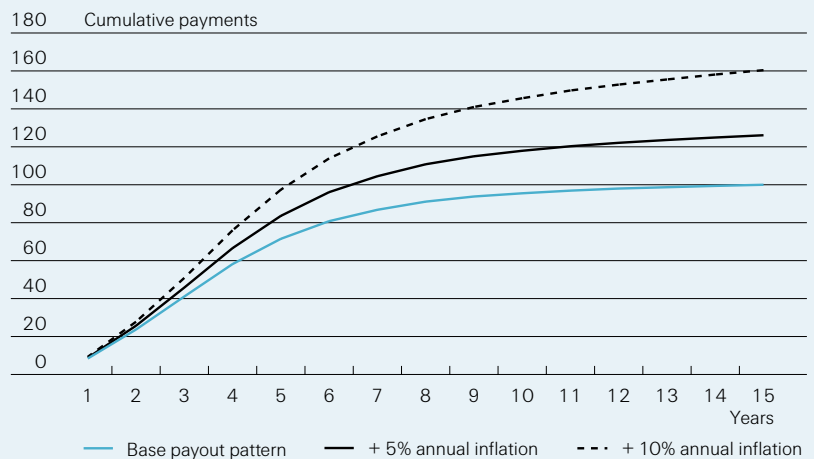
Long-term elasticities may be misleading as an indicator of current trends in the legal system and/or the liability insurance industry. Particular caution is necessary due to the time lags inherent in the liability system. Has the US liability system reached a point where past claims experience is no longer of any use as a guide to the future? The latest legal developments should be observed carefully in light of this question.

²³ See Tillinghast “US Tort Costs: 2003 Update.”

Sensitivity of long-tail portfolios to unexpected claims inflation

Underestimating future claims inflation can have a severe impact on profitability due to the compound effect over the duration of a long-tail portfolio. The following example illustrates the magnitude. The basic payout pattern of a US general liability claims portfolio is calibrated to a nominal total payout of USD 100 over 15 years following the claim. At 5% discount rate, the net present value of the payments is USD 81. An additional 5% annual claims inflation leads to cumulative payments of USD 125 with a net present value of USD 99, which is 23% higher than the base scenario. A 10% higher annual claims inflation raises the cumulative payments to USD 160 with a net present value of USD 125, which is 54% over the base scenario. Insurers need to recognize the full extent of claims dynamics in their actuarial pricing.

Figure 6
Graph showing the impact of unexpected inflation on long-tail claims



Sources: A.M. Best Swiss Re Economic Research & Consulting

Liability rules are expanding in scale and scope

Tort law serves two main purposes: compensation and prevention.

Tort law serves two main purposes: compensation and prevention. The compensation aspect centers around the situation of the victim. Can he or she demand compensation from a third party for a bodily injury or some infraction to a property right based on a causation for the damage and a legal liability? The prevention aspect addresses potential future injuries or infractions of property rights. Can liability law guide the behavior of individuals or corporations in order to avoid the injury happening in the first place? The economic theory of law has examined the role of liability law in setting incentives for (economically) desirable behavior in considerable detail. There is a trade-off between these two functions. A secular expansion of the compensation aspect increasingly distorts the economic incentives. Additional funds for compensating victims can only be captured at the expense of weakening the cause-effect relationship between the claimant's injury and the defendant's actions. Penal aspects of civil tort liability only play a role in the US. In all other developed economies, punishing illegal, reckless or immoral behavior is the domain of penal law. This mixing of legal spheres in the US also distorts economic incentives, since plaintiffs and their lawyers benefit economically from the penalty.

Secular shift from fault-based to strict liability

Tort liability has traditionally been based on fault.

Traditionally, liability rules in civil law were based on the notion of fault. Tort liability is based on the basic legal notion that a person who impairs another person's physical health or property should pay adequate compensation for that injury or damage, provided that the harmful act was deliberate or resulted from a lack of due care and attention. The legal equivalents of this principle in the US and UK are "negligence" and "trespass", and are mirrored by the general liability rules in the civil laws of Continental Europe and Japan.

Over time, liability has increasingly become based on causation.

The suitability of the principle of fault is limited. Technical progress has brought a ubiquitous use of production processes and consumer products that involve high risks (eg the automobile). This has, in certain cases, led to fault-based liability being replaced by "non-fault liability" or "liability based on causation". Here, an obligation to pay for damages arises if a connection (the causality) is deemed to have existed between an event (the cause) and the loss (the effect) in the normal course of events, and according to the normal experience of life. When liability is based on causation, a person becomes liable to pay compensation for an act irrespective of intent, recklessness or negligence.

US product liability started to abandon the requirement of fault 50 years ago.

The US legal system spearheaded this development. By the middle of the 20th century, some legal scholars had started to consider lawsuits as a surrogate for social insurance. The California Supreme court led the way in an influential 1944 case ("Escola vs. Coca-Cola Bottling Co."), which proposed that courts should not have to find manufacturers guilty of negligence in order to hold them liable for injuries resulting from defects in their products. An example of the subsequent export of this legal concept to Europe is the European Union's Directive on Liability for Defective Products of 25 July 1985. Article a1 of the directive contains the following standard clause for liability based on causation: "The producer shall be liable for damage caused by a defect in his product." Incorporated by all member states into their national legislation, this directive has had particularly enduring and wide-ranging effects.

Table 8

The expanding legal base for liability claims

The liability rules	Parties obliged to pay damages	Compensation	Grounds for exemption
Fault liability	The tort-feasor or damaging party	Compensation for actual harm suffered, ascertained on an objective basis	Traditional grounds [1]
Non-fault	Party with responsibility for a tortious act or omission committed by another person	Compensation for non-material damage	No proven link between the cause (event) and the effect (harm), act of God
Strict liability or stringent causal liability for specific situations ("dangerous" facility or product, vehicle, etc)	Completely uninvolved parties	Punitive damages	acts of God only
Strict liability or stringent causal liability for "all dangerous" situations	All parties directly or indirectly involved	Compensation for environmental impairment	No grounds for exoneration
Application of civil-law liability standards to natural resources belonging to the public domain			
Retroactive application of new liability standards			

[1] No fault on the part of the accused perpetrator, no proven link between the cause (event) and the effect (harm), deliberate or grossly negligent behavior on the part of the claimant, fault of a third party, act of God.

Source: Swiss Re, "Liability and liability insurance: Yesterday – today – tomorrow", 2001

Strict liability is based on causality only.

In extreme cases, liability based on causation is not subject to the existence of any irregularities, malfunction, or failure to observe limits. Thus, even the correct and proper operation of a specific type of industrial facility or the mere ownership of a particular object (even if it is in perfect working order) can lead to the obligation to compensate if there is a causal link between the facility/object and the loss event. This obligation to indemnify is triggered by a third party having been endangered by the operation of a hazardous type of facility or the existence of a given object.

Nuclear liability in Switzerland and environmental liability in Germany are based on strict liability.

The use of nuclear energy has caused a shift in the liability standard applicable to this field. Article 3 of Switzerland's 1983 Nuclear Energy Liability Act states: "The proprietor of a nuclear installation bears unlimited liability for the damage caused by any nuclear materials in his plant." The same principle applies to nuclear plants in Germany and other European countries. Legislation took the same path when it came to establish environmental liability laws. For example, paragraph 1 of the 1990 German Environmental Liability Act stipulates: "Should any person be killed or suffer bodily injury or health impairment or should property be damaged as a result of an effect on the environment emanating from an installation/plant as specified in Appendix 1, the operator of the installation shall compensate the injured party for the loss resulting there from." Nevertheless, these areas of strict liability remain an exception in Europe.

German courts assume a high degree of personal consumer responsibility

How does the US product liability environment compare to that of Europe? The following recent German court rulings shed some light on this question.

Chocolate bar verdict of 20 December 2002

This case centred on whether the consumption of chocolate bars over an extended period would pose a health risk (diabetes and dental problems). The plaintiff accused the producer of neglecting his duty by failing to print a warning on the product packaging about the health risks of excessive sugar consumption. The court ruled as follows: "The excessive consumption of foodstuffs containing sugar is, in itself, sufficient to pose a health risk. However, it is the individual's sole responsibility to select his/her diet according to his/her needs and wishes, thereby deciding whether to prioritise health or enjoyment. Food producers are under no obligation to design their products so as to maximise their healthfulness, minimising the fat content in sausages, monitoring vitamin content, using wholegrain instead of white flour, etc."

In short, the decision called for a "sensible consumer." It held that consumers should be responsible for informing themselves as to what constitutes a healthy lifestyle and that this responsibility could not be diminished by producers issuing more warnings. The court also noted that excessive warnings would actually increase the potential threat as they would make consumers less discerning about what they were buying. The court ruled that consumers are capable of thinking and acting independently and consequently are not entitled to transfer responsibility for their own decisions to the producer.

Children's tea verdicts

There may, however, be exceptions to this ruling in cases involving dangers that are difficult to identify because of the way in which they are triggered. The so-called "children's tea verdicts" illustrate this situation well. In this case it emerged that whilst the bottles and teats themselves were not dangerous, frequent and prolonged exposure of the milk teeth to sugary drinks could, indeed, cause the dental damage that occurred. The risk of dental damage was, however, found to be greatly accentuated through the use of orthodontic teats, which allowed the liquid to reach the back of the front teeth – an area of low salivation. As the layman could not have known that this combination of orthodontic teat and sugary drink posed a health threat, the children's tea producer was ultimately forced to apply a warning to the product.

The burden of proof has shifted from the claimant to the defendant.

It is not always possible to make the party at fault pay, however, since the principle of liability based on fault requires the injured party to prove that the perpetrator acted unlawfully or carelessly before compensation can be claimed. To avoid a situation where fault cannot be proved, the standard for fault-based liability was modified in certain areas and the burden of proof was shifted from the claimant to the defendant. The latter is now obliged to prove his/her innocence in order to avoid paying compensation. In the case of asbestos, for example, the diagnosis of a disease that could be caused by asbestos, and proof of exposure to asbestos at some time, are sufficient to trigger the cover.

A growing range of claimants and liable parties

Lawyers and claimants are attempting to extend liability to indirectly involved parties with “deep pockets”.

A secular trend is evolving whereby lawyers and claimants are attempting to extend liability beyond the person or corporation that caused the damage to a third party. In the US, many liability suits now specifically target “deep pockets” rather than looking strictly at cause and effect. Increasingly, parties that are only indirectly involved or are far removed from the cause-effect chain are being held responsible. The rationale behind the “deep pocket” approach is, of course, to ensure sufficient funds for compensation. Quite apart from being unjust, this approach has serious negative economic repercussions.

Product liability and environmental liability were the first areas to expand liability laws.

US product liability was the first area of law to experience this attempt to “widen the net” to include individuals and organizations that were not directly responsible for a loss. Later these expanded provisions gained a foothold in environmental liability law where US federal law created joint and several liability of owners and operators of commercial and industrial plants, transport facilities, warehouses, shopping centers, and refuse processing and disposal facilities.²⁴ According to this principle, defendants may be required to pay a larger portion of damages than they are found liable for if other entities are unable to pay their portion.

Joint and several liability is particularly difficult to insure.

Joint and several liability undermines the ability of the liability insurer to assess a risk adequately and determine a cover and price that is commensurate with the risk. There is also a severe moral-hazard problem associated with joint and several liability, since insurers – the ultimate “deep pockets” – may have to pick up the bill for underinsured codefendants as well as their clients’ share of a claim. Unlimited joint and several liability is detrimental to the insurability of an economic activity.

²⁴ The two relevant federal laws were the *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA) of 1980 and the *Superfund Amendments and Reauthorization Act* (SARA) of 1986.

The ever growing liability for asbestos

From the mid to late 1990s the number of new asbestos claims being filed and old claims being settled stabilized. Many insurance analysts began to believe that the worst was over. Billions of dollars had already been spent in settling thousands of claims, many asbestos producers had already declared bankruptcy and gone out of business, and many of the seriously ill had already died and their survivors had been compensated. But by 1999 a number of interacting factors spurred a new wave of litigation. The claimants' bar was successful in creating new theories and techniques for widening the range of claimants and defendants.

One of the most marked changes in asbestos litigation has been a widening of the range of defendants to companies without fault. Since most of the manufacturers of asbestos had already been bankrupted by asbestos litigation, lawyers began going after companies that were less directly linked with asbestos. Suddenly, it was no longer only manufacturers of the material or owners of firms that had once produced asbestos, but users of the products that were in the firing line. Rand²⁵ now estimates that some 8400 companies in over half of all US industries have been sued over asbestos-related claims and that these new defendants now account for over 60% of litigation expenditures. As more companies hit with asbestos litigation choose Chapter 11 bankruptcy, lawyers rush to file cases before it is too late. Sixteen asbestos manufacturers went bankrupt in the 1980s due to asbestos-related losses, 18 in the 1990s, and another 30 since the beginning of 2000.

Another trend with an even greater impact on the expansion of litigation was the filing of claims on behalf of people with little or no current disability, a condition characterized as "nonmalignant". A Tillinghast study found that 94% of the 59 200 claims filed in 2000 were by nonmalignant claimants. The filing of massive class action lawsuits, bundling strong cases with scientifically weak cases, has contributed to this surge in claims.

Retroactive application of new liability standards

Retroactive liability has been introduced in the US for environmental pollution.

The steady expansion of liability for manufacturers is especially dramatic in cases where new provisions are applied to losses resulting from activities which took place before the new legislation came into force. Environmental liability is the most prominent example of this retroactive creation of liability. The Superfund Act in the US – which extended liability for environmental pollution in both time and scope – was designed to facilitate the clean-up of waste sites, diminish their threat to human health and minimize direct costs to the taxpayer.

²⁵ See Rand (2002).

Whilst this act does relieve the “taxpayer’s” burden, it does not eliminate the cost to the economy. Affected corporations pass tort costs along to the consumer by increasing insurance premiums and product prices. Retroactive liability is an inefficient way of preventing pollution, since the financial burden lies on corporations that were polluting in the past rather than companies that will pollute in the future. Given the dynamics of structural change in a modern economy, many of the polluters from the past are now in entirely different industry sectors.

Retroactive liability forces insurers to pay for risks that were unknown when underwriting the policy and were never factored into insurance premiums.

Applying liability retroactively has a serious impact on insurers. It is impossible for insurers to forecast such eventualities, as the liability regulations did not exist when the policies were underwritten. As a result, such payments were never compensated for with premium payments. Instead of being diversified over a large portfolio of similar risks and/or over time, the liability is shifted in its entirety, to the insurers’ shareholders. In extreme cases, this can even ruin the insurer. In May 2001, A.M. Best estimated that insurers will ultimately pay out as much as USD 56 billion in pollution claims associated with federal and state sites.

Main drivers of soaring compensation payments

The US tort system awards the largest sums of any country in the world.

The US tort system often produces excessively sized awards, as illustrated by the list of most expensive verdicts of 2002 (see table 9). Large non-economic damages, punitive damages, the emergence of mass tort litigation, contingency fees, and jury shopping are the key drivers behind this development.

Table 9
Most expensive US verdicts in 2002,
USD millions

Value	Issue	State
28 000	Tobacco (product liability) ²⁶	Florida
2 200	Negligence (pharmacy malpractice)	Missouri
270	Personal injury (burn)	Kentucky
225	Product liability (rollover)	Texas
150	Tobacco (product liability)	Oregon
122	Product liability (auto accident)	Virginia
97	Business fraud	California
95	Medical malpractice (birth injury)	New York
91	Medical malpractice	New York
80	Medical malpractice (birth injury)	New York
80	Product liability/personal injury (auto)	Missouri

Sources: Insurance Information Institute, Lawyers Weekly USA, January 2003.

²⁶ This verdict was subsequently reduced to 28 million on appeal.

US awards for pain and suffering are traditionally higher than in the rest of the world.

The principal non-economic damages are compensation for “pain and suffering”. In addition to compensating accident victims for medical expenses, rehabilitation costs, lost earnings, etc, there is generally an additional provision for the pain and suffering associated with an injury or fatality. The criteria for setting these awards are vague, and US courts have traditionally been more generous than courts in the rest of the world. One implicit reason for this is contingency fees, paid to the plaintiffs’ lawyers as a prearranged percentage of a successful award. A successful plaintiff may not recover the full amount of his economic loss, because he owes his lawyer a substantial portion of the award. Recovery of non-economic damages, in effect, is necessary to pay for the legal fees of the plaintiff and obtain full compensation for economic damages. In Europe, the losing party usually pays the lawyer’s fees of both sides in a lawsuit unless the judge rules otherwise.

Punitive damages can exceed compensation for economic damages and pain and suffering.

US civil law provides the option of making the perpetrator pay awards for “punitive damages” which exceed the actual compensation for damages in cases of particularly reprehensible behavior. Uniquely, this instrument for deterring future offences is embedded in civil, not penal, law.

There is a wide range of punitive damages.

Punitive damages were awarded in 3–4% of all bodily injury verdicts with a median of USD 160 500 in 2002. However, the range is wide and there are many dramatic cases in which extremely high punitive damages were awarded. Although many excessive awards have been overturned on appeal, punitive damages remain a severe threat. Frequently, the defendant has to provide collateral in the amount of the original award in order to be allowed to appeal. There have been spectacular cases in which even Fortune 500-size companies were not able to provide an appeal bond. Punitive damage awards are often not covered by liability insurance policies, and in some states such insurance policies are even prohibited by law. The fear of irrationally high punitive damage awards frequently drives companies into settlements. Hence, the effect on defendants’ behavior is much larger than the actual incidence of punitive damage awards would suggest. Recent Supreme Court verdicts have aimed to achieve a more reasonable balance between compensatory and punitive damages.²⁷

Class actions are frequently initiated by plaintiff lawyers.

Some of the tort system costs arise because there are strong financial incentives for trial lawyers to pursue mass tort cases with huge compensation awards. Mass torts can consist of class actions, multidistrict litigations, consolidations before trial, bankruptcy proceedings and several other emerging devices, all of which create substantial leverage against the defending companies. The total compensation can reach large sums due to the aggregation of many claimants. In practice, trial lawyers often initiate cases, identifying the violation and number of harmed individuals. Potential claimants are solicited via advertisement to join the suit even after it has started.

²⁷ In *Campbell v. State Farm* the Court added that “...few awards exceeding a single-digit ratio between punitive and compensatory damages will satisfy due process... Single digit multipliers are more likely to comport with due process, still achieving the state’s deterrence and retribution goals...”

Contingent fees create huge financial stakes for plaintiff lawyers in class actions.

Forum shopping tends to facilitate large settlements.

Compared to the US, consumers in Europe assume a higher degree of personal responsibility and are protected by a robust social security system.

Lawyers' compensation is funded out of the settlement and is frequently based on contingent fees. In contrast to individual lawsuits, there is no effective control of lawyers' compensation from the claimant's side, since the individual stakes are small and the claimants do not hire the lawyers themselves. Faced with growing caseloads, judges are also failing to monitor payments to plaintiffs' attorneys effectively, leading to excessive fees from class actions. Between 2001 and 2003, average class action fees were USD 1520 per hour, more than four times the average hourly market rates that the plaintiffs' attorneys charged clients in non-contingent fee cases.²⁸ Effective hourly rates tend to increase with the size of the class recovery, creating a strong financial incentive to initiate class actions.

The filing of class actions is facilitated by "forum shopping", the process whereby plaintiff lawyers seek to file their claims in the most plaintiff-friendly jurisdictions. In most large class actions, injured parties reside all over the country and the plaintiffs' lawyers will select courts that are known to be more sympathetic towards plaintiffs' cases and commonly offer large compensation awards. Certain small courts are magnets for national class actions and attract many more cases than one would expect, judging by the size of the population. Once a suit has been filed in one of these "magnet courts", many corporations opt to settle the claim rather than risk a verdict with billions of dollars in punitive damages. Several tort reform initiatives aim to reduce "forum shopping" by entrepreneurial lawyers.

Major differences in societal attitudes and procedural law persist

The largest differences between the US tort system and the rest of the industrialized world lie in procedural law and societal attitudes. Only a few countries (eg the UK, Australia) accept class actions and contingent fees for attorneys are generally prohibited. While US courts have considerable freedom in determining non-economic awards, European countries are much more restricted in this regard. Greater predictability of jurisdiction, the absence of a culture of punishment in liability trials, and a more common-sense approach to consumers taking personal responsibility for standard risks of life have so far prevented major liability crises in Europe. This greater degree of individual responsibility in Europe is complemented by more highly developed social security systems. Whereas public social expenditure, excluding old age pensions, amounted to 9% of GDP in the US in 1998, it accounted for 15 to 18% in the UK, Germany and France, and more than 20% in Scandinavia.²⁹

²⁸ See *Class Action Reports* Vol, 24, No. 2, March–April 2003.

²⁹ Source: OECD social expenditure database

Legislative actions to curb rising liability costs

Governments are attempting to reform the tort system by containing it or by bypassing it to directly offer compensation.

Rising liability costs have prompted governments in several countries to take corrective action. There are two fundamental routes a government can take: either it chooses to push through reforms within the tort system or it bypasses it altogether. With an expense ratio of 54%, the tort system is one of the most expensive compensation mechanisms. The bulk of these expenses are generated by attorneys representing plaintiffs and defendants. Another element that makes the tort system expensive – particularly in the US – is compensation for non-economic losses, such as pain and suffering and punitive damages. Reforms within the tort system primarily try to limit expenses (ie lawyers' fees) and non-economic compensation. Reforms that avoid the tort system focus on compensating the victim for health expenses, rehabilitation and sometimes loss of income, without consideration of fault. Examples include workers' compensation schemes, non-fault auto insurance and wider-ranging non-fault accident insurance.

In the US, tort reform is occurring at the state level, but its impact is limited.

Tort reforms in the US³⁰

In an effort to reduce litigation costs, business groups and other organizations started campaigning for tort law reforms in the 1970s. State law is the basis for the US liability system. Most reforms have taken place at the state level and during the last decade all but a handful of them have passed significant tort law reforms. Enacted tort reforms have focused on reducing compensation for punitive damages and non-economic damages. However, some of these initiatives have been overturned by the courts. The effect of such piecemeal reforms will be limited. Unless all states pass certain key reforms, forum shopping will continue unabated. Other initiatives are aimed at restricting joint and several liability, eliminating the collateral source rule, and reforming contingency fees.

Caps on awards for non-economic damages are one type of reform.

The *California Medical Malpractice Reform Act* of 1975 capped awards for non-economic damages in medical malpractice cases. Reducing the frequency and severity of medical malpractice lawsuits, it became a model for other states. Several of them now have laws restricting the imposition of punitive damages, limiting the types of cases in which they may be applied or capping monetary amounts. One reform that may be gaining ground would require that a portion of the award be paid to the state. This measure would diminish the incentive for overcompensating the injured party, and, as a consequence, bring down lawyers' fees.

Some reforms are designed to limit lawyers' compensation.

Some reform plans are designed to reduce attorneys' contingency fees, particularly in class action cases. Caps or sliding scales should avoid the excessive compensation for class action attorneys that occur if their economies of scale are not sufficiently reflected in the fee structure. The *California Medical Malpractice Reform Act* also applied limits to the amount of fees a plaintiff's lawyer can demand. These limits helped to offset some of the effects of capping non-economic damage awards. Plaintiffs experienced a 15% drop in recoveries, on average, while defendants realized a 30% reduction in their liabilities.³¹

³⁰ See Viscusi (2003).

³¹ See Rand (2004).

A proposed federal bill seeks to limit forum shopping.

A recently proposed federal bill, The *Class Action Fairness Act* of 2003, aimed to limit forum shopping with large multi-state class action suits. A Rand study supports the legislation's major goal of limiting forum shopping.³² The study's authors also recommend increased regulation of settlements and fee awards by judges. Judges should reward class action attorneys only for lawsuits that provide value to class members and society. It is currently very uncertain whether this bill will be passed. Other federal tort reform initiatives are discussed in the Outlook section.

Liability crisis in Australia³³

Australia had a "Public Liability Crisis" in 2002.

In Australia sharp increases in insurance premiums and the unavailability of insurance to many individuals and corporations created the so-called "Public Liability Crisis" in the first half of 2002. This crisis is commonly thought to have had five causes: 1) the terrorist attack of 11 September 2001, which reduced (re)insurers' capacity, 2) the placing into liquidation of one of Australia's largest insurers, HIH in March 2001, 3) lower returns on investments, 4) the increase in damage awards determined by courts and the level of associated legal costs, and 5) lawyer advertising and no-win-no-fee (ie contingency fee) style representation by plaintiffs' lawyers.

New South Wales enacted legislation to limit the escalation in liability costs.

The New South Wales government responded to the crisis by passing the *Civil Liability Act* in May 2002. The key elements of the act were: 1) increasing the threshold of fault triggering liability for personal injury claims, 2) capping legal costs for personal injury claims worth less than AUD 100 000, and 3) making the legal representatives potentially liable for legal costs incurred because of frivolous claims or unmeritorious defenses. The act contains provisions which:

- 1) oblige defendants only to take precautions against risk of which the defendant was aware or should have been aware, and which is significant. This is a lesser obligation than the common law requirement to take precautions against any risk which is not "far-fetched or fanciful";
- 2) impose a requirement that the court take into account the means of the defendant in determining the defendant's ability to take reasonable precautions. For example, local communities with finite resources may be limited in their capacity to maintain roads, parks, and sporting facilities;
- 3) make any negligent act or omission by the defendant a necessary condition for a plaintiff's injury or loss to occur. Common law provided the more lenient requirement that the negligent act or omission merely materially contribute to the loss or damage;
- 4) allow the court an ultimate discretion (not available in common law) to refuse a plaintiff's claim if imposing liability on a particular defendant is not appropriate;³⁴
- 5) guarantee a significant degree of immunity (not available in common law) from any claim for damages to statutory authorities, voluntary organizations and providers of recreational activities.

³² See Rand (1999).

³³ Based on a presentation ("Tort Law Reform in Australia [2002-2003]") given by Michael Gill and James Sheller from Phillips Fox in December 2003 at the Singaporean Insurance Law Association.

³⁴ This legislation grew out of a fear that imposing an excessively harsh liability system on commercial professionals like lawyers, auditors or doctors would reduce competition in these professions.

By 2003, the whole of Australia was covered by similar liability legislation.

The act became a blueprint for other states and territories in Australia. All of them passed acts by the middle of 2003. Most imposed limits on the legal costs recoverable for smaller claims. Two states (New South Wales and the Australian Capital Territory) have introduced lawyers' liability for unmeritorious claims or defenses. Having identified lawyer advertising as a cause of the crisis, the New South Wales Government introduced the *Legal Profession Amendment* (Personal Injury Advertising) Regulation in 2003 which prohibits a barrister or solicitor from publishing or advertising any legal services relating to the recovery of money for personal injury. The overall claims-reducing effects of these acts are enhanced by a "pro-defendant" trend in the High Court since 2000. However, it is too early ascertain how the reforms are being applied by the courts and what gaps may still exist.

Non-fault car insurance in the US and Canada³⁵

Non-fault auto insurance in the US avoids legal fees for most smaller accidents.

In the 1960s, the traditional auto liability insurance system became the target of public criticism. The debate focused on the often expensive and time-consuming process of determining who is legally liable when an accident occurs. To reduce the delays and inefficiencies of the system, non-fault legislation was introduced in the 1970s in many US states and in the Canadian province of Ontario in 1990. Under a non-fault system, accident victims are allowed to recover medical and hospital expenses and lost income from their own insurers while limiting the right to recover compensation from the other drivers' insurers. This measure avoids legal fees for the majority of smaller accidents.

Most of the non-fault systems limit monetary compensation.

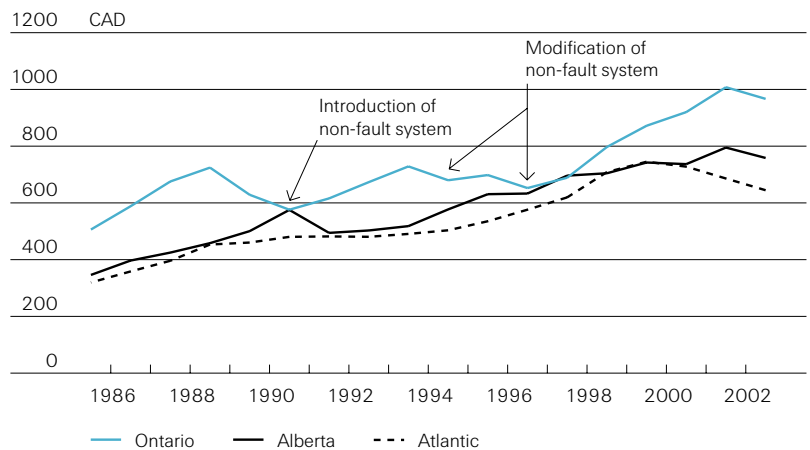
Twenty-four US states, the District of Columbia, Puerto Rico, and the Canadian province of Ontario now have laws that allow policyholders to obtain compensation for auto accidents from their own insurers. Most of these non-fault systems restrict the right to sue either by monetary thresholds, which allow a suit to be filed for pain and suffering when medical expenses exceed a certain amount, or through descriptive or verbal thresholds which allow suits only when an injury meets the definition of a serious injury.

The effects of the non-fault system appear to be temporary.

Experiences with these systems have been mixed. While overall auto claims costs typically fall immediately after introducing a non-fault system, moral hazard and fraud become more critical in the longer run. Police and lawyers tend not to investigate with the same scrutiny as they would under a fault-based liability system. The various thresholds also need to be adjusted frequently. In Ontario, for example, reforms were implemented in 1994 and 1996 after the non-fault scheme was introduced in 1990. The growth in average claims per insured vehicle was contained or reduced after each of these reform steps, but bounced back soon after. Average claims have recently been rising faster in Ontario than in Alberta and the Atlantic provinces which still have traditional liability systems. A further reform is currently under discussion. In the long run, average claims per vehicle grew almost at the same pace in Ontario as in Alberta and the Atlantic provinces.

³⁵ For an overview of non-fault car insurance in various US states, see Insurance Information Institute "No-Fault Auto Insurance" in Hot Topics & Insurance Issues, July 2004. For a detailed description of Ontario's system, see the Insurance Bureau of Canada's public website www.ibc.ca

Figure 7
Average claims per insured vehicle
in Canada



Source: Insurance Bureau of Canada

New Zealand's non-fault system provides benefits for all personal accident injuries.

Benefits are provided without proof of "fault", and the right to sue for damages was abolished.

New Zealand's non-fault compensation scheme for personal injuries³⁶

In 1974 New Zealand abolished tort law remedies for all personal accident injuries and replaced them with a non-fault compensation scheme administered by a state monopoly. Under the new Accident Compensation Commission (ACC) act, benefits included:

- 1) payments for hospital and medical expenses, rehabilitation costs, and associated transport costs;
- 2) compensation for loss of income (payable from the seventh day after the accident at a rate of 80% of average weekly earnings before the accident);
- 3) lump sum payments for permanent loss or impairment, and up to a maximum of NZD 100 000 (as of 2004) for pain and mental suffering;
- 4) payments for funeral costs and lump sum payments to surviving spouses and children in cases of accidental death.

Benefits are provided without proof of "fault", no matter how or where the accident occurred, whether at work, home, on the road, or while participating in a recreational or sporting event. In return, the common law right to sue for damages for personal injury (except for punitive or exemplary damages) was abolished. The ACC administers the system, which has six accounts for different types of risk or activities: employers, earners, non-earners, motor vehicle, self-employed work injury, medical misadventure (medical malpractice) and residual claims (work-related injuries before 1 July 1999 and non-work related injuries before 1 July 1992).

³⁶ See Connecticut Office of Legislative Research, "Non-fault medical liability compensation system" in *OLR Research Report* April 16, 2003 and the ACC's website www.acc.co.nz

The system has been revised several times and the funding structure has been transformed from “fully funded” to “pay-as-you-go”. In 1999, private insurers were authorized to provide work-related accident insurance, but only one year later the new Labor-led government returned the provision of workplace accident insurance exclusively to the ACC. The latest proposed changes to ACC legislation include greater focus on injury prevention and rehabilitation.

One of the main benefits of this system is administrative efficiency by avoiding tort costs. However, drawbacks include undifferentiated pricing, and cover limitations (ie loss of income benefits capped at NZD 87 185 as of 2004; treatment in public hospital schemes). Some are also concerned that less attention will be paid to risk management in a non-fault environment than would be under a tort system. Some of these moral hazard issues could be mitigated by applying experience rating schemes, such as those used in the non-fault US workers’ compensation system.

Rising liability claims challenge the insurance industry

Is liability risk insurable?

Insurance can only operate within the limits of insurability. In addition to finite insurance capacity, Christoph Courbage and Patrick Liedtke cite regulatory and legal limitations, the inability to price insurance in an economically sustainable way, the incapacity to provide sufficient risk transfer solutions and information asymmetries (in particular moral hazard and adverse selection) as other limiting factors. They also warn that, in some cases, the level of uncertainty associated with a given risk or set of risks might become so high as to be “rationally unmanageable”.³⁷

The limits of insurability

Insurability is based on the law of large numbers.

One of the key prerequisites for the insurability of a risk is that the law of large numbers can be applied to it. In other words, as more and more risks are added to an insurer’s portfolio, the average loss will approach the actuarial expected loss. This applies to risks where the maximum potential loss is not large and the risks are not highly (positively) correlated. However, as the size of awards in Table 9 shows, the distribution of liability claims can be skewed to very large losses, threatening the financial survival of even large insurance companies. The insurance industry is still struggling to come to terms with the scale of asbestos claims. Case law and class actions also create a strong positive correlation of losses, as one court’s decision has implications for many separate insurance policies.

Adverse selection and moral hazard limit insurability.

Adverse selection occurs when an insurer receives incomplete information about a specific risk from a policyholder. Actuarial pricing is frequently based on average risk statistics. If an information asymmetry exists between insurer and insured, “good” risks may not be able to obtain traditional insurance cover at rates reflecting their individual risk profile, but only at higher (average) market rates. This inevitably means that insurance is relatively expensive for good risks, which may subsequently self-insure, leaving the insurer with the “bad” ones. If there is no reliable way of assessing the specific risk of a client ex ante, some good liability risks may become uninsurable altogether. Liability claims are particularly susceptible to moral hazard: there is a real danger that policyholders will change their behavior simply because they have insurance cover. Moral hazard may occur either ex ante or ex post the occurrence of the loss.

Ex ante moral hazard increases the riskiness of the policyholder’s behavior.

Ex ante moral hazard means that the policyholder has less of an incentive to prevent or mitigate a risk, as the risk is insured. This change in behavior alters the frequency or severity of potential claims. Many new liability risks (eg D&O) are closely linked to entrepreneurial risk and therefore generate moral hazard, which, if not properly contained, may render certain risks uninsurable.

Although the type of behavior that leads to liability claims is harder to monitor than the drivers of property insurance, for instance, efforts should nevertheless be made to monitor ex ante moral hazard in every line of insurance.

³⁷ See Courbage/Liedtke (2002).

Ex post moral hazards diminish the client's willingness to defend a claim.

Ex post moral hazard involves an increase in claims against an insurance policy after a triggering event has occurred. In the context of liability insurance, ex post moral hazard includes a lower propensity to litigate the claim or a greater willingness to settle quickly.

Ambiguity regarding the probability distribution restricts insurability.

Another factor (linked to information asymmetry) that limits insurability is ambiguity or parameter uncertainty. Assessing and pricing a risk becomes problematic if the probability distribution is unknown. This may be due to the absence of historical data or to imperfect scientific knowledge. Unlike natural catastrophes or mortality risks, liability risks cannot be quantified using scientific methodologies. The law is permanently changing, meaning that past experience is a poor predictor of the future. Trials gain relevance quickly through the evolution of case law and the adaptive behavior of plaintiffs and their trial lawyers. Insurers respond to parameter uncertainty by charging higher risk premiums, which, in turn, reduce the demand for insurance protection.³⁸

Liability claims are becoming both more frequent and more severe

The US serves as a benchmark for the insurability of liability risks.

Personal injury claims are more frequent and more severe in the US than in any other legal system in the world. So detailed data from the US is used as the basis for the following discussion on the consequences of this rise in claims for the insurability of liability risks.

The number of claims tried in court has been diminishing...

According to Bureau of Justice Statistics data, the number of claims tried in the largest state courts in the US has been falling. As this figure is based on statistics gathered from the 75 largest counties by population, it should provide a representative sample for the entire country. Most of the caseload in the US is handled by state, not federal, courts. The decline in the number of claims being brought to court is indicative of a shift from individual claims to mass torts – a significantly more severe form of liability for insurers.

...but this is more than offset by a trend towards settling out of court.

A study prepared for the American Bar Association shows a similar trend in the federal court system. However, this study shows a growing discrepancy between filed cases and cases that get tried in court. The percentage of all civil cases filed in federal courts that go to trial declined from 11.5% in 1962 to 1.8% in 2002, reflecting a strong growth in settlements. Despite the fact that five times more lawsuits are being filed today, the number of civil trials is actually falling, having reached a peak of 12 529 in 1985.³⁹

The outcome of a settlement is more predictable than a jury trial.

These findings point to a growing opposition to trials among lawyers and judges, who consider them costly and risky and prefer negotiated settlements and pretrial determinations by judges. The increase in settlements is a direct result of the rising severity of settlements and the associated expenses of the legal system. Companies are also opting for the settlement route in the knowledge that it is becoming increasingly unlikely that a defendant will win a lawsuit in a jury trial.⁴⁰

³⁸ See Kunreuther et al. (1995).

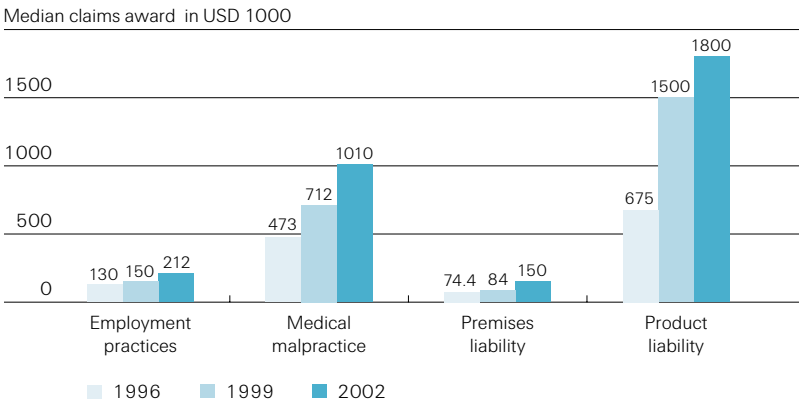
³⁹ See Patricia Lee Refo "Opening Statement: The Vanishing Trial", in *American Bar Association, Litigation online*, Vol 30 No. 2, Winter 2004.

⁴⁰ See Jury Verdict Research "Current Award Trends in Personal Injury." 43rd Edition, 2004.

Average claims awards are increasing in several commercial liability lines.

Figure 8
Trends in average US claims awards

Statistical evidence also suggests that verdicts and settlements are not only growing in number but also in size. Data for some key commercial liability risks (eg employment liability, medical malpractice, premises liability and product liability) show that average award size is increasing.



Source: Jury Verdict Research

The insurance industry's toolbox for underwriting a moving target

Insurers have tools for reducing liability risk.

The insurance industry has developed a range of tools and clauses to reduce its exposure to liability risks. However, this toolbox has severe limitations:

- 1) Most of the tools can only be introduced after losses have already occurred, as it is notoriously difficult to foresee changes in behaviour, law and court practice.
- 2) Some clauses have been declared void or reinterpreted by courts.

Exclusions may be used to segment more critical risks into special covers.

Adverse selection is often mitigated by excluding many of the critical areas of liability from the general liability policy and requiring exposed firms to purchase separate covers for risks such as product liability, E&O, D&O, employment practices, etc. This practice of narrowing down risk segments allows more precise underwriting and pricing that is commensurate with risk levels. Other risks that are considered uninsurable by insurers may, however, be excluded without the option to purchase separate cover. Examples include old asbestos risks, punitive damages in certain US states, and US liability risks for non-US insurers.

US courts voided gradual pollution exclusions

Commercial general liability policies usually contain a pollution exclusion. The insurance industry added this exclusion to policies in 1973 in response to several high-profile cases of environmental contamination. A few courts, however, have refused to enforce the pollution exclusion on the grounds that the damage was “unexpected” or “unintended”, irrespective of whether the discharge was an intentional act.

In the 1982 “Jackson Township Case”, the court found the insurer of a municipality to be liable for the gradual leaking of chemicals from a landfill that contaminated water supplies, and judged that the pollution exclusion was “ambiguous.” One ambiguity the judge noted was that the clause could be understood as applying to deliberate polluters only, meaning that it would not apply to the township which had not been accused of actual waste dumping. Another ambiguity concerned the definition of “sudden and accidental.” The court ruled that only the suddenness of the initial release was material, and not the subsequent gradual migration of the pollutants.⁴¹ In another pollution case, the Supreme Court of Illinois decided that an event is sudden and accidental whenever the resultant damage or injury is “unexpected” or “unintended” from the standpoint of the insured.⁴²

The language of the pollution exclusion in standard general liability policies was changed in 1986 and now excludes coverage for all pollution liability claims. Pollution coverage must now be purchased separately.

The occurrence trigger creates considerable uncertainty regarding old underwriting years.

Certain types of liability risks are uninsurable due, in part, to occurrence triggers.

There are two criteria that must be satisfied in order for coverage to be activated in a liability policy containing an occurrence trigger:

- 1) A claim may be made many years after a policy has expired. What matters is that the insured event occurred during the policy term.
- 2) The insured must report the claim as required by the policy.

The occurrence trigger transfers the risk to the insurers, contingent only on the insurers’ ability to pay. However, the long-tail nature of the risks and the ever expanding interpretations of liability have created too much uncertainty for insurers, rendering certain types of liability risks uninsurable (eg asbestos and environmental risks in the late 1980s). The liability crisis was a profitability crisis for insurers and ultimately turned into a coverage crisis for the economy. The “claims-made” policy was one of the methods devised by insurers to resolve this crisis.

⁴¹ See Flanigan (2002).

⁴² Since more than one interpretation of “sudden” can be derived, the word is legally “ambiguous”. In many states, if an insurance clause is ambiguous, the courts are required to rule in favour of the insured.

The claims-made trigger reduces uncertainty for insurers.

Under a policy with a claims-made trigger, coverage is activated upon the filing of a claim. There are three requirements:

- 1) The coverage trigger must be the first notification of a claim to the insurer.
- 2) The claim must be reported to the insurer within the policy period or the extended reporting period specified in the policy.
- 3) The incident must have occurred after a specified retroactive date, which is critical to limiting the long-tail risk for the insurer. Generally, medical malpractice, professional liability, and high-hazard product liability policies are written on a claims-made basis.⁴³ In 2002, 37% of US other liability business was written on a claims-made basis.

Claims-made triggers à la française ⁴⁴

In 1990, the French supreme court overruled the applicability of the claims-made trigger in a construction liability policy (garantie décennale). This policy was based on a "claims-made" clause, which stipulated that a claim had to be reported while the policy was in force. The court found that "the premium payments for the period between the inception and expiry of the insurance contract are necessary to provide cover against losses originating during this period" and decided that the claims-made clause was "sufficient to deprive the insured of their cover due to circumstances beyond their control, thus creating an illicit advantage for the sole purpose of benefiting the insurer, which would have collected premiums and avoided the associated liability; this stipulation must be considered as null and void." This principle was subsequently applied to all claims-made policies.

In November 2003 the financial security law (loi 2003–706, article 80, known as the "Amendement Hunault") came into force, and put an end to the uncertainty following the 1990 court decision. Despite the fact that courts had voided the "claims-made" clauses, the insurance industry continued to use them widely in France. Today, French law only allows two criteria for making a claim under liability policies: "causation" (fait dommageable) or "claims-made" (réclamation). Other criteria, such as "occurrence" (survenance) or "claim manifested" (manifestation) are no longer valid. In professional liability insurance the insurer can choose either trigger, but the "causation" trigger must be applied in private liability policies (motor and personal liability). For "claims-made" policies, coverage extends to the "unknown past", without any time limit, provided the claim is made during the term of the policy. If the policy expires and no new policy is taken out, an extended reporting period of at least 5 years applies. The new law not only applies to new policies but also, retroactively, to policies in force.

⁴³ See Rupp's Insurance & Risk Management Glossary. <http://insurance.cch.com>

⁴⁴ Source: Bulletin N° de pourvoi: 88–12863.

Quantitative limits are necessary to reduce ambiguity.

Quantitative limits – per-event as well as aggregate limits per time period – are important with respect to transforming ambiguous underlying risks into insured risks with known maximum outcomes. Limiting the maximum loss per risk improves risk consolidation in an insurer's portfolio and reduces capital requirements. Defining and limiting the insurer's liability is clearly also important in limiting the "success" of lawsuits designed specifically to seek out "deep pockets".

Index clauses result in equitable sharing of the inflation risk.

One of the major difficulties with insuring liability risks is the long-tail nature of related claims. Fluctuations in inflation or wages may have a significant impact on the ultimate size of a claim. Inflation risk is especially relevant to excess layer (re)insurance, when higher frequency losses – that it was initially thought would remain in the working layer – "grow" into the excess layer. In Europe and Asia, reinsurers use index clauses to ensure that deductibles and limits keep pace with inflation. This results in a more equitable sharing of inflation effects between insurer and reinsurer. Reinsurers typically use the consumer price inflation index, the medical care component of the consumer price index, and hourly earnings indices.

ART products can expand the limits of insurability.

Ambiguity or parameter uncertainty, adverse selection, and moral hazard associated with liability risks can be mitigated by introducing elements of self-insurance into risk transfer solutions. Captives and finite covers are the standard instruments for dealing with risks that prove difficult to insure in the traditional market⁴⁵ and are increasingly being used to manage difficult-to-insure product liability, D&O, E&O, and medical malpractice risks.

Governments can influence insurability or serve as risk carriers of last resort.

Regulatory intervention plays an important role in enhancing insurability. Some adverse selection cases, for example, can be addressed by introducing compulsory insurance. However, as long as insurers remain the final instance in a given area of risk control, they are obliged to reject those risks that cannot be adequately quantified. Where they are unable to provide sufficient cover to meet the economy's needs, other compensation mechanisms – such as pools, government schemes, and, as risk carrier of last resort, the social security system – should be used to absorb some of the risks associated with socially desirable activities.

⁴⁵ See Swiss Re, *sigma* No 1/2003 "The Picture of Art".

Outlook: liability exposure will continue to grow as a result of both traditional and emerging risks

Tort reform at the US federal level is proposed to limit class actions, medical malpractice and asbestos suits.

US: tort and asbestos reform are difficult topics for an election year

The majority of US claims are awarded at state level and it is at this level that most of the tort reform initiatives are discussed, passed or rejected. Nevertheless, there are three important areas in which tort reform is being proposed at federal level: class actions, medical malpractice, and asbestos. The Class Action Fairness Act of 2003 was passed by Congress and is still awaiting a vote in the Senate. This act foresees the transfer of large interstate class action lawsuits to federal courts, significantly reducing forum shopping by plaintiffs' attorneys. The National Medical Malpractice Reform Bill was adopted by the US House of Representatives in March 2003 and is also awaiting Senate approval. The bill limits non-economic and punitive damages to USD 250 000 and establishes a sliding scale for attorneys' fees. It would also require that claims be filed within three years of the occurrence of the injury or within one year of the discovery. Efforts to pass the Asbestos Trust Fund Legislation are still underway in Congress. Although the two sides are making progress on some key issues, major changes are required on several points in order for the bill to gain broader support. Given the realities of election-year politics, however, the prospects for all of these initiatives are bleak.

In contrast, the European Commission is seeking to expand the scope of tort liability.

Europe: expansion of liability via Brussels

In Europe, precisely the opposite trend may be observed. Rather than seeking to limit the scope of tort liability, the European Commission is pursuing a policy of expansion. Some of its directives are designed to introduce new areas of liability, increase limits, and/or require mandatory liability insurance. Expanding liability rules has advantages for the policymaker as it does not involve government budgets or require new institutions to be established. An example of this legislation is the recently drafted environmental liability directive that introduces a polluter-pays-all regime for environmental impairment in the European Union. Earlier drafts even proposed that all companies operating within the EU should take out compulsory environmental liability insurance. Although the current draft favours a voluntary scheme, an amendment has been made to the directive requiring the European Commission to report on the development of a mandatory insurance scheme six years after the directive comes into force. Another example of EU legislation affecting liability is the recently enacted Insurance Agents and Brokers Directive which requires brokers to purchase professional indemnity insurance or any other comparable guarantee against liability claims arising from professional negligence. Finally, the accession of ten new members to the EU has expanded the scope of the tort system to these countries. For example, limits of insurance for motor third-party liability have been raised to match EU minimums.

Emerging risks worldwide

Insurers are concerned about new “emerging risks”.

“What is the next asbestos?” is a question that all insurers ask and worry about. Since many potential liability risks would be covered by liability policies unless explicitly excluded, managing so-called “emerging risks” has become a key challenge for liability underwriters. As yet, there is no clear definition of what precisely constitutes an “emerging risk”, but we will illustrate the phenomenon with a few examples.

Claims costs for silicosis and toxic mold have been rising rapidly, but probably will not prove to be as severe as asbestos.

Silicosis and toxic mold are risks with rapidly rising claims costs in the US. Unlike asbestos, however, the health consequences are less severe, materialize sooner, and causation is harder to prove. Exposure is also more restricted and does not spread via products. The number of silica claims grew by 267% in 2003, with potential claims costs in the range of several billion USD.⁴⁶ So far, the insurance industry has not moved to exclude silica from coverage. US insurers are estimated to have paid out at least USD 3 billion in mold-related claims in 2002, more than double the USD 1.3 billion paid the previous year.⁴⁷ In the case of mold, insurance supervisory authorities in most states have already approved exclusions in homeowners policies and exclusions are becoming increasingly common in commercial property and liability policies.

Electromagnetic fields, genetically modified food, and nanotechnology are discussed as possible emerging risks.

Risks to the human body arising from electromagnetic fields produced by power lines, cell phones, and other mobile communication equipment are currently the subject of intense debate. Equally, there is much controversy surrounding the effects of genetically modified food and nanotechnology on the environment and the human body. In many cases, very little or no scientific evidence is available to prove or disprove a causal link between such technologies and health impairments to exposed individuals and/or future generations. Handguns and obesity (the risks of which are common knowledge) are also examples of emerging risks in the US. Here attempts are now being made to hold handgun manufacturers and fast food producers liable for known risks from the intended use.

⁴⁶ See Dresdner Kleinwort Wasserstein Research “Silica – Not the next asbestos, but still costly”, 6 July 2004.

⁴⁷ See Insurance Information Institute “Mold and Insurance”, 2003.

Emerging risks are a major challenge for insurers.

The expansion of the tort system creates economic distortions and costs, reducing social welfare.

Conclusions

Fortunately, none of these emerging risk complexes has evolved into the next asbestos – yet. However, emerging risks are a major challenge for the insurance industry as they cannot be assessed with traditional actuarial methods and are highly correlated once precedence verdicts have been established. A functioning liability insurance market is an important complement to any tort system, since it guarantees funds for compensating victims while reducing companies' risks to levels that are acceptable to their investors. Insurers have a vested interest in avoiding moral hazard. Indeed, it is vital that it does so in order to maintain efficient levels of loss prevention. In the early phases of assessing emerging risks, insurers must analyze complex exposures, make sure they and their clients take risk prevention measures, and do their utmost to limit accumulation risk.

Whether or not new liability risks emerge, the claims trend for "old" risks alone is steep enough to raise concerns. The economic effects of expanding the tort system go far beyond the immediate impact of jury verdict awards or insurers' claims payments. Ultimately, this expansion results in resources that would otherwise be directed towards productive uses being diverted to the tort system, distorting the *raison d'être* of risk management in the process: avoiding exposure to tort liability becomes the main objective, and real safety concerns begin to take second place. Attempting to make the liability system into a broad-based social insurance surrogate will stretch it unreasonably and prevent it from fulfilling its original purpose efficiently.

Appendix: compensation for injury, illness, and fatality in the US

Compensation for injury, illness, and fatality in the US

Type of system	Year	Compensation USD billions	Expenses USD billions	Total cost USD billions	Expense ratio	Total cost in % of GDP
		A	B	A + B	B/(A + B)	
Fault-based, third-party liability						
Tort: economic losses	2002	51.3 [1]	60.2 [1]	111.5	54%	1.1%
Tort: non-economic losses	2002	55.9 [1]	65.6 [1]	121.5	54%	1.2%
Non-fault, third-party						
Workers' comp	2002	24.3 [2]	4.9 [2]	29.2	17%	0.3%
First-party insurance						
Health insurance	2001	79.6 [4]	23.3 [4]	102.9	23%	1.0%
HMO/Blue Cross Blue Shield	2002	358.1 [3]	90.9 [6]	49.0	20%	4.3%
Life insurance	2002	48 [4]	14.0 [4]	62.0	23%	0.6%
Social insurance						
Medicaid and Medicare	2002	497 [3]	15.4 [5]	512.4	3.0%	4.9%
Social Security Disability	2002	64.9 [3]	2.0 [5]	66.9	3.0%	0.6%

Modified from "Economic Report of the President 2004".

[1] Tillinghast, "Tort cost update 2003".

[2] A.M. Best, "Aggregates & Averages, 2003".

[3] US Dep. of Health and Human Services, 2003 CMS statistics.

[4] American Council of Life Insurers, "Life Insurers Fact Book 2003". Expense ratios are for total life & health industry.

[5] "Economic Report of the President 2004", Chapter 11: The Tort System.

[6] Sherlock Company, "Administrative Expense Benchmarks for Health Plans".

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