

Tillinghast - Towers Perrin

U.S. Tort Costs: 2003 Update

**Trends and Findings on the
Costs of the U.S. Tort System**

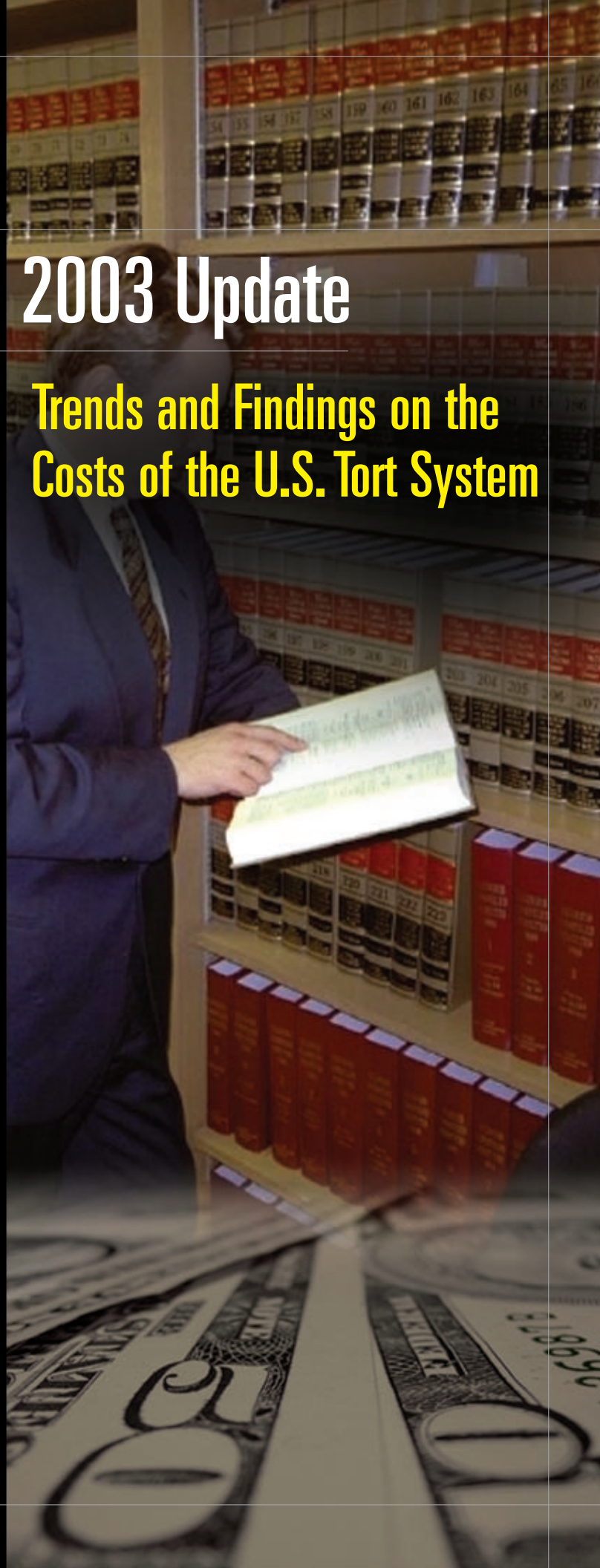


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Executive Summary

Key Findings

For the second consecutive year, the U.S. tort system experienced double-digit increases in costs, far outpacing trends of the past decade. U.S. tort costs grew by 13.3% in 2002, on the heels of a 14.4% increase in 2001. As indicated in the table below, the growth in tort costs experienced in 2001 and 2002 is in stark contrast to the more moderate rate of growth experienced in the past decade and is more akin to the double-digit growth rates of the 1950s, 1970s and 1980s.

Years	Average Annual Increase in Tort System Costs
1951-1960	11.6%
1961-1970	9.8%
1971-1980	11.9%
1981-1990	11.7%
1991-2000	3.3%
2001	14.4%
2002	13.3%

52 years (1951-2002)	9.8%

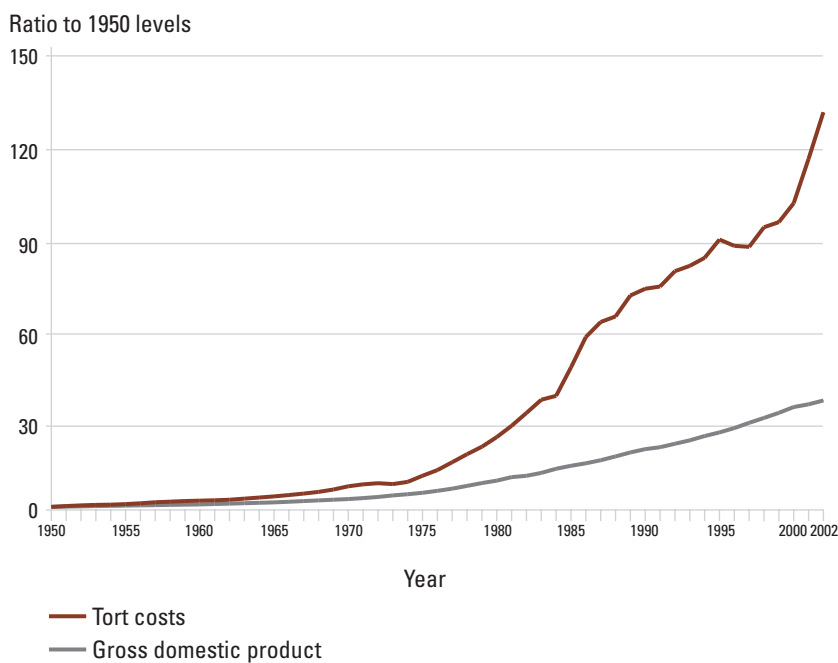
At current levels, U.S. tort costs are equivalent to a 5% tax on wages. The U.S. tort system cost \$233 billion in 2002, which translates to \$809 per person, or \$87 more than in 2001. This compares to a cost of \$12 per person in 1950. Over the last 50 years, tort costs in the U.S. have increased more than a hundredfold. In contrast, overall economic production (as measured by GDP) has grown by a factor of 35 and population has grown by a factor of less than two.

When viewed as a method of compensating injured parties, the U.S. tort system is highly inefficient, returning less than 50 cents on the dollar to the people it is designed to help and returning only 22 cents to compensate for actual eco-

conomic loss. Inefficiency in the system has increased over time; when our Tort Cost Study was first conducted in 1985, 25 cents on the dollar was returned to injured parties for their actual economic loss.

The 13.3% rate of growth in tort costs in 2002 greatly exceeded overall economic growth of 3.6%. During the past 50 years, growth in tort costs has exceeded growth in GDP by an average of two to three percentage points. The largest disparity, nearly 6%, occurred in the 1950s. In the 1990s, this trend reversed itself, with GDP growth in excess of tort cost growth, reflecting a period of steady economic growth and low inflation without significant growth in tort costs. As of 2002, U.S. tort costs accounted for 2.23% of GDP, reflecting the highest ratio to GDP since 1990.

Growth in Tort costs vs. GDP since 1950



Since 1975 (the first year for which insured medical malpractice costs were separately identified), the increase in medical malpractice costs has outpaced increases in overall U.S. tort costs. Medical malpractice costs have risen an average of 11.9% per year, in contrast to an average annual increase of 9.3% per year in all other tort costs. The compounded impact of this 27-year difference in growth rates is that medical malpractice costs have risen by a factor of 21 since 1975, while all other tort costs have grown by a factor of 11.

At nearly \$25 billion in 2002, medical malpractice costs translated to \$85 per person. This compares to \$5 per person in 1975. This significant escalation in medical malpractice costs has contributed to the increase in health care costs in the U.S. over the past 30 years.

Future Implications

The high tort cost growth experienced in 2001 and 2002 suggests another period of high tort cost growth in the U.S., akin to what was last experienced in the 1970s and 1980s.

As was the case in 2001, the largest single contributor to the rise in tort costs in 2002 was a significant upward reassessment of liabilities associated with asbestos claims, whose numbers have continued to mushroom. We estimate that this reassessment accounts for \$11 billion of the increase in 2002 tort costs over 2001 levels, a sizable increase over the \$6 billion estimated impact in 2001. Absent these costs, the increase in U.S. tort system costs between 2001 and 2002 would have been approximately 11.2%, still well above the increases seen in the past decade and well in excess of overall economic growth in 2002. This increase in tort costs, following more than a decade of moderate increases, should not be surprising in light of news reports during the past few years citing:

- increases in class action lawsuits and large claim awards
- record jury awards in medical malpractice cases
- an increase in the number and size of shareholder lawsuits against the boards of directors of publicly traded companies, reflecting poor stock performance and further exacerbated more recently by corporate accounting scandals and general consumer mistrust of U.S. corporations
- an increase in medical cost inflation, leading to higher costs of personal injury claims.

A number of these trends continue to dominate the news in 2003. Thus, while it is impossible to accurately predict future increases in tort costs, it does not seem unreasonable to assume that, absent sweeping structural changes to the

U.S. tort system, annual increases will be in the 6% to 11% range for the next several years. At this rate of increase, tort costs could approach \$1,003 per U.S. citizen by 2005 — representing a new quadruple-digit benchmark.

At this point, it is not possible to predict whether double-digit increases in tort costs are going to continue for several years into the future nor how quickly counterforces will emerge that will ultimately lead to a moderation in these trends. However, we would note that during the last period of sustained double-digit inflation-adjusted tort cost increases — from 1975 to 1977 — the insurance industry and public policymakers struggled to find solutions to mitigate the rapid rise in tort costs, prompting:

- the introduction and passage of legislative tort reform measures in many states (some of which were subsequently overturned by the courts)
- a concerted campaign by insurance industry leaders and trade groups to influence public and judicial attitudes with regard to jury awards by educating them about the ill effects of the so-called “lawsuit crisis”
- a greater focus on safety and risk management, with measures taken to improve highway safety, seat-belt usage, the safety of public recreational facilities such as playgrounds and swimming pools, and the safety of automobiles and other products
- introduction of defensive medicine practices by physicians and hospitals in an attempt to prevent malpractice lawsuits
- changes in insurance companies’ approaches to adjusting liability claims, with more of an outcome-based focus on cost containment than on pursuing lengthy battles on cases with only a small likelihood of success.

Although it is difficult to quantify the effects that these measures had individually, it is noteworthy that, in the five-year period following the lawsuit crisis of the 1970s, tort cost inflation moderated significantly. Should we continue to witness high tort cost inflation in 2003 and beyond, we might expect to see similar initiatives taken again.

A Word About This Study

U.S. Tort Costs: 2003 Update is an update of previous studies published by Tillinghast–Towers Perrin in 1985, 1989, 1992, 1995 and 2002. The most recent study, incorporating U.S. results through 2001, was published in February 2003.

Tillinghast presented the results of the original study to the American Insurance Association in the fall of 1985. The study was expanded in 1989 for the Actuarial Centennial Celebration, marking the 100th anniversary of the actuarial profession in North America, and was presented at a panel on liability insurance. Subsequently, Tillinghast testified on its findings before the U.S. Congress Joint Economic Committee. In October 2003, Tillinghast provided testimony on U.S. tort costs to the United States Senate Judiciary Committee, Subcommittee on Administrative Oversight and the Courts. The testimony was part of the subcommittee's hearing on S.1428, the Commonsense Consumption Act of 2003.

The results of these studies have been widely quoted by both proponents and opponents of tort reform, suggesting that the studies' straightforward analyses of the tort system's cost and trends have proved to be not only informative, but also objective and unbiased.

Introduction

This edition of *U.S. Tort Costs: 2003 Update* is similar to previous studies published by Tillinghast. This analysis tracks the cost of the U.S. tort system from 1950 to 2002 and compares the growth of tort cost with increases in various U.S. economic indicators.

The cost and relative benefits of the U.S. tort system have come under considerable public scrutiny and debate. Proponents of tort reform cite the high cost of the system as one reason for change. It is not surprising, then, that the studies have in and of themselves attracted increasing interest and attention, serving as the basic data source for numerous articles in business and popular periodicals.

This study shows that a significant increase in tort costs occurred in 2002, marking two consecutive years of dramatic increases in costs. Between 1990 and 2000, tort costs grew at a more modest level.

As with the previous studies, this study's purpose is to provide a straightforward, objective analysis of cost and trends, and not to support any particular point of view.

This study shows that a significant increase in tort costs occurred in 2002.

Summary of Key Findings

- Including insured and self-insured costs, the U.S. tort system cost \$233 billion in 2002.
- Tort costs increased 13.3% in 2002, a lower growth rate than the 14.4% increase observed in 2001 but much higher than the long-term average of 9.8%.
- U.S. tort costs accounted for 2.23% of gross domestic product (GDP) in 2002. This reflects the highest ratio of GDP* since 1990.
- U.S. tort costs were \$809 per person in 2002. This compares to a cost of \$12 per person in 1950.
- When viewed as a method of compensating claimants, the U.S. tort system is highly inefficient, returning less than 50 cents on the dollar to the people it is designed to help — and returning only 22 cents of the tort-cost dollar to compensate for actual economic losses.
- The tort system has both indirect costs and indirect benefits that are not measured by this study. We do not attempt to measure or to judge the relative utility of these factors, but rather to provide a reasonable and consistent measurement of total direct tort costs over a long period of time.
- We expect the 2003 ratio of tort costs to GDP to increase to 2.32%. We expect the ratio to grow to 2.39% in 2004, based on an assumed 8.5% increase in tort costs.

*Throughout this report, unadjusted, or nominal, GDP is used. Most news releases on GDP rely on inflation-adjusted, or real, GDP.

Change in Tort Costs From 2001

Total insured and self-insured tort costs in the U.S. are estimated to be \$233.4 billion in 2002. This is an increase of \$27.4 billion, or 13.3%, from the estimated \$206.0 billion of tort costs in 2001. The \$27.4 billion increase is the largest in U.S. history.

Of the \$27 billion increase in tort costs in 2002, roughly \$11 billion is attributable to an increase in insurance reserves for future payments associated with asbestos claims, resulting largely from a surge in claim filings beginning in 2000. Additionally, 2002 saw an increase in the number and size of shareholder lawsuits against the boards of directors of publicly held companies, which may be partially attributable to poor stock performance after a number of years of unprecedented growth in the stock market as well as continued news in 2002 about several corporate accounting scandals. Medical malpractice costs also continue to increase at a rate well above inflation.

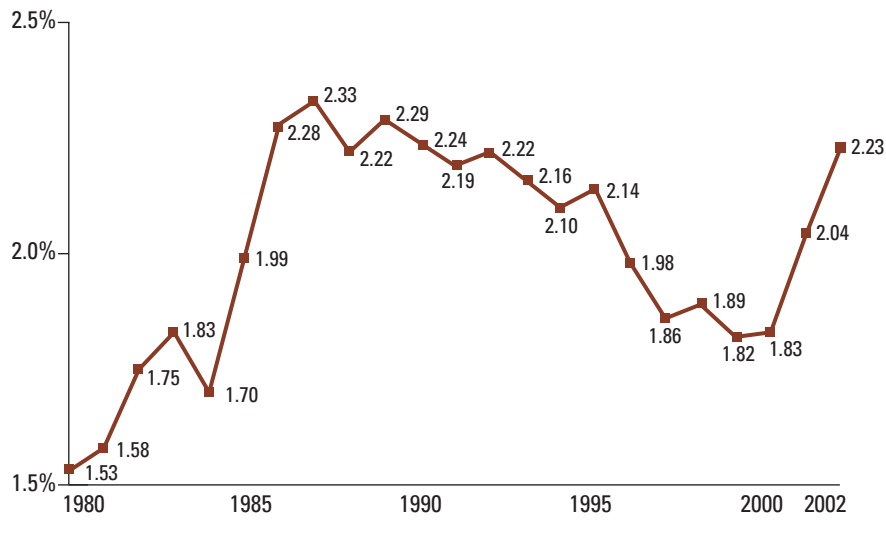
Tort Costs Relative to GDP

Over the last 50 years, tort costs in the U.S. have increased by over a hundred-fold — from less than \$2 billion in 1950 to \$233 billion in 2002. Tort cost growth has far outstripped U.S. economic growth, as measured by GDP, which increased by a factor of 35 during that time.

	\$ billions		Tort Cost as % of GDP
	U.S. Tort Costs	U.S. GDP	
1950	\$ 1.8	\$ 294	0.61%
1960	5.4	527	1.03%
1970	13.9	1,040	1.33%
1980	42.8	2,796	1.53%
1990	129.8	5,803	2.24%
2000	180.0	9,825	1.83%
2002	233.4	10,446	2.23%

Focusing solely on the last 20 years, a different perspective on the growth of tort costs emerges. Relative to GDP, tort costs appear to have peaked in 1987. The ratio of tort costs to GDP decreased sizably from 1995 (2.14%) to 1999 (1.82%). The 2000 ratio of 1.83% was little changed from the 1999 ratio, but the ratio jumped considerably in 2001 and 2002.

U.S. Tort Costs as % of GDP — 1980-2002



The 1990s were a period of substantial economic growth coupled with a low rate of inflation. Against this backdrop, it is not surprising that the rate of GDP growth in the decade exceeded the rate of tort cost growth.

The slowdown in economic growth that began in 2001, coupled with significant increases in tort costs, caused the surge in the ratio of tort-cost growth to GDP in 2001 and 2002. This suggests that the 1999 to 2000 period was the bottoming out of the ratio. We believe that 2001 reflects the start of a multiyear period of increasing tort costs relative to GDP.

Tort Costs Relative to Population

Growth in U.S. tort costs since 1950 has far exceeded the U.S. population growth. Tort costs per person have risen by a factor of 67 from 1950 (\$12 per person) to 2002 (\$809 per person). Only some of this increase is due to inflation. Even after adjusting for changes in the consumer price index, tort costs per person have risen by a factor of more than nine since 1950.

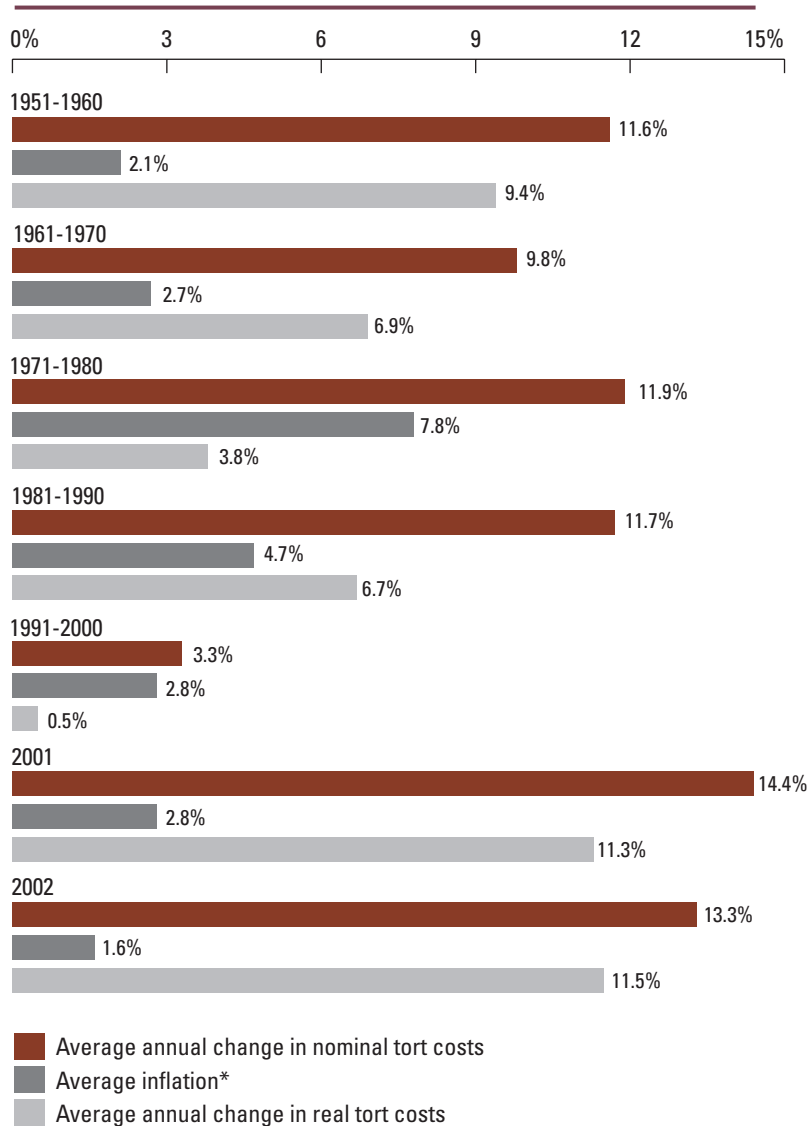
	U.S. Population (millions)	U.S. Tort Costs (\$ billions)	Tort Cost per Citizen	Inflation-Adjusted* Tort Cost per Citizen
1950	152	\$ 1.8	\$ 12	\$ 89
1960	181	5.4	30	183
1970	205	13.9	68	314
1980	228	42.8	188	410
1990	249	129.8	520	716
2000	281	180.0	640	668
2001	285	206.0	722	733
2002	288	233.4	809	809

*restated in year 2002 dollars

U.S. tort costs per person have increased continuously since 1950, before adjusting for inflation. Costs per person fell on an inflation-adjusted basis from 1990 to 2000, but increased significantly in 2001 and 2002.

Change in Tort Costs Relative to Inflation

The growth in U.S. tort costs since 1950 can only be partly explained by inflation. As shown below, the change in tort costs far exceeded inflation from 1950 through 1990, with the 1950s showing the biggest 10-year difference.



*as measured by the Consumer Price Index — All Items

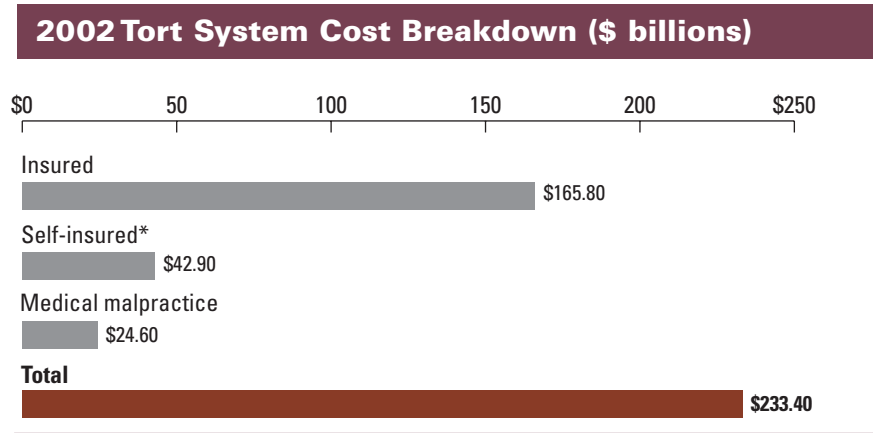
One would expect the change in tort costs to exceed inflation due to increases in population. However, as shown in Appendix 1b, column 2, U.S. population growth averaged only 1.2% per year from 1950 to 2002.

The two-year (2001 and 2002) increase in real torts of 24.1% was the largest two-year growth since 1986 and 1987.

Components of Tort Costs

Total Tort-Cost Dollars in 2002

The \$233.4 billion cost of the U.S. tort system in 2002 is broken down as follows:



*excluding medical malpractice

Insured Component

Insured cost estimates are derived from composite financial data (excluding medical malpractice) for the U.S. insurance industry as compiled and published by A.M. Best.** These data are considered highly reliable in that they are subject to audit and are reviewed by state regulatory agencies. Moreover, while certain product lines have changed over time, the data are available on a consistent basis for more than 60 years.

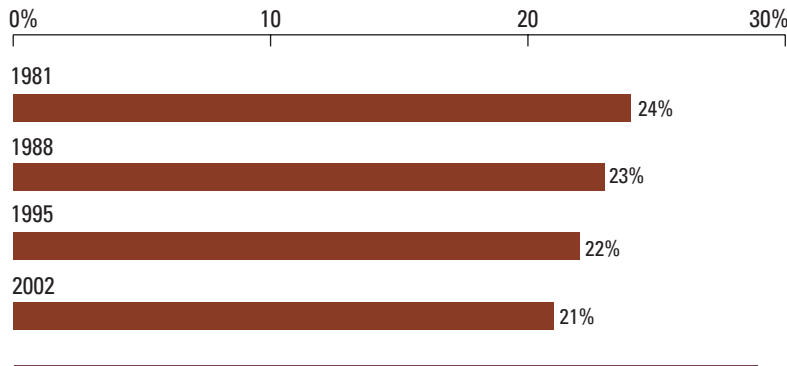
The insurance costs included are:

- benefits paid to third parties (or their attorneys) alleging injury or damages caused by insured persons or companies
- benefits paid to first-party insureds in the form of claim handling and legal defense costs
- insurance company administrative costs, or overhead.

Some users of our previous surveys have questioned our decision to include insurance company overhead costs in the total. We take no position here as to

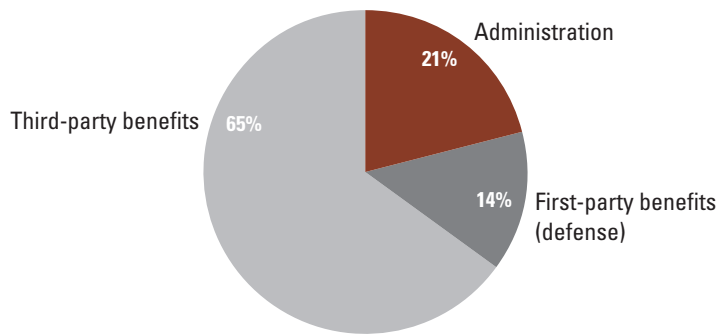
**Insurance purchased directly from a non-U.S. insurance company would not be included in the “insured component” of this study. Rather, such business would be considered in our estimates of self-insured tort costs.

the efficiency of this administrative system. Nevertheless, these are real costs, directly associated with administering the settlement of tort claims, and these costs are consistently defined and measurable over time. Although the inclusion of this administrative component obviously increases our definition of absolute cost, it actually dampens the rate of increase because it has generally declined as a percentage of the total, as follows:



The breakdown of insured costs for 2002 is shown below:

2002 Insured Costs (\$165.8 billion)



Self-Insured Component

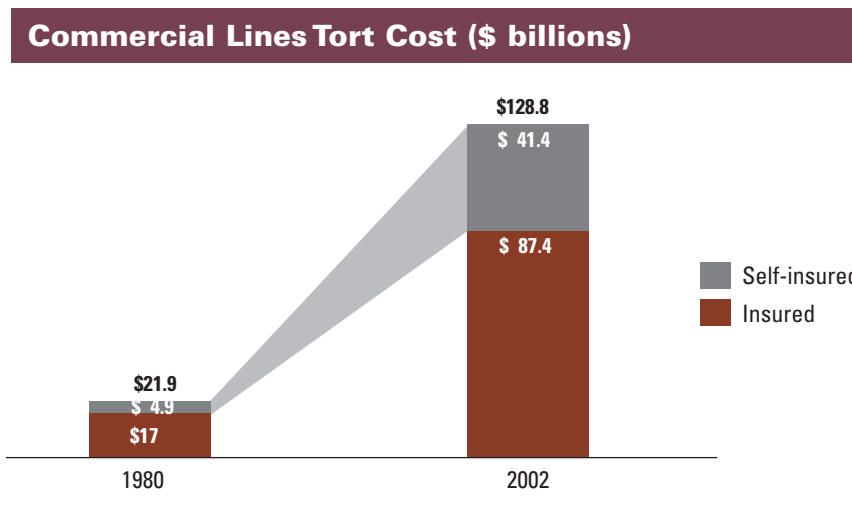
The second component of the \$233.4 billion cost total is the self-insured component (other than medical malpractice). No consistent data set exists for this component, but several specialized studies have been published. The information that we reviewed for commercial lines included Conning & Company’s periodic reports on the alternative risk market as well as various studies published by Tillinghast.

We estimate that 2% of personal insurance tort costs and 32% of total commercial insurance tort costs (up from less than 20% prior to 1980) are self-insured in 2002 (see Appendix 4).

Our estimate of self-insured costs is approximately \$41 billion for commercial risks in 2002. This has been calculated to include tort cost paid by various forms of self-insurance such as large deductibles, captives and risk retention groups. However, our estimate does not capture certain extraordinary costs, such as those resulting from the 1998 settlement between tobacco manufacturers and various state attorneys general for health care cost reimbursement.

As shown in the chart below, since 1980 the growth in self-insured commercial lines tort costs has far exceeded the growth in insured tort costs, reflecting an increased use of self-insurance as a mechanism to finance tort costs. Given significant rate increases for commercial insurance in 2001 and 2002, with no reduction in rates apparent in 2003, we would expect the portion of self-insured commercial lines tort costs to continue to grow.

Our estimates show that the percentage of commercial lines tort costs that are self-insured declined slightly in 2002, from 33.6% to 32.1%. This is not due to a reduction in the size of the self-insured or alternative markets. Rather, the insured costs jumped considerably in 2002, \$11 billion of which is attributable to increases in asbestos reserves. Absent the asbestos reserve increases, self-insured commercial lines tort costs are estimated to have increased in 2002 to



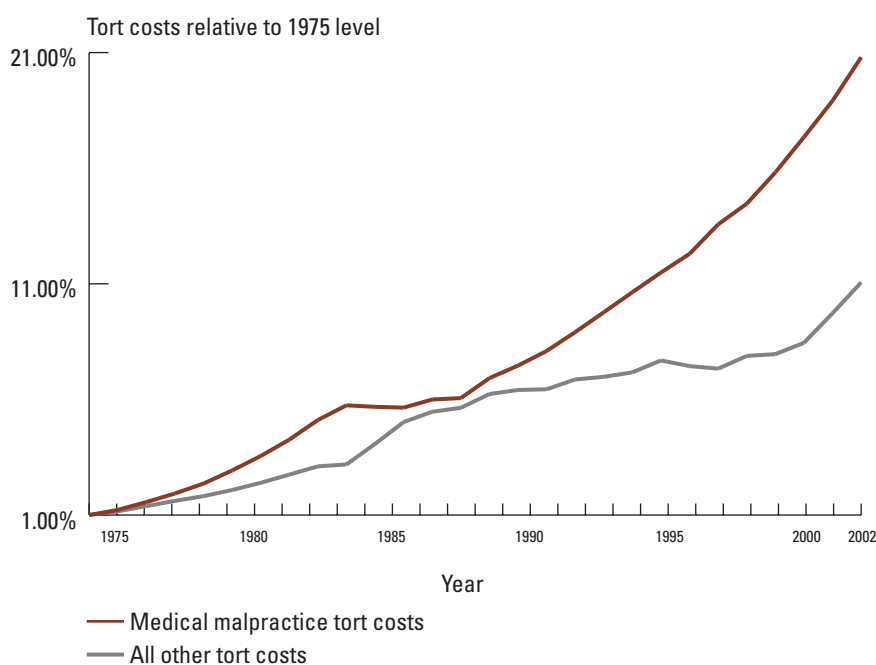
35.1% of total commercial lines tort costs. Please note that our estimate of self-insured costs does not include any explicit amount for additional asbestos losses retained at the defendant, or self-insured, level in 2002.

Medical Malpractice Component

Our estimate of medical malpractice cost is not based on A.M. Best insurance industry data, but rather on Tillinghast–Towers Perrin’s internal database of state-by-state medical malpractice costs. We have broken this cost out primarily because the definition of insured versus self-insured costs has changed significantly over the last 30 years. Many group captives, started in the mid-1970s as “self-insurance” alternatives to the commercial insurance market, have become fully licensed insurance companies and thus are now included in insurance industry data compiled by A.M. Best.

As shown in Appendix 5, the tort costs attributable to medical malpractice have been itemized since 1975. Since then, medical malpractice tort costs have grown at an annual rate of 11.9%, versus 9.5% for all U.S. tort costs. The chart below shows the relative growth in medical malpractice tort costs compared to relative growth in all other tort costs since 1975.

Change in Tort Costs Since 1975



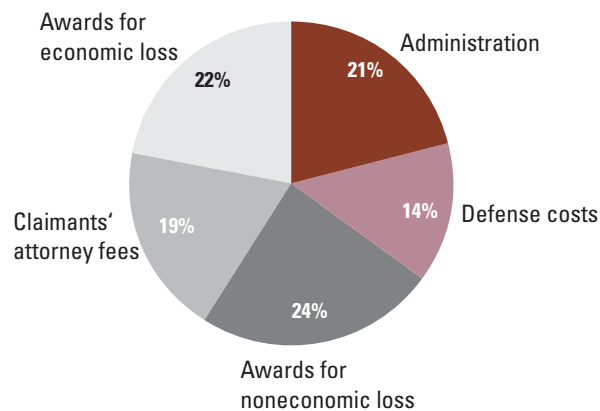
What's Included?

We have defined insured tort cost to include first-party benefits (the cost of legal defense and claims handling), benefits paid to third parties (claimants and plaintiffs) or their attorneys, and an administrative, or overhead, component. Moreover, our definition includes such costs associated with *all* claims, not just those that actually reach the courthouse.

The tort system provides both direct and indirect benefits. The direct benefits include compensation to victims for their economic losses, including damaged property, lost wages and medical expenses. No consistent historical database exists to measure these components of the tort system. However, we do know that of the total benefits paid to third parties (65%), one portion compensates for economic loss, one portion compensates for noneconomic losses (such as pain and suffering, loss of consortium, etc.) and a third portion goes to plaintiffs' attorneys.

There have been several studies of this split, but they typically have been limited to a particular state, coverage or exposure. Our best estimate of the breakdown of insured cost is illustrated in the chart below.

Where Tort Cost Goes



If viewed as a mechanism for compensating victims for their economic losses, the tort system is extremely inefficient, returning only 22 cents of the tort cost dollar for that purpose. Viewed in this narrow sense, the system is only 22% efficient. Of course, the tort system also provides compensation for victims' pain and suffering and other noneconomic losses. Even including these benefits, the system is less than 50% efficient.

What's Not Included?

Our definition of tort cost is largely governed by traditional liability insurance coverages. We previously noted the exclusion of tobacco settlements. For gray areas where awards and settlements are typically (but not always) excluded, such as punitive damages (which are included in the insurance contract in certain states and not in others) and certain types of contract and shareholder litigation, the costs reflected in this study are consistent with those reported by the insurance companies themselves. Therefore, while certain of these costs may be included in the tort cost totals, we are unable to separately account for them.

We have *not* included costs incurred by federal and state court systems in administering actual suits. Reliable estimates of these costs do exist, but not back to 1950. Estimates by the Institute of Civil Justice (Rand Corporation) put these costs at less than 1% of the other costs involved. We do not believe the omission of these costs significantly understates our cost index or in any material way distorts long-term trends.

Certain indirect costs are also omitted. The indirect economic cost associated with litigation avoidance is one example. This cost ranges all the way from unnecessary and duplicative medical tests ordered by doctors as a defense against possible malpractice allegations, to the disappearance of certain products or whole industries from the marketplace because of high product liability cost.

The tort system also provides indirect benefits that are not measured in this study. Such benefits include a systematic resolution of disputes, thereby reducing conflict, possibly including violence. Another indirect benefit is that the tort system may act as a deterrent to unsafe practices and products. From this perspective, compensation for pain and suffering is seen as beneficial to society as a whole.

Looking Ahead

Several factors contributed to the resurgence of tort costs in 2001 and 2002, including:

- an increase in losses associated with asbestos
- an increase in the number and size of shareholder lawsuits against the boards of directors of publicly held companies
- an increase in medical cost inflation, leading to higher costs of personal injury claims.

These trends appear to have continued in 2003. We expect total tort costs to increase approximately 8.5% in 2003, to \$253.2 billion. We expect GDP to increase by 4.5% in 2003. Consequently, the 2003 ratio of tort costs to GDP is anticipated to increase to 2.32%.

Looking ahead, we anticipate growth in U.S. tort costs to range from 6% to 11% in 2004, with a midpoint of 8.5%. We expect a similar increase in 2005. We also assume GDP growth will be 5.5% per year in both 2004 and 2005, based on forecasts made by the Congressional Budget Office. These assumptions yield projected tort costs, GDP and tort-to-GDP ratios as shown below:

	<u>\$ billions</u>		Tort Cost as % of GDP
	Tort Costs	GDP	
2001	\$206.0	\$10,082	2.04%
2002	233.4	10,446	2.23%
2003 (est.)	253.2	10,916	2.32%
2004 (est.)	274.7	11,517	2.39%
2005 (est.)	298.1	12,150	2.45%

The 8.5% growth in tort costs forecasted for the 2004 and 2005 period assumes no material impact on losses arising from tort reforms that may be implemented in the 2004 to 2005 period.

Our premise of a three-point gap in the growth rates of tort costs and GDP during the 2004-2005 period is consistent with the long-run history of 1951 through 2002, which shows a gap of 2.7 points. When the gap is measured through 1995 only, it widens to 3.1 points.

We feel the 1996 to 2000 period is not reflective of current trends. For example, health care cost increases were more contained during this period, both in absolute terms and relative to core CPI. During this period, medical care inflation was less than one point higher than the core CPI. This appears to have ended, as the CPI for medical care grew nearly two points more than core CPI in 2001 and three points more in 2002. A two-point gap is more consistent with the long-term trend. Results for 2003, through September, show a two-point gap.

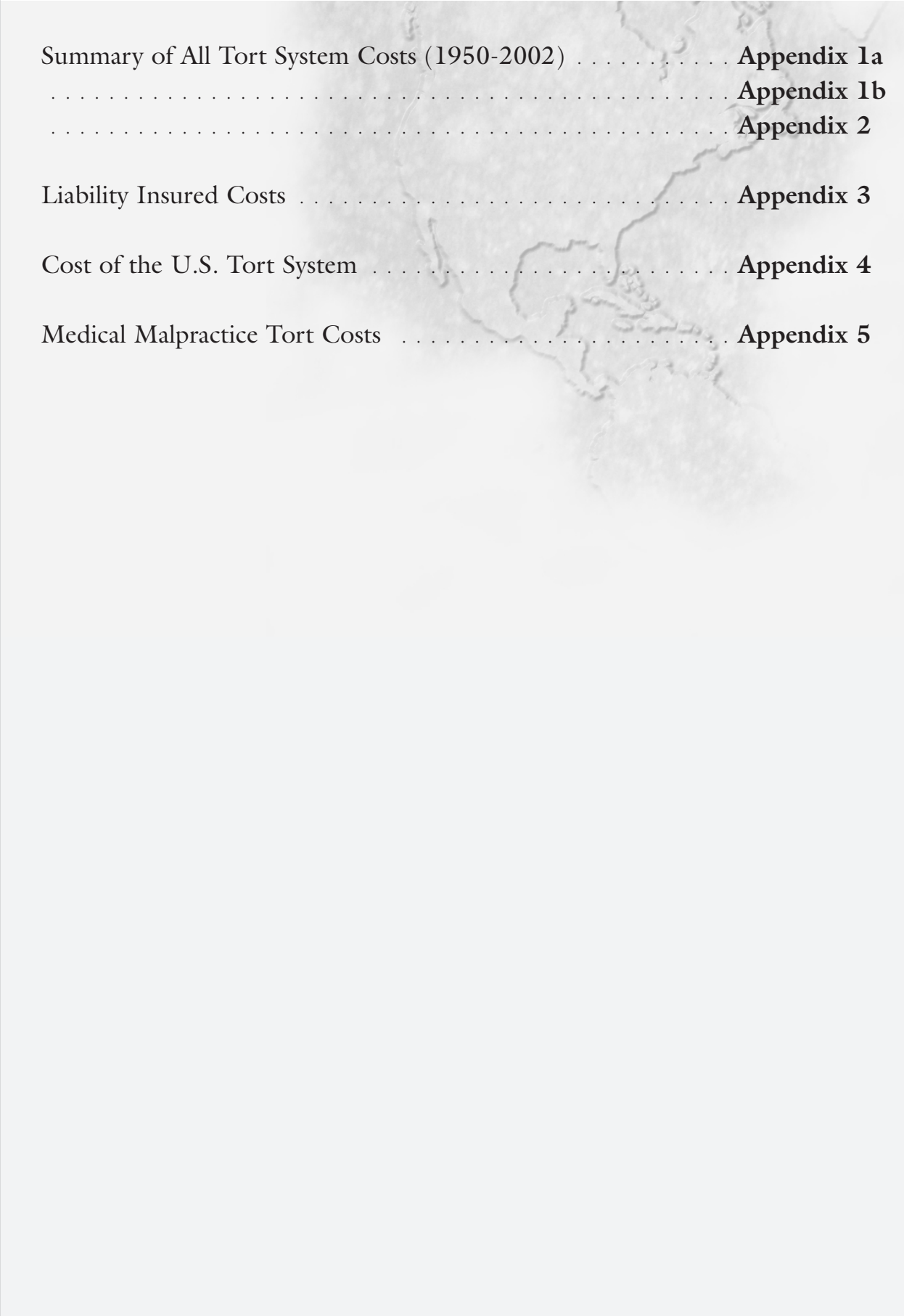
Conversely, the 2001 and 2002 periods show an extraordinarily large gap in the growth rates of tort costs and GDP, averaging nearly 11 points. We feel it is unreasonable to anticipate the continuation of such a large gap, given the long-term relationship between tort costs and GDP.

The chart below shows the long-term history and our predictions for the 2003 to 2005 period for CPI, medical care CPI, GDP and tort costs.

	CPI	Medical Care CPI	Nominal GDP	Tort Costs
1951 - 1995	4.2%	6.1%	7.4%	10.5%
1996 - 2000	2.5%	3.4%	5.8%	2.6%
2001	2.8%	4.6%	2.6%	14.4%
2002	1.6%	4.7%	3.6%	13.3%
2003 (est.)	2.5%*	4.5%*	4.5%*	8.5%
2004 - 2005 (est.)	2.5%	4.5%	5.5%	8.5%

* Estimate based on results through September 2003.

Appendices



Summary of All Tort System Costs (1950-2002)	Appendix 1a
.	Appendix 1b
.	Appendix 2
Liability Insured Costs	Appendix 3
Cost of the U.S. Tort System	Appendix 4
Medical Malpractice Tort Costs	Appendix 5

Appendix 1a

Cost of the U.S. Tort System — 1950-2002

Year	U.S. Population (millions)	U.S. Civilian Workforce (millions)	CPI (all items)	CPI (medical care)	Gross Domestic Product (\$ billions)	Tort System Costs (\$ billions)	Tort Costs as % of GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	152	62.2	0.241	0.151	\$ 294	\$ 1.8	0.61%
1951	155	62.0	0.260	0.159	340	2.3	0.67
1952	158	62.1	0.265	0.167	359	2.7	0.75
1953	160	63.0	0.267	0.173	380	3.0	0.78
1954	163	63.6	0.269	0.178	381	3.1	0.81
1955	166	65.0	0.268	0.182	415	3.4	0.82
1956	169	66.6	0.272	0.189	438	3.9	0.89
1957	172	66.9	0.281	0.197	462	4.5	0.98
1958	175	67.6	0.289	0.206	468	4.9	1.04
1959	178	68.4	0.291	0.215	507	5.2	1.03
1960	181	69.6	0.296	0.223	527	5.4	1.03
1961	184	70.5	0.299	0.229	546	5.7	1.04
1962	187	70.6	0.302	0.235	587	6.0	1.02
1963	189	71.8	0.306	0.241	619	6.6	1.07
1964	192	73.1	0.310	0.246	664	7.3	1.09
1965	194	74.5	0.315	0.252	720	7.9	1.10
1966	197	75.8	0.324	0.263	789	8.7	1.11
1967	199	77.3	0.334	0.282	834	9.6	1.15
1968	201	78.7	0.348	0.299	912	10.6	1.16
1969	203	80.7	0.367	0.319	985	12.0	1.22
1970	205	82.8	0.388	0.340	1,040	13.9	1.33
1971	208	84.4	0.405	0.361	1,129	15.0	1.33
1972	210	87.0	0.418	0.373	1,240	15.7	1.26
1973	212	89.4	0.444	0.388	1,386	15.2	1.10
1974	214	91.9	0.493	0.424	1,501	16.5	1.10
1975	216	93.8	0.538	0.475	1,635	20.1	1.23
1976	218	96.2	0.569	0.520	1,824	23.4	1.28
1977	220	99.0	0.606	0.570	2,031	28.0	1.38
1978	223	102.3	0.652	0.618	2,296	32.7	1.42
1979	225	105.0	0.726	0.675	2,566	37.1	1.45
1980	228	106.9	0.824	0.749	2,796	42.8	1.53
1981	230	108.7	0.909	0.829	3,131	49.4	1.58
1982	232	110.2	0.965	0.925	3,259	56.9	1.75
1983	234	111.6	0.996	1.006	3,535	64.7	1.83
1984	236	113.5	1.039	1.068	3,933	67.0	1.70
1985	239	115.5	1.076	1.135	4,213	83.7	1.99
1986	241	117.8	1.096	1.220	4,453	101.5	2.28
1987	243	119.9	1.136	1.301	4,743	110.3	2.33
1988	245	121.7	1.183	1.386	5,108	113.6	2.22
1989	247	123.9	1.240	1.493	5,489	125.9	2.29
1990	249	124.8	1.307	1.628	5,803	129.8	2.24
1991	252	125.3	1.362	1.770	5,986	131.1	2.19
1992	255	126.9	1.403	1.901	6,319	140.1	2.22
1993	258	128.4	1.445	2.014	6,642	143.2	2.16
1994	260	131.4	1.482	2.110	7,054	147.9	2.10
1995	263	132.0	1.524	2.205	7,401	158.7	2.14
1996	265	134.6	1.569	2.282	7,813	155.0	1.98
1997	268	136.7	1.605	2.346	8,318	154.4	1.86
1998	270	138.3	1.630	2.421	8,782	165.9	1.89
1999	273	139.9	1.666	2.506	9,269	168.9	1.82
2000	281	141.3	1.722	2.608	9,825	180.0	1.83
2001	285	141.9	1.771	2.728	10,082	206.0	2.04
2002	288	142.3	1.799	2.856	\$10,446	\$233.4	2.23%

Notes

- (2) From U.S. Census Bureau
- (3), (4), (5) From U.S. Department of Labor, Bureau of Labor Statistics
- (6) From U.S. Department of Commerce, Bureau of Economic Analysis
- (7) From Appendix 2, column (5)
- (8) (7)/(6)

Cost of the U.S. Tort System — 1950-2002

Average Annual Changes by Groups of Years

Year	U.S. Population (millions)	U.S. Civilian Workforce (millions)	CPI (all items)	CPI (medical care)	Gross Domestic Product (\$ billions)	Tort System Costs (\$ billions)	Tort Costs as % of GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1951-2002	1.2%	1.6%	3.9%	5.8%	7.1%	9.8%	2.5%
1951-1960	1.7	1.1	2.1	4.0	6.0	11.6	5.3
1961-1970	1.3	1.8	2.7	4.3	7.0	9.8	2.6
1971-1980	1.1	2.6	7.8	8.2	10.4	11.9	1.4
1981-1990	0.9	1.6	4.7	8.1	7.6	11.7	3.9
1991-2000	1.2	1.3	2.8	4.8	5.4	3.3	-2.0
2001	1.4	0.4	2.8	4.6	2.6	14.4	11.5
2002	1.1	0.3	1.6	4.7	3.6	13.3	9.3
1951-1995	1.2	1.7	4.2	6.1	7.4	10.5	2.8
1996-2000	1.4%	1.4%	2.5%	3.4%	5.8%	2.6%	-3.1%

Notes

Based on figures in Appendix 1a.

Appendix 2

Summary of All Tort System Costs

Year	Liability Insured Cost	Medical Malpractice	Self- (un) Insured	Total Cost
(1)	(2)	(3)	(4)	(5)
1950	\$ 1,723,059	\$ 0	\$ 86,153	\$ 1,809,212
1951	2,177,633	0	108,882	2,286,515
1952	2,557,353	0	127,868	2,685,221
1953	2,828,158	0	141,408	2,969,566
1954	2,950,051	0	147,503	3,097,553
1955	3,250,829	0	162,541	3,413,370
1956	3,719,824	0	185,991	3,905,815
1957	4,293,067	0	214,653	4,507,720
1958	4,624,008	0	231,200	4,855,208
1959	4,971,526	0	248,576	5,220,102
1960	5,186,101	0	259,305	5,445,407
1961	5,394,567	0	269,728	5,664,295
1962	5,704,594	0	285,230	5,989,824
1963	6,299,547	0	314,977	6,614,525
1964	6,924,227	0	346,211	7,270,438
1965	7,570,265	0	378,513	7,948,778
1966	8,322,529	0	416,126	8,738,655
1967	9,150,869	0	457,543	9,608,413
1968	10,102,273	0	505,114	10,607,387
1969	11,413,351	0	570,668	11,984,019
1970	13,208,732	0	660,437	13,869,169
1971	14,304,768	0	715,238	15,020,007
1972	14,933,112	0	746,656	15,679,768
1973	14,621,296	0	563,240	15,184,535
1974	15,837,813	0	623,535	16,461,347
1975	17,914,909	1,182,813	960,444	20,058,166
1976	20,687,521	1,443,809	1,245,574	23,376,903
1977	24,073,405	1,844,094	2,081,899	27,999,398
1978	27,616,588	2,283,508	2,814,504	32,714,601
1979	30,934,883	2,791,987	3,358,083	37,084,953
1980	34,057,943	3,461,256	5,235,693	42,754,892
1981	38,929,780	4,200,673	6,245,906	49,376,359
1982	44,438,093	5,039,074	7,432,699	56,909,866
1983	49,946,629	6,041,563	8,676,935	64,665,127
1984	51,208,738	6,794,912	8,966,786	66,970,436
1985	64,455,656	6,718,416	12,484,152	83,658,224
1986	78,167,587	6,678,502	16,627,514	101,473,603
1987	85,112,183	7,092,378	18,087,846	110,292,406
1988	88,462,814	7,163,943	17,925,304	113,552,060
1989	97,030,370	8,186,400	20,639,237	125,856,008
1990	100,602,676	8,828,691	20,357,363	129,788,729
1991	101,016,143	9,573,260	20,522,153	131,111,556
1992	106,652,899	10,541,148	22,915,896	140,109,943
1993	108,560,517	11,555,254	23,127,472	143,243,243
1994	112,042,831	12,582,968	23,307,639	147,933,437
1995	118,478,058	13,589,310	26,602,720	158,670,087
1996	115,362,594	14,545,012	25,068,233	154,975,839
1997	113,561,713	16,053,877	24,767,144	154,382,734
1998	121,428,366	17,106,604	27,374,427	165,909,397
1999	122,863,786	18,710,587	27,339,281	168,913,655
2000	129,528,854	20,517,427	29,955,242	180,001,524
2001	146,177,700	22,376,121	37,453,893	206,007,715
2002	\$165,841,657	\$24,597,976	\$42,924,460	\$233,364,092

Notes

All values in 000s

(2) From Appendix 3 [1975-2002 excludes Medical Malpractice]

(3) From Appendix 5

(4) From Appendix 4, [Prior to 1973, .05 x (2)]

Appendix 3

Liability Insured Cost

Year	Earned Premium	Loss & LAE Ratio	Expense Ratio	Combined Ratio	Liability Insured Cost
(1)	(2)	(3)	(4)	(5)	(6)
1950	\$ 1,752,857	64.3%	34.0%	98.3%	\$ 1,723,059
1951	2,083,720	71.1	33.4	104.5	2,177,633
1952	2,515,153	69.3	32.4	101.7	2,557,353
1953	2,981,588	63.2	31.6	94.9	2,828,158
1954	3,155,435	61.4	32.1	93.5	2,950,051
1955	3,337,773	64.9	32.5	97.4	3,250,829
1956	3,619,255	70.1	32.7	102.8	3,719,824
1957	4,035,199	74.0	32.4	106.4	4,293,067
1958	4,442,849	72.6	31.4	104.1	4,624,008
1959	4,951,128	69.9	30.6	100.4	4,971,526
1960	5,276,984	67.7	30.6	98.3	5,186,101
1961	5,504,507	67.1	30.9	98.0	5,394,567
1962	5,819,378	67.3	30.8	98.0	5,704,594
1963	6,224,657	70.5	30.7	101.2	6,299,547
1964	6,688,473	73.4	30.1	103.5	6,924,227
1965	7,379,531	73.5	29.1	102.6	7,570,265
1966	8,187,339	73.4	28.3	101.7	8,322,529
1967	8,947,529	74.1	28.1	102.3	9,150,869
1968	9,768,188	75.6	27.8	103.4	10,102,273
1969	10,957,402	76.9	27.2	104.2	11,413,351
1970	12,715,930	77.5	26.4	103.9	13,208,732
1971	14,273,904	74.1	26.1	100.2	14,304,768
1972	15,144,973	71.8	26.8	98.6	14,933,112
1973	14,360,195	74.8	27.0	101.8	14,621,296
1974	14,908,953	78.5	27.7	106.2	15,837,813
1975	16,500,824	81.5	27.0	108.6	17,914,909
1976	20,090,047	77.3	25.7	103.0	20,687,521
1977	24,973,118	71.4	25.0	96.4	24,073,405
1978	28,692,720	70.5	25.8	96.2	27,616,588
1979	31,088,697	73.1	26.4	99.5	30,934,883
1980	32,194,946	78.7	27.1	105.8	34,057,943
1981	32,838,195	90.7	27.8	118.6	38,929,780
1982	34,170,095	101.5	28.6	130.0	44,438,093
1983	36,235,619	109.2	28.6	137.8	49,946,629
1984	39,843,449	101.1	27.4	128.5	51,208,738
1985	50,372,373	102.9	25.1	128.0	64,455,656
1986	68,516,069	90.7	23.3	114.1	78,167,587
1987	78,337,490	84.8	23.9	108.6	85,112,183
1988	81,771,490	83.7	24.5	108.2	88,462,814
1989	83,745,030	89.7	26.1	115.9	97,030,370
1990	87,971,533	89.1	25.2	114.4	100,602,676
1991	89,311,786	87.0	26.1	113.1	101,016,143
1992	92,659,338	89.9	25.2	115.1	106,652,899
1993	96,562,526	87.6	24.8	112.4	108,560,517
1994	101,730,356	85.7	24.4	110.1	112,042,831
1995	105,299,103	87.6	24.9	112.5	118,478,058
1996	108,378,052	81.7	24.8	106.4	115,362,594
1997	110,525,049	77.4	25.4	102.7	113,561,713
1998	113,325,370	81.2	25.9	107.2	121,428,366
1999	111,429,324	83.7	26.5	110.3	122,863,786
2000	113,589,472	87.4	26.6	114.0	129,528,854
2001	124,411,884	92.5	25.0	117.5	146,177,700
2002	\$140,996,964	93.2%	24.5%	117.6%	\$165,841,657

Notes

(2), (6) All values in 000s

All data reflect direct revenues and costs from "Best's Aggregates and Averages."

Prior to 1975, Medical Malpractice is included; for 1975-2002 it is excluded.

(6) (2) x (5)

Cost of the U.S. Tort System

Comparisons of Personal Lines to Commercial Lines Costs and Impact of Self-Insurance

Year	Personal Lines			Commercial Lines			Self- (un) Insured
	Insured	Self- (un) Insured	Total	Insured	Self- (un) Insured	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1973	\$ 8,521,899	2.0%	\$ 8,695,815	\$ 6,099,397	6.0%	\$ 6,488,720	\$ 563,240
1974	8,921,581	2.0	9,103,654	6,916,232	6.0	7,357,694	623,535
1975	10,336,734	2.0	10,547,688	7,578,176	9.0	8,327,665	960,444
1976	11,609,756	2.0	11,846,690	9,077,764	10.0	10,086,405	1,245,574
1977	12,902,054	2.0	13,165,362	11,171,351	14.0	12,989,943	2,081,899
1978	14,381,293	2.0	14,674,789	13,235,295	16.0	15,756,304	2,814,504
1979	15,985,767	2.0	16,312,007	14,949,116	16.9	17,980,958	3,358,083
1980	17,084,039	2.0	17,432,692	16,973,905	22.4	21,860,944	5,235,693
1981	18,892,570	2.0	19,278,133	20,037,210	22.6	25,897,553	6,245,906
1982	20,828,903	2.0	21,253,983	23,609,190	22.9	30,616,810	7,432,699
1983	22,945,067	2.0	23,413,333	27,001,563	23.3	35,210,231	8,676,935
1984	25,615,607	2.0	26,138,375	25,593,130	24.8	34,037,149	8,966,786
1985	29,695,287	2.0	30,301,313	34,760,369	25.5	46,638,495	12,484,152
1986	34,460,827	2.0	35,164,110	43,706,759	26.7	59,630,991	16,627,514
1987	38,092,590	2.0	38,869,990	47,019,592	26.9	64,330,038	18,087,846
1988	41,783,652	2.0	42,636,380	46,679,161	26.8	63,751,737	17,925,304
1989	46,424,500	2.0	47,371,939	50,605,870	28.0	70,297,668	20,639,237
1990	50,967,722	2.0	52,007,879	49,634,954	28.0	68,952,159	20,357,363
1991	52,338,179	2.0	53,406,306	48,677,963	28.6	68,131,990	20,522,153
1992	55,274,662	2.0	56,402,716	51,378,237	29.8	73,166,079	22,915,896
1993	56,164,851	2.0	57,311,072	52,395,666	29.6	74,376,917	23,127,472
1994	58,857,222	2.0	60,058,389	53,185,609	29.4	75,292,080	23,307,639
1995	60,222,560	2.0	61,451,592	58,255,497	30.3	83,629,186	26,602,720
1996	61,414,886	2.0	62,668,251	53,947,707	30.6	77,762,576	25,068,233
1997	62,097,411	2.0	63,364,705	51,464,302	31.3	74,964,151	24,767,144
1998	64,995,727	2.0	66,322,170	56,432,639	31.6	82,480,623	27,374,427
1999	66,807,453	2.0	68,170,870	56,056,333	31.7	82,032,197	27,339,281
2000	70,866,341	2.0	72,312,592	58,662,514	32.7	87,171,504	29,955,242
2001	75,245,057	2.0	76,780,671	70,932,643	33.6	106,850,923	37,453,893
2002	\$78,405,888	2.0%	\$80,006,008	\$87,435,769	32.1%	\$128,760,109	\$42,924,460

Notes

All values in 000s

(2), (5) From "Best's Aggregates and Averages" (excludes Medical Malpractice)

(3) Based on internal Tillinghast interviews

(4) (2) / [1.0 - (3)]

(6) Based on various studies published by Tillinghast and Conning & Company

(7) (5) / [1.0 - (6)]

(8) [(4) - (2)] + [(7) - (5)]

Medical Malpractice Tort Costs

Year	Loss and LAE Costs				U/W Expense Ratio	Total Cost
	Hospital	Physicians	Other	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1975	\$ 426,132	\$ 526,255	\$ 85,715	\$ 1,038,102	12.2%	\$ 1,182,813
1976	529,694	635,651	109,076	1,274,421	11.7	1,443,809
1977	648,169	820,691	142,985	1,611,845	12.6	1,844,094
1978	789,083	1,018,936	183,040	1,991,059	12.8	2,283,508
1979	975,538	1,273,884	236,835	2,486,257	11.0	2,791,987
1980	1,187,464	1,623,391	307,785	3,118,640	9.9	3,461,256
1981	1,443,910	1,954,352	386,990	3,785,252	9.9	4,200,673
1982	1,770,714	2,313,503	483,710	4,567,927	9.3	5,039,074
1983	2,123,044	2,733,138	598,142	5,454,323	9.7	6,041,563
1984	2,412,111	3,063,070	701,360	6,176,541	9.1	6,794,912
1985	2,368,354	3,160,955	708,294	6,237,604	7.2	6,718,416
1986	2,440,650	2,995,117	696,311	6,132,079	8.2	6,678,502
1987	2,539,598	3,133,703	726,739	6,400,040	9.8	7,092,378
1988	2,587,857	3,165,040	736,935	6,489,832	9.4	7,163,943
1989	2,719,298	3,513,026	798,349	7,030,673	14.1	8,186,400
1990	2,890,620	3,864,158	865,274	7,620,052	13.7	8,828,691
1991	2,979,571	4,296,635	932,068	8,208,274	14.3	9,573,260
1992	3,219,832	5,006,678	1,053,800	9,280,310	12.0	10,541,148
1993	3,365,149	5,404,734	1,123,405	9,893,288	14.4	11,555,254
1994	3,515,232	5,793,081	1,192,377	10,500,690	16.5	12,582,968
1995	3,684,132	6,384,556	1,302,677	11,371,365	16.3	13,589,310
1996	3,844,767	6,994,025	1,416,336	12,255,127	15.7	14,545,012
1997	4,129,802	7,551,287	1,541,665	13,222,754	17.6	16,053,877
1998	4,401,325	8,204,416	1,680,337	14,286,078	16.5	17,106,604
1999	4,829,263	9,167,917	1,884,473	15,881,653	15.1	18,710,587
2000	5,294,748	10,288,992	2,119,056	17,702,796	13.7	20,517,427
2001	5,934,489	11,431,070	2,384,959	19,750,518	11.7	22,376,121
2002	\$6,574,579	\$12,574,177	\$2,656,159	\$21,804,915	11.4%	\$24,597,976

Notes

All values in 000s

(2), (3), (4) From internal Tillinghast study

(5) (2) + (3) + (4)

(6) From “Best’s Aggregates and Averages”; the ratio of underwriting expenses to all losses and expenses combined, multiplied by 0.90 to reflect lower costs in alternative market

(7) (5) / [1.0 - (6)]