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U.S. Tort Costs: 2004 Update

Trends and Findings on the Cost of the U.S. Tort System



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EXECUTIVE SUMMARY

KEY FINDINGS

U.S. tort costs grew by 5.4% in 2003, representing a dramatic reduction from the double-digit trends experienced in 2001 and 2002. This reduction is reflective of more moderate tort cost trends in the commercial lines of insurance, where asbestos-related costs accounted for large increases in tort costs during 2001 and 2002.

The U.S. tort system cost \$246 billion in 2003, which translates to \$845 per person, or \$35 per person more than in 2002. This compares to a cost of \$12 per person in 1950 (not adjusted for inflation).

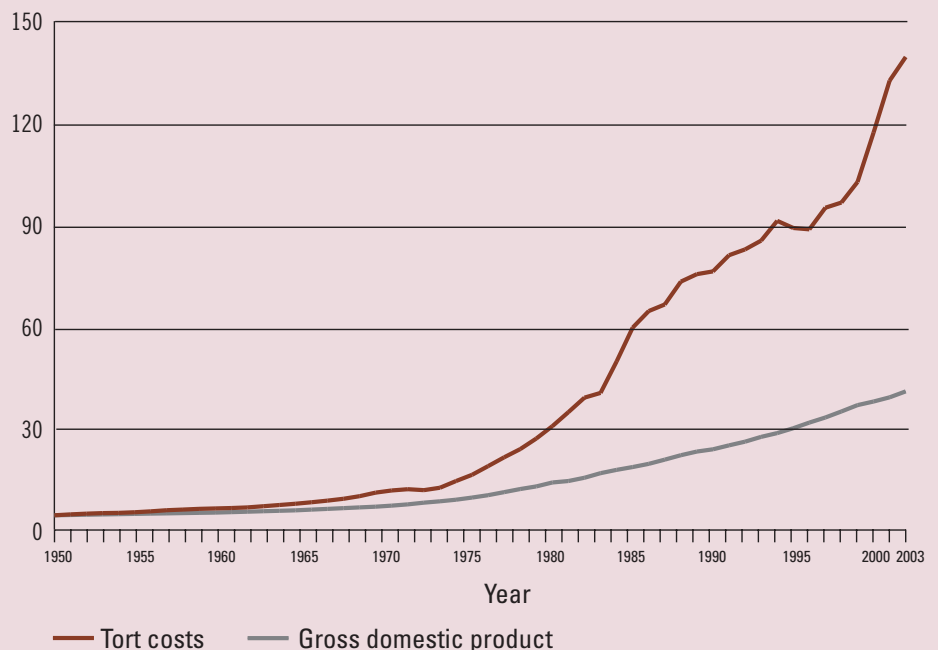
Over the last 50 years, tort costs in the U.S. have increased more than a hundredfold. In contrast, overall economic production (as measured by GDP) has grown by a factor of 37 and population has grown by a factor of less than two.

The 5.4% rate of growth in tort costs in 2003 slightly exceeded overall economic growth of 4.9%. During the past 50 years, growth in tort costs has exceeded growth in GDP by an average of two to three percentage points, with the largest disparity having been nearly six percentage points in the 1950s. In the 1990s, this trend reversed itself, with GDP growth in excess of growth in tort costs, reflecting a period of steady economic growth and low inflation without significant growth in tort costs.

Since 1975 (the first year for which insured medical malpractice costs were separately identified), the increase in

GROWTH IN TORT COSTS VS. GDP SINCE 1950

Ratio to 1950 levels



medical malpractice costs has out-paced increases in overall U.S. tort costs. Medical malpractice costs have risen an average of 11.8% per year, compared to an average annual increase of 9.2% per year for all other tort costs. The compounded impact of this 28-year difference in growth rates is that medical malpractice costs have risen by a factor of 23 since 1975, while all other tort costs have grown by a factor of 12.

At nearly \$27 billion in 2003, medical malpractice costs translated to \$91 per person. This compares to \$5 per person in 1975 (not adjusted for inflation). This significant escalation in medical

GROWTH OF TORT COST

Years	Average Annual Increase in Tort System Costs
1951-1960	11.6%
1961-1970	9.8
1971-1980	11.9
1981-1990	11.8
1991-2000	3.2
2001	14.7
2002	13.4
2003	5.4
52 years (1951-2003)	9.7%

malpractice costs has contributed to the increase in health care costs in the U.S. over the past 30 years.

FUTURE IMPLICATIONS

Despite the more moderate rate of growth in tort costs in 2003 relative to the two years prior, there are a number of societal influences, potential legislation reforms and political changes that make the future uncertain.

Reassessments of liabilities

In 2002 and 2003, the largest single contributor to the rise in tort costs was a significant upward reassessment of liabilities associated with asbestos claims, whose numbers have continued to mushroom. We estimate that this reassessment accounted for \$9 billion of the increase in 2003 tort costs over 2002 levels, a slight decrease from the \$10 billion estimated impact in 2002. Without the successful passage of asbestos litigation reform measures, we cannot rule out the possibility of further upward assessments in these liabilities.

As indicated in the table at right, without the asbestos-related costs, the increase in U.S. tort system costs between 2002 and 2003 would have been approximately 6.4%, compared to an 11.5% increase between 2001 and 2002 for comparable costs. However, reassessments have occurred in other areas as well. In 2003, for example, a number of major insurance companies reported significant upward reassessments of their non-asbestos liabilities, in lines of insurance such as directors and officers liability and general liability. Some industry experts project that

the insurance industry's liability estimates (including asbestos) are understated by as much as \$60 billion. To the extent that this projection is correct, significant reassessments will continue. Since a portion of those reassessments would likely occur in the liability lines of insurance, there will continue to be upward pressure on tort costs.

Litigious society

Reports of class action lawsuits by groups of injured parties and shareholder lawsuits against the boards of directors of publicly traded companies continue to appear in the business media. Absent sweeping reform, we see no indication that these trends will abate in the near future. In fact, there appears to be a shift in the types of liabilities that make up the total tort costs in the U.S., from individuals suing individual entities to groups of plaintiffs taking legal action against one or more entities. Current examples include potential claims against pharmaceutical companies for the alleged ill effects of certain prescription drugs and actions against food establishments for obesity-related injuries.

Impact of election results on reform measures

A number of states have introduced legislative tort reform measures; whether these measures will be successfully implemented or subsequently overturned by the courts (which has occurred in the past) is unknown at this time.

Some suggest that the recent election results in the U.S. and the resulting Republican-dominated Congress could result in greater prospects for significant legal reform. These reforms might address such areas as class action lawsuits, medical malpractice claims and asbestos litigation.

While it is impossible to accurately predict future increases in tort costs, it does seem reasonable to assume that, without sweeping structural changes to the U.S. tort system, annual increases will be in the 5% to 8% range for the next several years. At this rate of increase, tort costs could approach \$1,000 per U.S. citizen by 2006 — representing a new quadruple-digit benchmark.

IMPACT OF INSURED ASBESTOS LIABILITIES ON U.S. TORT COSTS (\$billions)

	Including Asbestos	Excluding Asbestos
2000	\$179.2	\$177.0
2001	205.5 (+14.7%)	200.0 (+13.0%)
2002	233.2 (+13.5%)	223 (+11.5%)
2003	245.7 (+5.4%)	237.1 (+6.4%)

INTRODUCTION

U.S. Tort Costs: 2004 Update represents the eighth study of U.S. tort costs published by the Tillinghast business of Towers Perrin. The first study was completed in 1985. The most recent study, incorporating results through 2002, was published in December 2003. This 2004 update provides results from 1950 through 2003, with projections through 2006.

A “tort,” as defined by *Webster’s Collegiate Dictionary*, is “a wrongful act other than a breach of contract for which relief may be obtained in the form of damages or an injunction.” It is important to note that the tort costs as calculated in this study include far more than just the claims that are litigated. Statistics on claims that are settled quickly, with no suits filed, are also included. Therefore, the costs tabulated in this study are not a reflection of litigated claims or of the legal system.

This study takes no position on whether tort costs are too high or too low. The purpose of the study is to attempt to

quantify the costs, not to support any particular point of view. Any connotation that an increase in tort costs is undesirable is unintended.

This study examines only one side of the U.S. tort system: the costs. No attempt has been made to measure or quantify the benefits of the tort system. This study makes no conclusion that the costs of the U.S. tort system outweigh the benefits, or vice versa.

FINDINGS

2003 TORT COSTS

Tillinghast estimates that total insured and self-insured tort costs in the U.S. were \$245.7 billion in 2003. This is an increase of \$12.5 billion, or 5.4%, from the estimated \$233.2 billion of tort costs in 2002. The \$12.5 billion increase in 2003 costs is the smallest since the \$10.9 billion increase in tort costs that occurred in 2000. At 5.4%, 2003 tort cost growth was far lower than in 2001 (a 14.7% increase) and 2002 (a 13.4% rise). While growth in personal lines tort costs has remained relatively stable at about 5% since 2001, growth in commercial lines costs dropped from over 20% in 2001 to 5.5% in 2003. It is the reduced growth in commercial lines tort costs that has driven down the total growth in tort costs in 2003.

Asbestos was a significant contributor to tort cost growth in both 2001 and 2002. In 2003, insured asbestos losses increased by approximately \$8.6 billion. While certainly significant, this was a smaller increase than the \$10.2 billion estimate for 2002. When asbestos-related insured tort costs are eliminated from both 2002 and 2003 estimates, the increase in tort costs in 2003 is approximately 6.4%. Essentially, the fact that insured asbestos losses increased less in 2003 than in 2002 has a dampening impact on the total growth in U.S. tort costs.

TABLE 1: COSTS RELATIVE TO GDP

(\$billions)

Year	U.S. Tort Costs	U.S. GDP	Tort Costs as % of GDP
1950	\$ 1.8	\$ 294	0.62%
1960	5.4	526	1.03
1970	13.9	1,039	1.34
1980	42.7	2,790	1.53
1990	130.2	5,803	2.24
2000	179.2	9,817	1.83
2002	233.2	10,487	2.22
2003	245.7	11,004	2.23

TABLE 2: COSTS RELATIVE TO POPULATION

Year	U.S. Population (millions)	U.S. Tort Costs (\$billions)	Tort Cost per Capita	Inflation-Adjusted* Tort Cost per Capita
1950	152	\$ 1.8	\$ 12	\$ 91
1960	181	5.4	30	187
1970	205	13.9	68	321
1980	228	42.7	187	419
1990	249	130.2	522	735
2000	281	179.2	637	680
2002	288	233.2	810	828
2003	291	245.7	845	845

*Restated in 2003 dollars, based on Consumer Price Index

Medical care inflation (as measured by the Consumer Price Index) also moderated slightly in 2002. The 4.0% increase was the lowest since 1999.

COSTS RELATIVE TO GDP

The ratio of U.S. tort costs to gross domestic product (GDP) has increased significantly since 1950. However, as shown above, the ratio of tort costs to GDP* was virtually unchanged in 2003 compared to 2002.

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

The year with the highest ratio of tort costs to GDP is 1987, at 2.33%. As shown in Appendix 1, the ratio generally declined from 1987 to 1999, when it reached 1.82%

COSTS RELATIVE TO POPULATION

Growth in U.S. tort costs since 1950 has far exceeded the growth in the U.S. population. Even after adjusting for inflation, tort costs per capita have risen by a factor of more than nine between 1950 and 2003.

As can be seen in *Table 2*, tort costs per capita, after adjusting for inflation, were lower in 2000 than in 1990. This was counter to steady increases in inflation-adjusted tort costs per capita both in prior decades as well as since 2000.

SPLIT TO PERSONAL VERSUS COMMERCIAL

Table 3 shows our estimate of the split of U.S. tort costs since 1990 on a personal versus commercial basis. “Commercial” in this distinction reflects torts alleged against business, including all medical malpractice. “Personal” tort costs include torts alleged against individuals, excluding medical malpractice. Personal tort costs are predominantly from automobile accidents.

As the table indicates, the increase in commercial tort costs since 1990 has exceeded the increase in personal tort costs. The difference is even greater when measured over the last five years.

One might expect the growth in personal lines tort costs to exceed the growth in commercial lines tort costs simply due to changes in auto insurance laws. Since 1990, four states (Colorado, Connecticut, Georgia and Hawaii) repealed at least some portions of their no-fault systems. These repeals would, in theory, bring additional claims into the tort system. (Note: No-fault costs are excluded from this study.)

Some of the higher growth in commercial tort costs is attributable to asbestos. However, even after removing insured asbestos losses totaling approximately \$9 billion in 2003 from the analysis, the commercial tort cost growth rate over the last five to 13 years remains above the personal tort cost growth rate.

TABLE 3: SPLIT TO PERSONAL VERSUS COMMERCIAL

(\$billions)

Year	Personal Tort Costs	Commercial Tort Costs
1990	\$52.0	\$ 78.2
1991	53.4	78.2
1992	56.4	83.8
1993	57.3	86.0
1994	60.1	88.0
1995	61.5	97.1
1996	62.7	92.1
1997	63.4	90.6
1998	66.3	99.2
1999	68.2	100.1
2000	72.3	106.9
2001	76.8	128.8
2002	80.0	153.2
2003	84.2	161.5
Average Annual Change		
Since 1990	3.8%	5.7%
Since 1998	4.9%	10.2%

METHODOLOGY AND APPROACH

COMPONENTS OF TORT COSTS

The methodology used to develop estimates of tort costs in this study is similar to the methodology used in prior Tillinghast studies of U.S. tort costs. This study incorporates three cost components:

- Benefits paid or expected to be paid to third parties (hereafter referred to as “losses”)
- Defense costs
- Administrative expenses.

It is important to note that we have measured losses on an incurred basis, reflecting both payments as well as the collective change in reserves on incurred claims. We believe it is more appropriate to measure costs on an incurred basis than on a paid basis because of the greater time difference between an event and the payment of the claim than between the event and the estimate of the cost of that event. However, we recognize that more estimates of costs must be used when measuring on an incurred basis than when measuring on a paid basis.

Our use of incurred losses instead of paid losses has resulted in higher increases in tort costs in recent years. Had paid losses been used, the costs of asbestos-related claims included in the study would have been lower. However, use of incurred losses does not overstate tort costs. To argue this, one

would have to posit that insurers knowingly set reserves too high. We do not believe this is the case. In fact, some rating agencies believe that current insurance industry reserves are, in total, deficient.

Defense costs reflect costs directly incurred in the defense and investigation of a claim, as well as general claim-handling costs. The former is known in insurance industry parlance as allocated loss adjustment expenses (ALAE), while the latter is often referred to as unallocated loss adjustment expenses (ULAE).

Administrative expenses reflect expenses, other than defense costs, incurred by either the insurance company or self-insured entity in the administration of tort claims. Our inclusion of such costs has been questioned since those costs are not directly related to the disposition of specific tort claims. We take no position on the efficiency of the insurance industry’s administrative expenses. However, we note the following:

- The relative share of total insured tort costs (as defined in *Table 4*) attributable to administrative expenses generally declined during the 1950s, 1960s and 1970s. However, the portion has not changed materially, either up or down, since 1980.
- The U.S. insurance industry is not a monopoly or a cartel. Insurers have an incentive to be as efficient as possible in order to either strengthen their competitive positions or maxi-

TABLE 4: TORT COSTS — ADMINISTRATIVE EXPENSE PORTION

Time Period	Insured Tort Costs — Administrative Expense Portion
1950-1959	32.2%
1960-1969	29.0
1970-1979	26.0
1980-1989	22.0
1990-1999	23.0
2000-2003	21.9

mize their profits. To insinuate that the insurance industry is bloated or inefficient would be to suggest that the industry is not subject to cost pressures that face most competitive industries.

We believe administrative expenses are a real cost of the tort system. Their inclusion undoubtedly increases the absolute levels of estimated tort costs, but has a negligible impact on recent tort cost trends and actually lessens the long-term trends in tort cost growth.

As detailed in Appendix 3, Table 4 above shows the average administrative expense portion of insured tort costs by decade.

CATEGORIES OF TORT COST

Tillinghast computed tort costs in the following three categories:

- Insured costs (excluding medical malpractice)
- Self-insured costs (excluding medical malpractice)
- Medical malpractice costs.

We derived insured costs from composite financial data for the U.S. insurance industry, as tabulated 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 going back prior to 1950.

The statutory lines of business that we include in the insured category are as follows:

- Private passenger auto liability
- Homeowners multi-peril
- Farmowners multi-peril
- Commercial auto liability
- Commercial multi-peril
- Other liability
- Products liability.

The following should be noted regarding these lines of business:

- For both personal auto liability and commercial auto liability, costs associated with personal injury protection (PIP, also known as no-fault) are excluded. PIP costs are excluded since PIP is, in theory, a first-party coverage, not a liability coverage. This exclusion has only a minor impact on the commercial auto costs, but is material for personal auto liability.
- Homeowners and farmowners multi-peril are largely first-party property coverages that have a liability (or tort) element. We excluded 91% of the costs for these lines. Our estimate that 9% of the costs for these lines are tort-related is based on our experience with these coverages.
- Commercial multi-peril (CMP) also is a coverage that includes both property and liability. However, since 1992, insurance data have been split to the liability and property components. For years prior to 1992, we include up to 50% of total CMP costs in this study.

- We do not include any costs in this study from either workers compensation (in theory, a first-party coverage), aviation or ocean marine. The latter two coverages do have a liability component to them. However, we choose to exclude them given their size and a lack of foundation for estimating the liability portion.

The insured tort costs are the sum of the three components of losses, loss adjustment expenses and administrative expenses. The last component includes the following statutory expense categories:

- Commissions and brokerage
- Other acquisition expenses
- General expenses
- Taxes, licenses and fees.

Total tort costs from the A.M. Best data are reduced slightly to reflect an estimate of non-U.S. business in the data. The reduction varies by line of business and is approximately 2%.

Earned premiums are displayed in Appendix 3. The actual premiums are not considered in the total tort costs shown in column (6). (The arithmetic in

the Appendix multiplies premiums by ratios in which earned premium is the denominator, effectively eliminating premiums from the resulting product.) As such, any increase in insurance premiums without a corresponding increase in costs has no impact on the estimated tort costs in this study.

As shown in Appendix 3, total insured tort costs in 2003 are estimated to be \$173.9 billion.

The second category of tort costs is self-insured costs, excluding medical malpractice. Appendix 4 outlines the estimated costs for this category.

As shown in the Appendix, we estimate 2% of personal tort costs to be in this category. This is not the same as saying that 2% of the auto driving population is uninsured or that 2% of auto accidents involve an uninsured driver. (Actual figures for these items would likely be far higher than 2%). Rather, the 2% provision reflects our estimate of the *additional* tort costs that are not included in the insured data. Many personal auto insurance policies include

coverage for uninsured motorists, whereby the insured is compensated if injured in an auto accident caused by an uninsured or underinsured driver. As such, the “insured” tort costs described previously already include the costs associated with many auto accidents involving uninsured drivers. The 2% provision adds \$1.7 billion to our estimate of 2003 personal tort costs.

Our estimate of self-insured tort costs is approximately \$43.6 billion for commercial risks in 2003. This estimate includes tort costs paid by various forms of self-insurance, such as large deductibles and captive insurance programs. The estimate would also consider insurance purchased directly from a non-U.S. insurance company, since such insured costs would not be captured in the A.M. Best data used to estimate the insured cost category.

To our knowledge, no source of data exists that tabulates the losses incurred by all self-insured entities. However, various organizations have estimated the size of this market. We have relied on the various estimates available, as well as Tillinghast’s experience in this field, in developing the costs for this

category. We have assumed that the administrative expense component in this category is 10% lower than in the insured category.

Our estimate of commercial self-insured costs does not capture certain extraordinary costs. For example, costs resulting from the 1998 settlement between tobacco manufacturers and various state attorneys general are not explicitly included in this study.

As can be seen in Appendix 4, our estimates of commercial self-insured costs show a long-term increase in the portion of commercial tort costs that are self-insured.

The third category of tort costs is medical malpractice, both insured and self-insured. Appendix 5 shows the estimated medical malpractice tort costs since 1975. A.M. Best data have segregated medical malpractice costs since 1975. However, the portion of medical malpractice costs that are insured has fluctuated significantly since then.

Our estimate of medical malpractice costs is not based on A.M. Best data, but rather on Tillinghast's internal estimates of state-by-state medical malpractice costs. The state costs per physician and per occupied hospital bed are multiplied by the number of practicing physicians and occupied beds by year to develop the estimated medical malpractice losses and LAE. Administrative expenses are included; as with the self-insured estimate, we assume a 10% lower cost than insurance data would indicate.

As shown in Appendix 5, our estimate of medical malpractice costs in 2003 is approximately \$26.5 billion. Our analysis suggests that, since 1975, medical malpractice costs have increased at an annual rate of 11.8% versus 9.2% for all other tort costs.

EXCLUDED COSTS

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. 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, such as those associated with litigation avoidance. These costs range 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.

As noted previously, this study does not attempt to quantify the benefits of the tort system. 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

Tort cost growth in 2003, at 5.4%, was far lower than in 2001 and 2002 (14.7% and 13.4%, respectively). The lower growth rate is all due to commercial lines as shown in *Table 5*.

The stability in personal tort costs and moderation in commercial tort costs appears to have continued in 2004. We expect total tort costs to increase approximately 6.5% in 2004, to \$261.7 billion. The Congressional Budget Office (CBO) anticipates an increase in GDP of 6.8% in 2004.

Consequently, the 2004 ratio of tort costs to GDP is anticipated to remain at approximately 2.23%.

Looking ahead, we anticipate growth in U.S. tort costs to range from 5% to 8% in 2005, with a midpoint of 6.5%. We expect a similar increase in 2006. CBO forecasts call for GDP growth to be 6.1% in 2005, and 4.8% for 2006-2009. These assumptions yield projected tort costs, GDP and tort-to-GDP ratios as shown in *Table 6*.

The answers to several pending questions will help determine the near future of U.S. tort cost growth, including:

1. Will personal auto liability continue to show flat-to-negative frequency?
2. Are further reserve increases for asbestos likely?
3. Will recent issues surrounding mutual fund and insurance brokerage organizations generate significant tort costs?
4. Will recent medical malpractice reforms in various states (including Florida, Ohio and Texas) dampen tort costs for that category?
5. Has the litigation related to directors and officers of publicly held companies peaked?
6. Will obesity-related lawsuits begin to contribute significant tort costs?
7. Will litigation pertaining to certain prescription drugs have significant costs?

TABLE 5: ONE-YEAR GROWTH IN TORT COST

Year	Personal	Commercial	Total
2001	6.2%	20.0%	14.7%
2002	4.2	19.0	13.4
2003	5.3	5.5	5.4

TABLE 6: TORT COSTS RELATIVE TO GDP

(\$billions)

Year	U.S. Tort Costs	U.S. GDP	Tort Costs as % of GDP
2002	\$233.2	\$10,487	2.22%
2003	245.7	11,004	2.23
2004 (est.)	261.7	11,752	2.23
2005 (est.)	278.7	12,469	2.24
2006 (est.)	296.8	13,068	2.27

APPENDICES

Cost of the U.S. Tort System — 1950-2003	Appendix 1A
Cost of the U.S. Tort System — 1950-2003 — Average Annual Changes by Groups of Years	Appendix 1B
Summary of All Tort System Costs	Appendix 2
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COST OF THE U.S. TORT SYSTEM — 1950-2003

APPENDIX 1A

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	0.62%
1951	155	62.0	0.260	0.159	339	2.3	0.67
1952	158	62.1	0.265	0.167	358	2.7	0.75
1953	160	63.0	0.267	0.173	379	3.0	0.78
1954	163	63.6	0.269	0.178	380	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	437	3.9	0.89
1957	172	66.9	0.281	0.197	461	4.5	0.98
1958	175	67.6	0.289	0.206	467	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	526	5.4	1.03
1961	184	70.5	0.299	0.229	545	5.7	1.04
1962	187	70.6	0.302	0.235	586	6.0	1.02
1963	189	71.8	0.306	0.241	618	6.6	1.07
1964	192	73.1	0.310	0.246	664	7.3	1.10
1965	194	74.5	0.315	0.252	719	7.9	1.11
1966	197	75.8	0.324	0.263	788	8.7	1.11
1967	199	77.3	0.334	0.282	833	9.6	1.15
1968	201	78.7	0.348	0.299	910	10.6	1.17
1969	203	80.7	0.367	0.319	985	12.0	1.22
1970	205	82.8	0.388	0.340	1,039	13.9	1.34
1971	208	84.4	0.405	0.361	1,127	15.0	1.33
1972	210	87.0	0.418	0.373	1,238	15.7	1.27
1973	212	89.4	0.444	0.388	1,383	15.2	1.10
1974	214	91.9	0.493	0.424	1,500	16.5	1.10
1975	216	93.8	0.538	0.475	1,638	20.0	1.22
1976	218	96.2	0.569	0.520	1,825	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	2,295	32.7	1.42
1979	225	105.0	0.726	0.675	2,563	37.0	1.44
1980	228	106.9	0.824	0.749	2,790	42.7	1.53
1981	230	108.7	0.909	0.829	3,128	49.2	1.57
1982	232	110.2	0.965	0.925	3,255	56.7	1.74
1983	234	111.6	0.996	1.006	3,537	64.4	1.82
1984	236	113.5	1.039	1.068	3,933	66.9	1.70
1985	239	115.5	1.076	1.135	4,220	83.7	1.98
1986	241	117.8	1.096	1.220	4,463	101.7	2.28
1987	243	119.9	1.136	1.301	4,739	110.5	2.33
1988	245	121.7	1.183	1.386	5,104	114.0	2.23
1989	247	123.9	1.240	1.493	5,484	126.2	2.30
1990	249	124.8	1.307	1.628	5,803	130.2	2.24
1991	252	125.3	1.362	1.770	5,996	131.6	2.20
1992	255	126.9	1.403	1.901	6,338	140.2	2.21
1993	258	128.4	1.445	2.014	6,657	143.3	2.15
1994	260	131.4	1.482	2.110	7,072	148.0	2.09
1995	263	132.0	1.524	2.205	7,398	158.5	2.14
1996	265	134.6	1.569	2.282	7,817	154.7	1.98
1997	268	136.7	1.605	2.346	8,304	154.0	1.85
1998	270	138.3	1.630	2.421	8,747	165.5	1.89
1999	273	139.9	1.666	2.506	9,268	168.3	1.82
2000	281	141.3	1.722	2.608	9,817	179.2	1.83
2001	285	141.9	1.771	2.728	10,128	205.5	2.03
2002	288	144.8	1.799	2.856	10,487	233.2	2.22
2003	291	146.5	1.840	2.971	11,004	245.7	2.23

Notes (2) From U.S. Census Bureau
(3) From U.S. Department of Labor, Bureau of Labor Statistics
(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 — 1950-2003

APPENDIX 1B

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)
1951-2003	1.2%	1.6%	3.9%	5.8%	7.1%	9.7%	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	11.8	3.9
1991-2000	1.2	1.3	2.8	4.8	5.4	3.2	-2.0
2001	1.3	0.4	2.8	4.6	3.2	14.7	11.2
2002	1.0	2.0	1.6	4.7	3.5	13.4	9.6
2003	1.0	1.2	2.3	4.0	4.9	5.4	0.4
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	2.5	-3.2

Notes Based on figures in Appendix 1A

SUMMARY OF ALL TORT SYSTEM COSTS

APPENDIX 2

Year (1)	Liability Insured Cost (2)	Medical Malpractice (3)	Self- (Un) Insured (4)	Total Cost (5)
1950	\$ 1,723,059	\$ N/A	\$ 86,153	\$ 1,809,212
1951	2,177,633	N/A	108,882	2,286,515
1952	2,557,353	N/A	127,868	2,685,221
1953	2,828,158	N/A	141,408	2,969,566
1954	2,950,051	N/A	147,503	3,097,553
1955	3,250,829	N/A	162,541	3,413,370
1956	3,719,824	N/A	185,991	3,905,815
1957	4,293,067	N/A	214,653	4,507,720
1958	4,624,008	N/A	231,200	4,855,208
1959	4,971,526	N/A	248,576	5,220,102
1960	5,186,101	N/A	259,305	5,445,407
1961	5,394,567	N/A	269,728	5,664,295
1962	5,704,594	N/A	285,230	5,989,824
1963	6,299,547	N/A	314,977	6,614,525
1964	6,924,227	N/A	346,211	7,270,438
1965	7,570,265	N/A	378,513	7,948,778
1966	8,322,529	N/A	416,126	8,738,655
1967	9,150,869	N/A	457,543	9,608,413
1968	10,102,273	N/A	505,114	10,607,387
1969	11,413,351	N/A	570,668	11,984,019
1970	13,208,732	N/A	660,437	13,869,169
1971	14,304,768	N/A	715,238	15,020,007
1972	14,933,112	N/A	746,656	15,679,768
1973	14,621,296	N/A	563,240	15,184,535
1974	15,837,813	N/A	623,535	16,461,347
1975	17,914,909	1,158,476	960,444	20,033,829
1976	20,687,521	1,420,786	1,245,574	23,353,881
1977	24,073,405	1,811,894	2,081,899	27,967,198
1978	27,616,588	2,241,760	2,814,504	32,672,853
1979	30,934,883	2,745,213	3,358,083	37,038,178
1980	34,057,943	3,376,381	5,235,693	42,670,017
1981	38,929,780	4,065,717	6,245,906	49,241,403
1982	44,438,093	4,845,214	7,432,699	56,716,006
1983	49,946,629	5,802,016	8,676,935	64,425,580
1984	51,208,738	6,768,896	8,966,786	66,944,420
1985	64,455,656	6,740,227	12,484,152	83,680,035
1986	78,167,587	6,892,127	16,627,514	101,687,229
1987	85,112,183	7,314,182	18,087,846	110,514,210
1988	88,462,814	7,622,786	17,925,304	114,010,903
1989	97,030,370	8,498,791	20,639,237	126,168,398
1990	100,602,676	9,202,873	20,357,363	130,162,912
1991	101,016,143	10,077,004	20,522,153	131,615,300
1992	106,652,899	10,664,402	22,915,896	140,233,197
1993	108,560,517	11,635,903	23,127,472	143,323,892
1994	112,042,831	12,668,947	23,307,639	148,019,417
1995	118,478,058	13,441,955	26,602,720	158,522,733
1996	115,362,594	14,290,605	25,068,233	154,721,432
1997	113,561,713	15,666,686	24,767,144	153,995,543
1998	121,428,366	16,712,698	27,374,427	165,515,491
1999	122,863,786	18,080,438	27,339,281	168,283,506
2000	129,528,854	19,712,900	29,955,242	179,196,996
2001	146,177,700	21,902,829	37,453,893	205,534,422
2002	165,841,657	24,403,678	42,924,460	233,169,795
2003	173,873,885	26,536,754	45,333,244	245,743,883

Notes

Last three 000s omitted

(2) From Appendix 3 [1975-2003 excludes Medical Malpractice]

(3) From Appendix 5

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

LIABILITY INSURED COSTS

APPENDIX 3

Year	Earned Premium	Loss & LAE Ratio	Expense Ratio	Combined Ratio	Insured Tort Costs
(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
2003	161,077,976	83.9	24.1	107.9	173,873,885

Notes (2), (6) Last three 000s omitted
All data reflect direct revenues and costs from "Best's Aggregates and Averages"
Prior to 1975, Medical Malpractice is included; for 1975-2003 it is excluded
(6) (2) x (5)

COST OF THE U.S. TORT SYSTEM — 1950-2003

APPENDIX 4

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

Year (1)	Personal Lines			Commercial Lines			Self- (Un) Insured (8)
	Insured (2)	Self- (Un) Insured (3)	Total (4)	Insured (5)	Self- (Un) Insured (6)	Total (7)	
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
2003	82,522,939	2.0	84,207,081	91,350,946	32.3	135,000,048	45,333,244

- Notes**
- Last three 000s omitted
 - (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 estimating the size of the self-insured market and estimates by Tillinghast
 - (7) (5) / [1.0 - (6)]
 - (8) [(4) - (2)] + [(7) - (5)]

MEDICAL MALPRACTICE TORT COSTS

APPENDIX 5

Year (1)	Loss and LAE Costs				U/W Expense Ratio (6)	Total Cost (7)
	Hospital (2)	Physicians (3)	Other (4)	Total (5)		
1975	\$ 378,619	\$ 554,171	\$ 83,951	\$ 1,016,742	12.2	\$ 1,158,476
1976	465,814	680,949	107,337	1,254,100	11.7	1,420,786
1977	567,845	875,367	140,488	1,583,700	12.6	1,811,894
1978	690,917	1,084,047	179,693	1,954,658	12.8	2,241,760
1979	848,193	1,363,543	232,868	2,444,605	11.0	2,745,213
1980	1,051,838	1,690,090	300,238	3,042,166	9.9	3,376,381
1981	1,290,927	1,998,159	374,557	3,663,643	9.9	4,065,717
1982	1,576,183	2,350,909	465,101	4,392,193	9.3	4,845,214
1983	1,890,801	2,772,834	574,426	5,238,060	9.7	5,802,016
1984	2,181,499	3,272,719	698,675	6,152,893	9.1	6,768,896
1985	2,129,009	3,418,252	710,593	6,257,854	7.2	6,740,227
1986	2,175,976	3,433,666	718,584	6,328,226	8.2	6,892,127
1987	2,268,904	3,581,822	749,467	6,600,193	9.8	7,314,182
1988	2,363,708	3,757,656	784,135	6,905,499	9.4	7,622,786
1989	2,456,483	4,013,665	828,813	7,298,961	14.1	8,498,791
1990	2,572,981	4,468,082	901,947	7,943,010	13.7	9,202,873
1991	2,692,628	4,966,450	981,113	8,640,192	14.3	10,077,004
1992	2,841,396	5,481,304	1,066,122	9,388,822	12.0	10,664,402
1993	2,967,300	5,863,791	1,131,246	9,962,337	14.4	11,635,903
1994	3,049,164	6,322,753	1,200,524	10,572,441	16.5	12,668,947
1995	3,162,980	6,796,529	1,288,552	11,248,061	16.3	13,441,955
1996	3,284,839	7,364,371	1,391,562	12,040,772	15.7	14,290,605
1997	3,481,942	7,917,420	1,504,483	12,903,845	17.6	15,666,686
1998	3,658,590	8,656,884	1,641,645	13,957,119	16.5	16,712,698
1999	3,997,582	9,528,191	1,821,007	15,346,779	15.1	18,080,438
2000	4,393,333	10,579,339	2,035,964	17,008,636	13.7	19,712,900
2001	4,904,910	12,093,338	2,334,513	19,332,761	11.7	21,902,829
2002	5,559,553	13,437,948	2,635,178	21,632,680	11.4	24,403,678
2003	5,963,951	14,787,711	2,878,501	23,630,163	11.0	26,536,754

Notes Last three 000s omitted

(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)]