

Understanding Cycles and Shocks in the Property and Casualty Insurance Industry

LESSONS LEARNED FROM EXPERIENCE

By Harry Shuford



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The experience of the property and casualty (P&C) insurance industry provides insights into the nature of financial shocks and cycles. The evidence indicates that:

- *Shocks do not contribute to the underwriting cycle because they are random and, hence, taken as not being truly representative of the future of “business as usual.”*

- *Shocks do affect underwriting practices by initiating efforts to eliminate or mitigate a newly perceived risk from interfering with “business as usual.”*
- *Shocks in the P&C industry have been more psychological than financial due to the protection of diversification.*
- *Cycles in premium income and underwriting can be attributed to underwriting decisions driven by the anticipated profitability of writing P&C insurance.*

Changes in economic and financial activity largely reflect one of three phenomena: long-term trends, intermediate-term cycles, and short-term shocks. This paper examines the specific experience of the property and casualty (P&C) insurance industry. In this case, shocks are defined as major underwriting losses resulting from a single event, typically referred to as a “catastrophic loss.” The “underwriting cycle” is measured by the deviation from trend of the industry’s premium income, underwriting results, and total operating gains. The paper’s intent is to describe how the industry responds to exogenous shocks, to try to identify the factors that drive the largely endogenous swings in the underwriting cycle, and to determine the extent to which shocks may trigger cyclical changes.

The views expressed here are those of the author and not necessarily those of NCCI, Inc.

The Scope of the Analysis

The analysis begins by examining the impact of Hurricane Andrew on the market for homeowners insurance. Next, the analysis is expanded to examine the impact of a series of catastrophic events during the 1980s and 1990s on the entire P&C industry. In addition to Andrew, the Northridge earthquake and the September 11 terrorist attack on the World Trade Center stand out as shock-loss events.

This examination of the impact of shocks is followed by a discussion of the underwriting cycle and the key factors that appear to drive the long-term financial performance of the P&C industry as a whole. The paper concludes by reviewing the key observations on the nature of shocks and cycles in the P&C industry and speculating on what they suggest about gaining a better understanding of economic shocks and cycles in general.

Shock Losses in Property Insurance—How the Industry Responds

The first part of the analysis focuses on Hurricane Andrew and the market for homeowners insurance as a case study of an underwriting shock loss. Some observers may argue that natural catastrophes pale in comparison to the events of September 11. However, the actual and potential consequences of natural catastrophes and terrorist events are comparable. Thus, Hurricane Andrew is a reasonable case study.

Hurricane Andrew vs. Sept. 11 losses at the World Trade Center

In March 2002, the Property Claims Service of the Insurance Services Office (ISO) estimated that the insured property losses from the September 11 attack on the World Trade Center in New York totaled \$20.3 billion. This estimate (Table 1) barely exceeded the inflation-adjusted estimate of \$19.6 billion of insured property losses generated in 1992 by Hurricane Andrew. Moreover, if Andrew were to happen today ISO estimates that the property losses would exceed \$23 billion because economic growth in the region means that more properties would be at risk.

ISO also indicated that the WTC property losses are associated with approximately 49,000 claims. In contrast, ISO reports that the property losses from Andrew were generated by more than 680,000 claims. (Insurance Information Institute, 2002). Moreover, the Insurance Information Institute stated that “the enormity of the World Trade Center has overshadowed what is still the greatest threat to insurers and their policyholders: natural disasters. If a megahurricane or earthquake hit a major city it could cause as much or more damage than a terrorist attack.”¹ The major difference is that unlike Andrew the terrorist attacks resulted in enormous loss of life. Because of advance warning, this extreme level of human loss is unlikely in even worst-case hurricane events; but high levels of injuries and fatalities are a real possibility if a major earthquake hit a densely populated urban area.

¹Unlike Andrew, the terrorist-related losses impacted a much broader range of insurance markets: in addition to property, these include most notably workers compensation, life, disability, and health insurance. These may result in an additional \$10 to 20 billion in insurance claims.

TABLE 1				
COMPARISON OF TWO SHOCK LOSSES				
	Terrorism— World Trade Center	Hurricane Andrew		
		Reported	Inflation- Adjusted	Exposure- Adjusted
Property Claims Costs (\$billions)	\$20.3	\$15.6	\$19.6	\$23.0
Number of Claims (estimated)	49,000		680,000	

TABLE 2				
CLAIMS AND RELATED EXPENSES AND PAYMENTS MADE ON HOMEOWNERS INSURANCE (BILLIONS OF DOLLARS – NOMINAL)				
	Claims and Expenses	Payments	Claims and Expenses	Payments
	Billions of Dollars–nominal		Excess of 1992 Over Indicated Year (percent)	
1991	16.9	10.6	50	64
1992	25.4	17.4	–	–
1993	17.8	11.3	42	54
1994	19.9	13.2	28	32
1995	19.7	12.8	29	36
1996	23.4	15.9	8	9
1997	18.6	12.0	36	45
1998	23.5	14.6	8	19
1999	24.1	15.3	5	14
2000	27.1	17.0	-7	2

Source: Loss and loss adjustment expenses incurred, homeowners insurance, A.M. Best & Co.(1992-2001).

FIGURE 1

EXCESS OF HOMEOWNERS CLAIMS EXPENSE IN 1992 (HURRICANE ANDREW) OVER THOSE OF INDICATED YEARS
(adjusted for inflation and growth in housing stock)

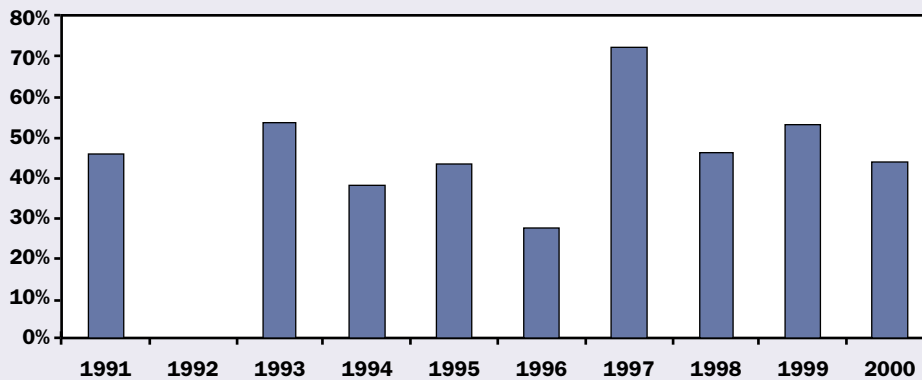


Figure 1 shows the same data as Table 2, adjusted for the increase in housing units as measured by the Bureau of the Census and the change in the NAR series for the average price of existing single family homes.

TABLE 3

UNDERWRITING GAINS AND LOSSES IN HOMEOWNERS INSURANCE

	Underwriting Gain/Loss (\$millions, nominal)	1992 Loss vs Other Years
1991	-3,241	+340%
1992	-11,030	-
1993	-2,816	+392%
1994	-4,089	+270%
1995	-2,862	+385%
1996	-4,919	+224%
1997	549	-
1998	-3,137	+352%
1999	-2,155	+512%
2000	-4,114	+268%

Hurricane Andrew—a case study

Hurricane Andrew's impact on homeowners insurance can be measured against a couple of benchmarks. The claims and expenses (Table 2) were 40 percent to 50 percent greater in 1992 than what might be termed "normal" based on the experience of adjacent years. In terms of cash flow, the pattern for payments was similar to that of claims: the initial claims payments in 1992 were 50 percent to 60 percent greater than comparable payments in 1991 and 1993; and it was not until the year 2000 that first year claims payments approached the level created by Andrew. The unique impact of Hurricane Andrew is even more apparent in Figure 1, which adjusts for the growth in the housing stock and the increase in housing prices during the 1990s. In real, exposure-based terms the claims expenses in 1992 would

have ranged from 28 percent to 72 percent greater than any other year in the decade. A similar pattern emerges for payments. In real, exposure-based terms the payments that would have been associated with claims occurring in 1992 ranged from 29 percent to 84 percent greater than other years in the decade.

The \$11 billion of underwriting losses in homeowners insurance in 1992 was more than three and a half times the average of just over \$3 billion in 1991 and 1993 (Table 3).² Moreover, the underwriting loss in 1992 was more than twice as great as any other year in the 1990s.³

Shock losses such as those resulting from Andrew typically are unprecedented and unanticipated. It is difficult to institute premium-pricing changes to cover perceived future exposures. From an actuarial perspective, these are "low frequency, high severity" exposures; and it is difficult to build associated costs into an annual premium rate because of the unpredictability of potential claims costs in any given year. From an accounting perspective, it is difficult to establish claims reserves to prefund the potential costs of these random events because liabilities generally must be linked to known, certain events that already have happened. For similar reasons, under current tax laws such reserves would have to be established with after-tax revenues.

Figure 2 suggests that the major underwriting loss due to Hurricane Andrew did not result in an immediate, noticeable adjustment in premium rates for private carriers; the industry's homeowners premium income grew at a steady pace over the decade.⁴ In part, this reflects the fact that in several states hurricane exposure and the associat-

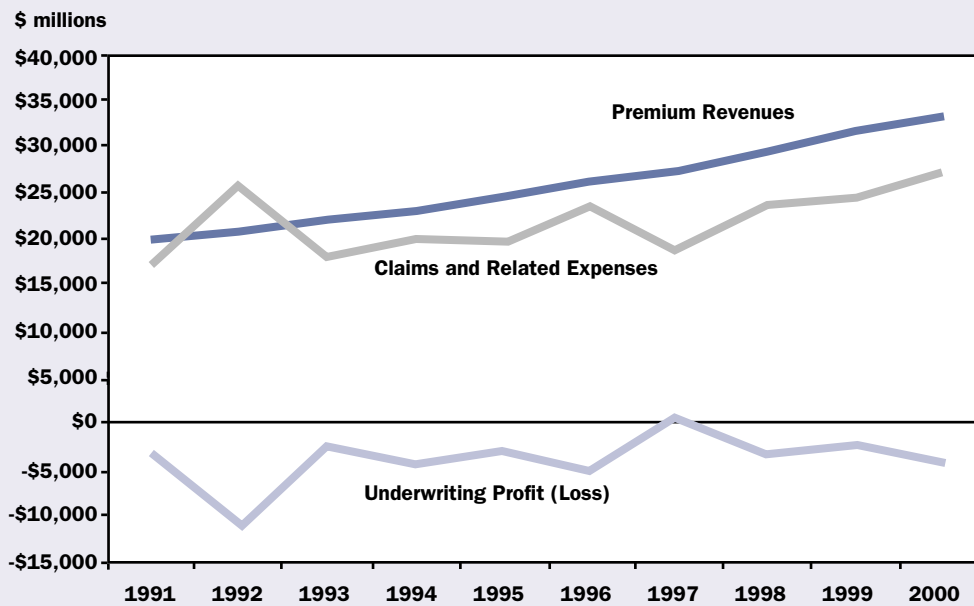
²As discussed below, investment income is the primary source of profits in the insurance industry.

³The impact was even more devastating for individual companies. The Insurance Information Institute (2002, p. 6) reported "Allstate, for example, paid out \$1.9 billion, \$500 million more than it had made in profits from its Florida operations from all types of insurance, including investment income, over the 53 years it had been in business."

⁴This was not true for homeowners living in areas exposed to hurricanes. Homeowners insurance rates for many residents in Florida, for example, went up substantially. Most of this, however, went to the state hurricane pool, not to P&C insurers. The data in this analysis cover the consolidated industry excluding state funds. Similarly the marked increase in premiums that initiated the current hard market began in early 2001 and was not a reaction to the losses sustained on September 11 (see Figure 10).

FIGURE 2

HOMEOWNERS INSURANCE CLAIMS AND EXPENSES ARE VOLATILE AND PREMIUM GROWTH IS NOT



ed premium were transferred to a public facility. Moreover, the fact that the windstorm exposures were being excluded from homeowner policies also eased pressure on state insurance regulators to approve significant premium rate increases, which also would moderate premium growth.

The industry and insurance regulators responded quickly to the newly perceived hurricane risk. The first step was to attempt to exclude coverage for hurricane related-damages from conventional homeowners insurance. To succeed, an alternative way to protect homeowners had to be developed that would also protect the P&C industry. The State of Florida worked with the industry to establish the Florida Hurricane Catastrophe Fund as a mechanism to provide the coverage, collect premiums, and build tax-sheltered financial reserves for major hurricane losses. In addition, consulting firms developed sophisticated hurricane catastrophe models to support actuarial rate making and reinsurance programs. Catastrophe (“cat”) bonds and other multi-year financial mechanisms were developed to engage the capital markets to help spread the financial risk over more appropriate time horizons.

Subsequent catastrophic events evoked a similar response. For example, the estimated \$12.5 billion of mainly commercial property losses from the Northridge earthquake in 1994 was also unprecedented. In contrast to Andrew, which devastated the housing stock in several

southeast states, this major California earthquake severely damaged or destroyed commercial buildings.⁵ The industry worked with the State of California to establish the California Earthquake Authority, a catastrophe pool comparable to the hurricane facilities established in the southeast. Cat models, specialized reinsurance, and cat-oriented financial instruments have now been developed to address the financial risks of earthquakes. Similar efforts have been launched in the aftermath of September 11. The primary difference is the belief of many observers that terrorism risk requires a country-wide solution as reflected in the federal Terrorism Risk Insurance Act (TRIA), which provides the P&C industry reinsurance-type financial support for losses resulting from major terrorist events.⁶

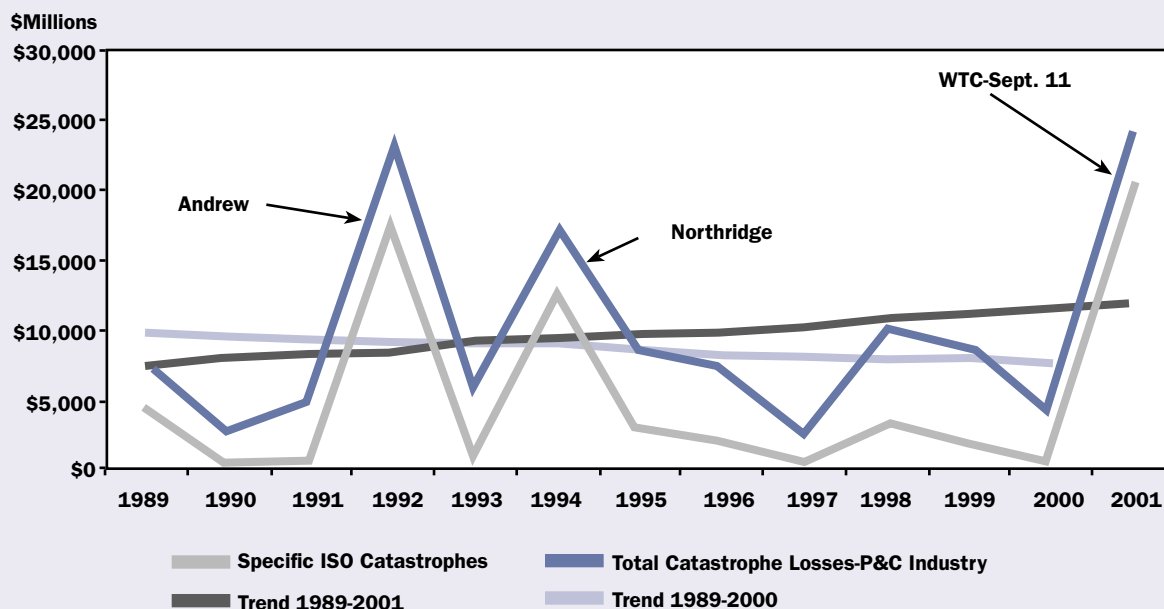
More than a decade of catastrophe losses in the P&C industry—only three events stand out. The response of the homeowners insurance market to Hurricane Andrew provides a case study of the impact of a single shock loss. In the 1990s, the P&C industry as a whole experienced three shock losses. ISO defines a specific catastrophic event as

⁵Frame construction, typical of housing, is less likely to be heavily damaged by the shaking that accompanies earthquakes; the more rigid construction of commercial buildings makes them more vulnerable.

⁶TRIA currently is scheduled to expire at the end of 2005. It is unclear what, if any, long-term alternative may be established to replace the reinsurance-type capacity of this federal program.

FIGURE 3

THREE EXTREME EVENTS BUT NO CLEAR TREND IN CATASTROPHIC PROPERTY LOSSES



Source: Insurance Services Office

one that generates property losses in excess of \$25 million.⁷ Figure 3 suggests that there has been virtually no trend in the total of cat losses over the 1990s; the trend is slightly down prior to 2001 and is slightly up when 2001 is included. Figure 3 also illustrates the difficult challenge of trying to include an appropriate factor in annual premium rates for cat losses; since 1989 there were three major, and distinctly different, specific cat loss events—essentially one every four years. But timing is everything; two were only one year apart while six years passed before the third.

Figure 3 also illustrates the key characteristics of a shock loss. It is enormous in its immediate financial impact; it is unprecedented in terms of its cause; and its timing is unanticipated. In actuarial parlance, it comes from the tail of a low-frequency, potentially high-severity, loss distribution. In spite of its magnitude, the analysis below suggests that it has little impact on conventional underwriting practices.⁸

Absorbing Shock Losses in the P&C Industry—The Portfolio Effect in Action

The analysis in this section and the next separates changes reflecting long-term trends from short-term movements about those trends. The trend components are estimated based on regression analysis of the relevant time series relative to a linear trend line. The reported “trends” are the fitted values based on these regressions. The short-term movements, referred to interchangeably as “deviations from trend” or “trend deviations,” are calculated as the difference between the actual series and the fitted or estimated trend of that series. At its heart the insurance business is based on the benefits of the portfolio effect. Insurance is designed to build portfolios of diversifiable risks and to hedge the systematic risk in these portfolios. Reinsurance is used to hedge the small probability associated with potentially large losses—either in individual policies or in a portfolio of policies.⁹

Insurers can also diversify systematic risk in specific portfolios by writing two or more types of insurance with systematic risks that are largely unrelated, for example, homeowners and workers compensation. Figure 4 makes

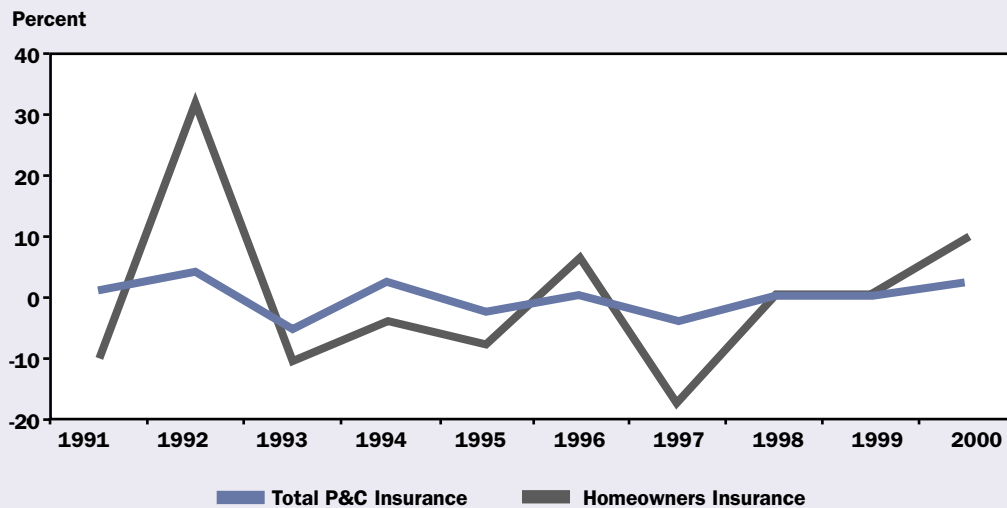
⁷More precisely, the threshold was \$5 million through 1996 when it was increased to \$25 million as reported in Insurance Information Institute (2002, p. 14).

⁸As noted in the previous sections the specific exposures were excluded from conventional insurance policies and typically were handled by some form of special pooling.

⁹For example, excess of loss reinsurance might transfer or hedge individual claims costing, say, more than \$50,000. In contrast, aggregate reinsurance might be used to transfer losses on a portfolio of insurance policies once total claims exceed, say, \$50 million.

FIGURE 4

THE PORTFOLIO EFFECT: CLAIMS COSTS INCURRED IN TOTAL P&C INSURANCE VS. HOMEOWNERS INSURANCE
(Percent Deviation from Trend, 1991-2000)



"Aggregates and Averages" for 1985 through 2001. A.M. Best Company, Oldwick, New Jersey.

clear that the volatility in claims costs from homeowners insurance is considerably greater than the variability in claims costs from all classes of P&C insurance. Indeed, the year-to-year movement in claims costs for the entire industry appears to be remarkably stable.¹⁰ Stable investment income also provides the P&C industry a major source of revenue that is largely independent of the swings in underwriting performance.

Diversification has limited the impact of the volatility of shock losses. But even in isolation, the extreme events experienced by the P&C industry are generally rather modest relative to the resources of the P&C industry.¹¹

- The \$16 billion shock loss from Andrew was less than ten percent of the industry's total estimated claims costs in 1992.
- The resulting \$11 billion underwriting loss in 1992 in

¹⁰This is a fundamental explanation of the transition of the industry from specialty, mono-line companies to "multi-line" carriers over the past 50 years.

¹¹Perhaps equally important—we have been lucky. The Northridge earthquake that caused extensive damage and destruction to commercial property occurred at 4:30 in the morning. A similar event six hours later would have resulted in extensive human casualties. Similarly, under slightly different circumstances the loss of life at the World Trade Center arguably could have substantially greater than the losses actually sustained on September 11.

homeowners insurance was roughly seven percent of industry surplus (which actually increased by \$4 billion in 1992.)

- The \$7 billion increase in claims payments for homeowners insurance in 1992 relative to 1991 was barely three percent of the industry's cash inflow from all P&C premium collections during the year.

The scope of the financial impact on P&C insurers of the September 11 events was far broader than previous natural catastrophes. The estimated \$20 billion of property losses was huge, but the additional \$20 billion of estimated liability claims for lines such as general liability and workers compensation was unprecedented.

- The estimated \$40 billion of insured losses on September 11 was less than ten percent of the industry's total estimated claims costs in 2001.¹²
- The \$40 billion was approximately 12 percent of the industry's surplus.¹³
- The cash flow impact of 2001 claims payments was also modest relative to the industry's resources. The first two years of cumulative payments for claims occurring in 2001 were \$11 billion or seven percent

¹²The P&C industry's earned premium from direct and assumed business was approximately \$450 billion.

¹³In comparison increases in unrealized capital losses in the industry's holdings of equities reduced surplus by more than \$18 billion.

FIGURE 5

DIVERSIFICATION OVER TIME: MULTI-YEAR AVERAGING SMOOTHS VOLATILITY INTO AN APPARENT CYCLE

Three-year Moving Average of Underwriting Income

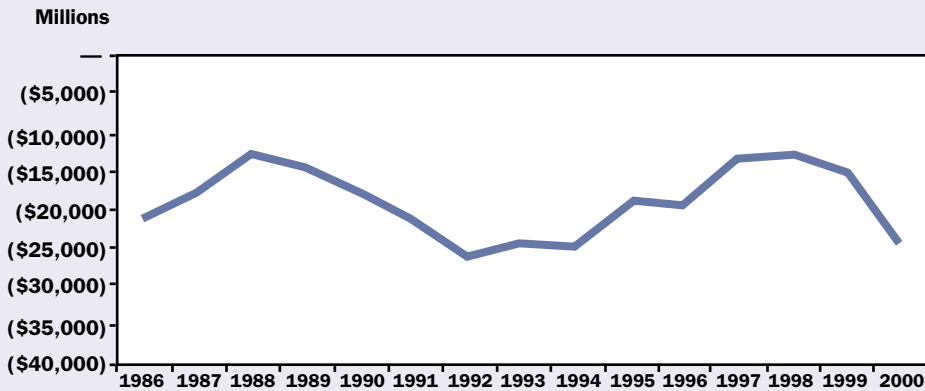
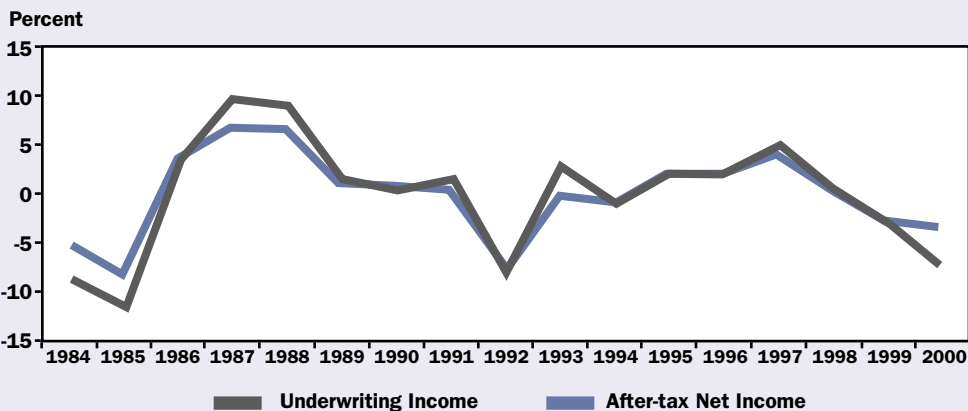


FIGURE 6

UNDERWRITING AND AFTER-TAX NET INCOME, PERCENTAGE DEVIATION FROM TREND



greater than similar payments for claims occurring in 2000. This increase was less than four percent of the industry's cash in-flow from premium collections in 2001.

The timing of shock losses in financial reports creates a volatility that largely disappears if results are measured over periods greater than a year. This is seen in the three-year moving average of underwriting results (Figure 5). While diversification over time may not be an appropriate concept for many businesses, it seems appropriate when considering the risks of catastrophic losses and underwriting profits. The smoothing of the impact of shock losses in Figure 5 suggests that there is a cycle in underwriting results. The nature of this cycle is examined in the

next section. One conclusion is that the industry's cyclical movements are unrelated to shock losses.

The Underwriting Cycle

The P&C industry experienced three shock loss events in the 1990s; each had a unique and unprecedented cause. In each case the industry modified its business practices to insulate itself from such future events. As a consequence conventional insurance operations continued to function as "business as usual." One notable characteristic of this is the chronic cycle in underwriting profitability.

Figure 6 highlights the P&C industry's well-known underwriting cycle expressed as a percentage deviation from trend. It also depicts the percentage deviation from trend of the movement of the industry's after tax income and shows that the cycles of these variables are closely linked.

The phases of the underwriting cycle are typically referred to as "hard" and "soft" markets. Hard mar-

kets are characterized by tightened underwriting standards and dramatic increases in premiums as shown by the circled years in Figure 7. These periods are followed by soft market periods of easing of underwriting criteria and premium rates. The cycle in underwriting profits tends to lag the changes in premium income due primarily to written premiums becoming earned income over the term of the policy, typically 12 months. Thus strong growth in written premium in one year will not be fully reflected in underwriting results until the next year.¹⁴

Critics of the industry's underwriting performance

¹⁴There is some evidence that insurers often adjust their liability reserves for future claims payments in conjunction with premium changes. Typically liabilities for future payments are increased ("strengthened") in hard market conditions and are reduced ("released")

FIGURE 7

P&C PREMIUM IS CYCLICAL

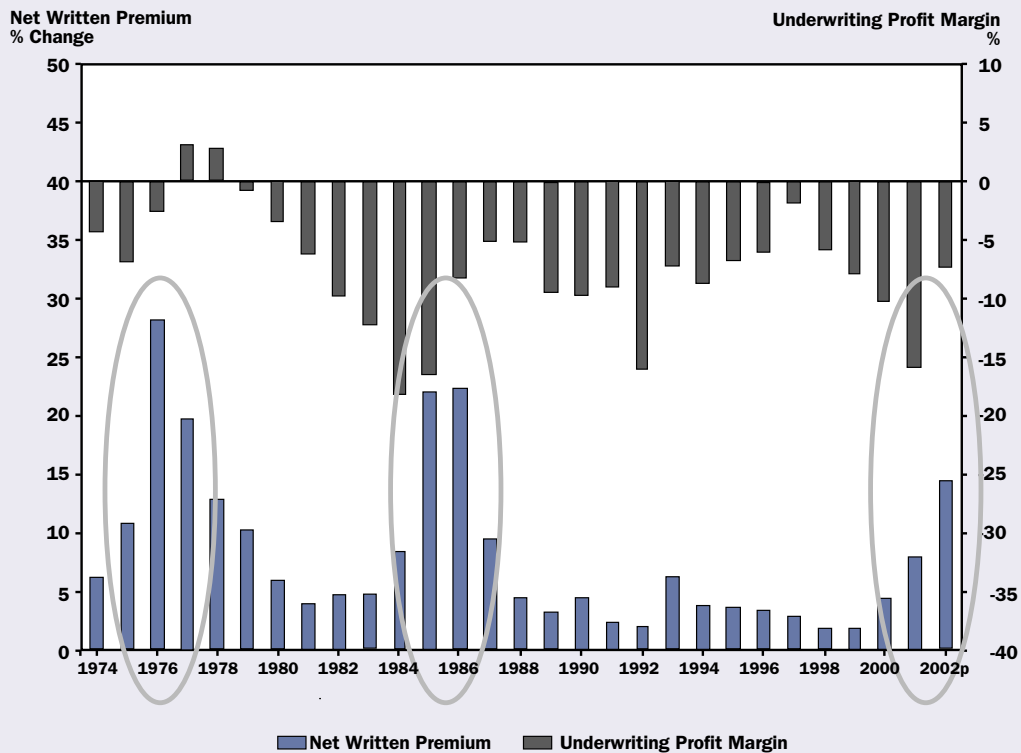


FIGURE 8

RETURN ON SURPLUS CONTRIBUTIONS OF UNDERWRITING AND INVESTMENT INCOME

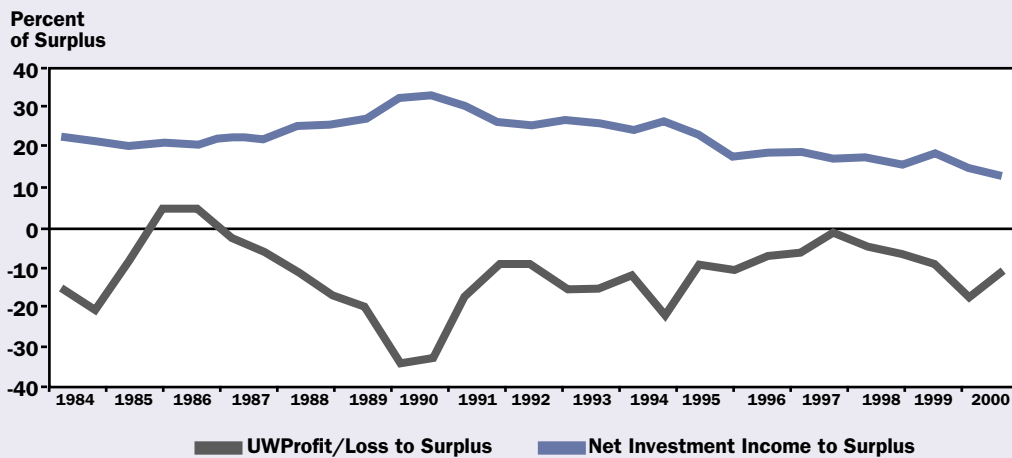
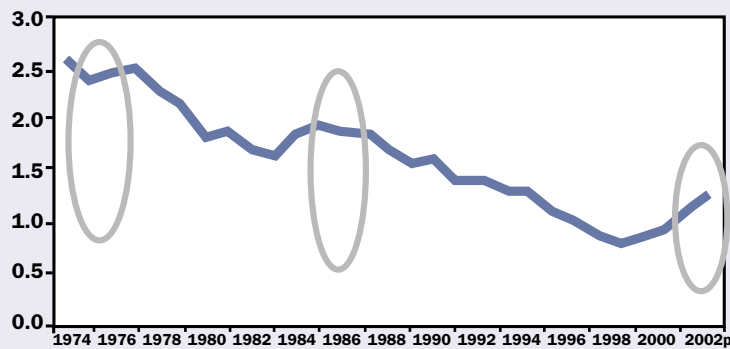


FIGURE 9

THE RATIO OF PREMIUM TO SURPLUS

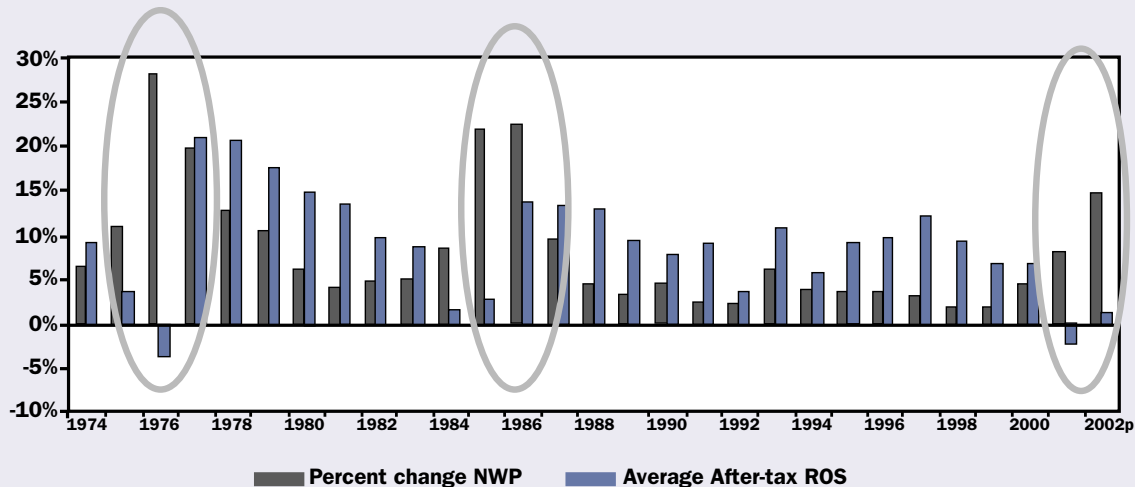


ment performance has consistently been the primary source of P&C industry profits (Figure 8). Unlike underwriting it has been relatively stable and positive. One could argue that the perceived opportunity for investment income does lead to aggressive cash flow underwriting. Alternatively, it can be argued that the actual objective of P&C financial managers is an adequate total return and that their challenge lies in achieving a proper balance between reasonably stable investment income and volatile, uncertain underwriting results.¹⁶

The premium to surplus ratio is a traditional measure of underwriting capacity that is also embedded in regulatory capital adequacy

FIGURE 10

RELATION OF PREMIUM CHANGES AND RETURN ON SURPLUS



often refer to “cut throat” competition in pricing. At times, this is attributed to “cash flow underwriting”—the willingness to write business at seriously depressed prices in order to generate funds for their potential investment returns. At other times, there have been discussions of “excess capacity” (i.e., too much surplus¹⁵) as the reason for excessive price competition. Both of these carry the suggestion that irrational behavior drives the underwriting cycle.

There is no doubt that investment income should be an important consideration in underwriting decisions. Invest-

during soft markets. It may be that the reassessment of previous estimates of claims experience causes the changes in underwriting conditions and premium rates. In any case it adds to the lag between changes in premium volume and subsequent changes in underwriting profits.

¹⁵Surplus is the statutory equivalent of shareholders' equity.

tests. The basic idea is that because underwriting results are uncertain there must be sufficient capital to cover adverse experience. The excess capacity argument is that the pressures to earn adequate returns on high levels of surplus lead to aggressive competition. The trend of the declining ratio of premium to surplus is shown in Figure 9. While it is beyond the scope of this paper to examine all of the factors that contribute to changes in this ratio, the two pronounced soft markets were an indication of growth in underwriting capacity. It should be noted, moreover, that in addition to increases in surplus the slowing of premium growth in the soft market would exert downward pressure on the ratio.

¹⁶Industry observers, for example, have noted that insurance is an industry that does not know its cost of goods sold until well after the sale.

FIGURE 11

PERCENT CHANGE IN EARNED PREMIUM AS PREDICTED BY UNDERWRITING PROFITABILITY
TWO YEARS EARLIER: ACTUAL VS. FITTED

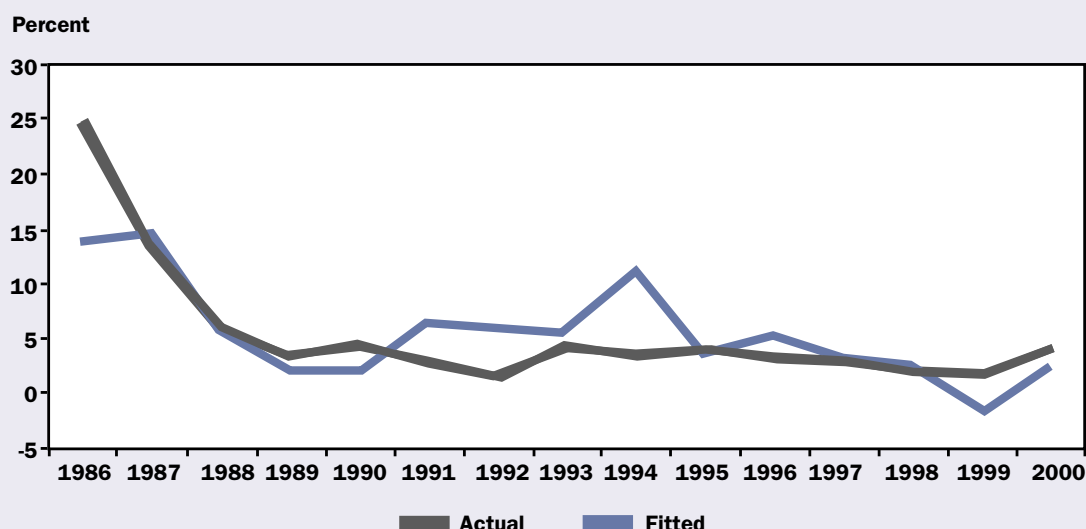


Figure 9 presents evidence that is consistent with the conventional arguments that the underwriting cycle is the consequence of aggressive competition due to excess capacity. The data, however, also support a more plausible argument—the hard market is a response to low or negative rates of return on surplus. Figure 10 indicates that the marked increases in the industry's written premium followed negative or single digit returns. These low returns would also contribute to the declines in surplus observed.

After at least three decades of blaming excess capacity and cash flow underwriting, it may come as a surprise to many in the P&C industry that there is a more reasonable explanation for the forces generating the underwriting cycle: inadequate rates of return force management to reassess their business practices. They have greatest control over their underwriting activities, and corrective actions produce very attractive returns. This generates additional competition, which drives down the rate of return. Eventually, it reaches unacceptably low levels and the cycle repeats.

A regression of the percentage change in the earned premium against underwriting profitability lagged two years resulted in an R adjusted for degrees of freedom of .52. A fit of the equation's predicted versus actual values (shown in Figure 11) seems to track remarkably well, given the variety of other factors that are likely to influence annual premium volume. Moreover, a material portion of the estimation errors in the 1990s can be attributed to the random impact of extreme natural catastrophe losses—in particular Andrew in 1992 and Northridge in 1994—on underwriting prof-

itability. It appears that these are not reflected in subsequent adjustments in premium income.¹⁷

Shock Losses in Insurance Often Generate Windfall Gains for the Economy

Shock losses have had an adverse impact on the financial performance of the P&C industry. However, the industry has been able to absorb these blows and to continue operating with little difficulty. More importantly, the industry's ability to manage the financial aspects of these catastrophic events has helped to soften the blow to economic activity generally. Indeed, the claims payments for, say, property damage have served to help stimulate the economic recovery in the regions affected by the catastrophe.

Table 4 lists the major catastrophic events experienced by the P&C industry and by the Federal Emergency Management Agency (FEMA).¹⁸ The role of the P&C industry stands out. Indeed, at \$31 billion, claims payments contributed almost four times as much to economic recovery as the \$8 billion of relief payments from FEMA. The multiplier effect of these undoubtedly

¹⁷Data for 2001 and 2002 were not available when the analysis was done. However, it is revealing that the relative increases in industry premium were lower in 2001 and 2002 than in the two previous hard markets. This is true in spite of the multi-line impact of the losses incurred on September 11, 2001.

¹⁸The P&C total excludes Hurricane Floyd since comparable data for FEMA were not available.

TABLE 4

**CLAIMS PAYMENTS HELP TO FINANCE ECONOMIC RECOVERY:
THE “TOP ELEVEN” WORST HURRICANES ACCORDING TO THE
P&C INDUSTRY AND FEMA**

The “Top Eleven” Worst Hurricanes P&C Industry and FEMA Cost						
ISO Property Losses “Thirty Most Destructive Hurricanes” 1949-1999				FEMA Relief Costs “Top ten Hurricane Disasters” 1953-1998		P&C% of Total
Year	Event	Rank	Reported (\$ million)	Rank	Reported (\$ million)	
1999	Floyd	5	\$1,960	NA	NA	NA
1992	Andrew	1	\$15,550	2	\$1,844	89%
1989	Hugo	2	\$4,195	3	\$1,334	76%
1998	George	3	\$2,995	1	\$2,403	55%
1995	Opal	4	\$2,100	9	\$192	92%
1992	Iniki	6	\$1,600	7	\$260	86%
1996	Fran	7	\$1,600	4	\$614	72%
1995	Marilyn	8	\$875	5	\$498	64%
1979	Frederic	9	\$753	8	\$226	77%
1983	Alicia	10	\$676		under \$99	
1991	Bob	11	\$620		under \$99	
TOTALS excluding Floyd			\$30,924		<\$8,063	

played a major role in the ensuing recovery from regional devastation.

Lessons Learned from the Shocks and Cycles of the P&C Industry

In his General Theory, Keynes (1936, p. 51) argued that “Although output and employment are determined by the producer’s short-term expectations and not by past results, the most recent results usually play a predominant part in determining what these expectations are. ...Accordingly it is sensible for producers to base their expectations on the assumption that the most recently realized results will continue, except in so far as there are definite reasons for expecting a change.”

Interpreting Keynes, it would seem that it is not necessarily irrational to extrapolate from the recent past. Rather it is irrational only if decision makers fail to recognize and incorporate evidence that conditions are likely to change. Given that many economists have a difficult time identifying turning points in economic activity, perhaps it is not unreasonable for most people to rely on trend extrapolation. It appears that in the P&C industry people do both.

Extrapolating recent experience

Cycles can be attributed to insurer responses to market profitability. While in hindsight this may appear to lead to irrational behavior, it seems to be reasonable in the short

term. When rates of return are attractive, insurers compete for additional business. When returns fall to low levels, insurers become more selective and are willing to lose business that appears to be unprofitable.

Moreover, the challenge lies in predicting the timing of the next turning point, with sufficient lead-time to take meaningful decisions. This is never an easy task, even for experienced professional forecasters.

Shocks have minimal impact on cycles. The evidence suggests that in the P&C industry the impact of shock losses has little relation to cycles in financial performance. Shocks may have a momentary impact on the group psyche, but in general, if they can be excluded from future business exposures, they do not seem to impact the course of decisions related to conventional underwriting.

Other observations on the nature of shock-loss events

Shock losses have both immediate and long-term costs. Although it typically involves public mechanisms, property and—since September 11—liability insurance costs increased to reflect the expected losses of previously unrecognized or under-estimated catastrophic exposures. Additional transactions costs are incurred to more accurately assess the risk of a specific policyholder’s exposure—earthquake, hurricane, and now terrorism.

Some of the new costs are more general than insurance prices—changes in building codes, for example, will increase construction costs but should reduce insurance costs. Similarly, efforts to mitigate terrorism risk will impose new, ongoing costs on the flow of resources and productivity—for example, those that impact transportation and immigration. The impact on insurance markets should be favorable as insurers become better able to assess terrorism exposures and therefore more willing to provide coverage at affordable costs.

Shocks can stimulate even as they inhibit financial performance. As illustrated by the P&C industry, one group’s financial shock loss can create opportunities for unexpected financial opportunities for others. Natural catastrophes typically stimulate the construction trades; much of this is financed by the surge in claims costs borne by the P&C industry. In a paper assessing the social and eco-

nomic costs under liability concepts, Goldberg (1994) made the point that the losses suffered by individuals generally are significantly greater than the net costs to society. As an example, the loss of tourism in Alaska after the Exxon Valdez oil spill undoubtedly resulted in an unexpected up tick in tourism elsewhere. Similarly, it was reported that many of those whose livelihoods were threatened by the disruption in fishing were hired at attractive wages by Exxon to help with the cleanup.

Shocks actually have been more psychological than financial due to the benefits of diversification. Thus, the financial resources of the P&C industry have been able to absorb the extraordinary shock losses from catastrophic events. ■

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