THE U. S. INSURANCE INDUSTRY

Structure, Performance, and Prospects

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EXECUTIVE SUMMARY

U. S. insurers have achieved their strong position in the world insurance industry primarily through servicing demand in the large domestic markets. Future growth will require U. S. insurers to cultivate a more international focus.

The life and the property-casualty sides of the industry are financially healthy. Continued profitability will require successful adjustment to current and emerging competitive and risk pressures. Liability exposures—particularly in catastrophe coverages—threaten profitability for property-casualty insurers.

The next decade is likely to bring significant changes in the structure and operation of both life and property-casualty insurers. Increased competition from banks, mutual funds and securities firms on the life insurance side of the industry, and from self-insurance and customer-generated insurance mechanisms on the property side, will heighten competitive pressures. The need for cost containment will lead companies toward consolidation, adoption of information technology and possibly increased product specialization.

Domestic market growth, particularly for the life business, is slowing. However, world markets are becoming more open and enticing for U. S. insurers. Despite some continuing barriers to market entry, international insurance markets are increasingly open to foreign competitors. The recent international trade liberalization agreements championed by the United States and other market-liberalizing actions have increased market opportunities for U. S. companies. Fast-growing economies in Asia and in Latin America are potentially large insurance markets.

Technology gains in telecommunications, computer information and data processing have contributed to increased efficiencies and productivity. The new technologies also facilitate the development and servicing of global markets.

Enhanced competition, the technology revolution, and development of global markets will change the face of the U. S. insurance industry over the next decade. These developments, together with slow growth in the domestic market, will lead to new products, reduced costs and a more streamlined and competitive industry—an ultimate boon to both insurers and their customers.

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I. INTRODUCTION

The insurance industry plays a critical role in the American economy, providing individuals and businesses with a broad spectrum of financial security products and playing a major role in financial intermediation. Individuals and their families look to insurance companies to provide life insurance, retirement income, health insurance, and automobile and homeowners property and liability coverages. Businesses rely on insurers for similar coverages as well as workers compensation and more specialized products like product liability and marine insurance.

This paper surveys the structure and performance of the U. S. insurance industry.[1] It focuses on the converging forces that are changing the organization and operations of American insurance companies. Chief among these forces are the competitive pressures stemming from a blurring of product and industry roles within the financial services industry, a maturing domestic market, and the domestic and global impacts of information technology.

[1] The Office of Policy Development, Economics and Statistics Administration, prepared this study of the U. S. insurance industry at the request of the Commerce Department's Technology Administration (TA) in support of TA's industry benchmarking project.

II. CHARACTERISTICS OF THE INDUSTRY

SCOPE

The U.S. insurance industry provides a broad range of financial security products for both individuals and businesses. The industry includes primary insurers, reinsurers, and agency and brokerage firms. Reinsurers provide insurance to insurers.[2] Insurance companies fall in two general categories: life insurers and property-casualty insurers. A precise count of U. S. insurance companies is not available since many insurers are very small and many are not currently operating.

At the close of 1993 there were 1,840 U. S. operating life insurance companies, down from over 2,300 in 1988.[3] Fewer than 200 companies account for more than 65 percent of both insurance company assets and life insurance in force.[4]

The number of groups[5] and individual property-casualty insurers operating in the United States peaked at 1,272 in 1990 and declined to 1,197 in the end of 1993.[6] In 1994, the four largest property-casualty insurance groups wrote about 25 percent of the business (measured by net premiums) and the market share of the top 10 groups was just over 40 percent.[7]

Products

Life insurers provide a variety of insurance products grouped within three product categories—life insurance, annuities and health insurance.[8] Life insurance includes ordinary (individual) and group life insurance, both of which include whole life,

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[2] Reinsurance is considered part of the property-casualty business. Reinsurers have about a 6% share of the property-casualty market.

[3] American Council of Life Insurance (ACLI), *Life Insurance Fact Book 1994* and A. M. Best, *Best's Aggregates and Averages*, 1994 Edition.

[4] ACLI, *Life Insurance Fact Book 1994.*

[5] Insurance groups are those multiline companies such as Aetna or State Farm which each consist of more than one operating company.

[6] Insurance Services Office, Inc. (ISO), *Insurer Financial Results: 1994*, June 1995. According to the Insurance Information Institute *(The Fact Book 1995)*, there were 3,916 individual property-casualty companies in 1994; however, about 900 companies wrote most of the business.

[7] ISO, *Insurer Financial Results: 1994.*

[8] The primary SIC categories of life insurers are SIC 631 "Life Insurance" and SIC 6321 "Accident and Health Insurance."

endowment, and term insurance; industrial life (policies for amounts less than $1,000); and credit life insurance (term insurance used to repay a debt following the borrower's death). The fastest growing life products, annuities, consist of individual and group annuities, which provide variable and/or fixed income. They also include supplemental contracts that provide life income from life insurance policy proceeds. Health insurance is written for individuals and groups.[9] Table 1 shows the dramatic shift in product emphasis in recent years. Over the period the annuity share went from 10 percent of the business to 47 percent and life insurance dropped from 59 percent to 29 percent. The share of health insurance premium remained relatively constant.

Table 1
Life Insurance Industry Premium Receipts By Line Of Business
(Millions of dollars)

	1970	1975	1980	1985	1990	1994
Life insurance	21,679	29,336	40,829	60,127	76,692	96,271
Annuity considerations[1/]	3,721	10,165	22,429	53,899	129,064	153,850
Health insurance	11,367	19,074	29,366	41,837	58,254	76,221

1/ Includes deposits collected for future purchase of annuities and therefore may differ from other published sources of life insurance premium receipts.
Source: American Council of Life Insurance

Property-casualty insurers provide individual and commercial automobile insurance; homeowners multiple peril; commercial and farmowners multiple peril; crop insurance; fire and allied lines (including earthquake insurance); general liability; medical malpractice; workers compensation; surety and fidelity; burglary and theft; boiler and machinery; glass; inland and ocean marine and nuclear insurance.[10] Table 2 shows the property-casualty product lines by net premiums written from 1970 to 1993. There has been no significant change in product distribution over the period.

Table 2
Property-Casualty Industry Net Premiums Written By Lines Of Business
(Millions of dollars)

	1970	1975	1980	1985	1990	1993
Fire, allied, and multi-peril	7,166	11,857	22,045	33,106	44,373	47,810
Accident and health	1,912	1,820	3,291	3,205	4,948	6,796
Workers compensation	3,533	6,186	14,238	17,048	30,957	30,321
Medical malpractice & other liability	2,170	3,981	7,690	14,313	22,138	22,122
Auto liability/physical	15,071	20,938	39,152	61,333	95,367	109,712
Reinsurance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
All other lines[1]	2,727	3,924	5,981	9,500	12,420	14,911

1/ All other lines: ocean marine, inland marine, aircraft, glass, burglary, boiler & machinery, fidelity, and surety.
Source: Bests' Aggregates and Averages, 1994.

[9] The health insurance referred to in this paper includes only health insurance provided by private, for profit or mutual insurance companies. It does not include Blue Cross/Blue Shield plans or government plans.

[10] Property-casualty companies are classified in SIC 633, "Fire, Marine and Casualty Insurance."

Size

Compared with other industries, the insurance industry produces a relatively small share of total output. As Table 3 shows, the industry contributed roughly $100 billion to total gross domestic product in 1993, up from $80 billion in 1981. In terms of output, the insurance industry is about four-fifths the size of the commercial banking industry. In 1993, the insurance industry's contribution to total output was about 2 percent compared with almost 18 percent for financial, insurance, and real estate industries as a group. The insurance industry's share of total output has remained steady over time.

Table 3
Insurance Industry Contribution To GDP Relative To Other Selected Industries
(Billions of 1987 dollars)

	1981	1990	1993	Average Annual Growth Rate 1981-93	Share of GDP 1993 %	Change in Share 1981-93 %
Gross domestic product	$3,843.0	$4,897.0	$5,135.0	2.4	100.0	
Manufacturing-durable goods	429.7	537.0	573.3	2.4	11.2	0.0
Manufacturing-nondurable goods	317.1	391.5	397.5	1.9	7.7	-0.5
Transportation	116.5	168.9	193.5	4.3	3.8	0.7
Communication	98.7	140.8	158.9	4.0	3.1	0.5
Electric, gas, and sanitary services	121.9	152.9	163.5	2.5	3.2	0.0
Wholesale trade	207.5	319.5	356.6	4.6	6.9	1.5
Retail trade	330.6	478.1	511.8	3.7	10.0	1.4
Finance, insurance, and real estate	704.7	868.3	915.0	2.2	17.8	-0.5
Banking and depository institutions	111.2	135.1	123.3	0.9	2.4	-0.5
Insurance carriers	56.9	60.1	67.7	1.5	1.3	-0.2
Insurance agents and brokers, and services	23.6	32.1	31.1	2.3	0.6	0.0
Services	624.4	869.4	914.2	3.2	17.8	1.6
Health services	202.1	241.4	255.3	2.0	5.0	-0.3
Legal services	51.6	66.1	65.3	2.0	1.3	-0.1

Source: Bureau of Economic Analysis

Insurance industry sales (measured by net premiums) are fairly high compared with other industries. In 1993, premiums were $583 billion ($341 life/health and $242 property-casualty), roughly equal to sales of the chemicals industry and double the sales of the auto industry.

In 1994, insurance carriers employed over 1.5 million workers; insurance agents, brokers, and providers of other insurance services employed 852,000 workers. Insurance industry workers represent less than 2 percent of U.S. industry employment. Between 1981 and 1994, as Table 4 shows, the size of the industry remained unchanged, while employment in the service sector as a whole grew from 53 percent to 61 percent of total U. S. employment.

Table 4
Industry Employment—Selected Industries
(Employment in thousands)

	1981	1990	1994	Average Annual Growth Rate 1981-94	Employment Share 1994 %	Change in Share 1981-94 %
ALL INDUSTRIES	102,833	122,117	126,958	1.6	100.0	
Manufacturing-durable goods	12,316	11,379	10,677	-1.1	8.4	-3.6
Manufacturing-nondurable goods	8,243	8,145	8,059	-0.2	6.3	-1.7
ALL SERVICES	54,950	72,550	77,420	2.7	61.0	7.6
Transportation	3,212	3,816	4,141	2.0	3.3	0.1
Communications	1,396	1,320	1,316	-0.5	1.0	-0.3
Electric, gas, and sanitary services	868	965	940	0.6	0.7	-0.1
Wholesale trade	5,684	6,519	6,493	1.0	5.1	-0.4
Retail trade	16,915	21,211	22,041	2.1	17.4	0.9
Finance, insurance, and real estate	5,760	7,362	7,563	2.1	6.0	0.4
Banking and depository institutions	1,977	2,255	2,078	0.4	1.6	-0.3
Insurance carriers	1,240	1,462	1,551	1.7	1.2	0.0
Insurance agents, brokers, and services	616	843	852	2.5	0.7	0.1
Other Services	21,115	31,357	34,926	3.9	27.5	7.0
Health services	5,922	8,233	9,391	3.6	7.4	1.6
Legal services	727	1,113	1,170	3.7	0.9	0.2

Source: Bureau of Labor Statistics

Role In The Economy

It is difficult to quantify the importance of and need for a strong and competitive insurance industry. Traditional measures of importance such as relative employment and output shares do not accurately convey the pervasiveness of the U.S. insurance industry. A healthy insurance industry is able to provide extensive coverage at reasonable cost for a broad assortment of economic activities and spread the risk of loss throughout the economy.

The demand for insurance coverage and the need for limiting exposure to risk is an economy-wide concern, although insurance needs vary by industry and by individual. Economic dislocations can occur when insurance needs are not met. During the late 1970s and 1980s, availability and affordability problems occurred in product liability and commercial liability coverages. Businesses found these liability coverages scarce and expensive and many companies were forced to operate without insurance.

In addition, the insurance industry affects overall economic activity through its financial intermediation. Financial intermediaries make credit markets more liquid and efficient, which, in turn, lower the costs of borrowing and increase the range and return on investments to savers. The insurance industry is the U. S. economy's second largest financial intermediary after the commercial banking industry. Insurance companies held $2.7 trillion in assets in 1994 and accounted for roughly one-fifth of the funds supplied to credit markets by private financial intermediaries. Table 5 shows the share of credit market instruments held by the insurance industry. Since 1970 insurance companies have become less dominating players in the mortgage market, especially multifamily residential, and much larger participants in the government bond market.

Table 5
Share Of Outstanding Credit Market Instruments
Held By The Insurance Industry
(Percent)

	Private Bonds	Equity	Mortgages		Government		
			Commercial	Multifamily Residential	U.S. Treasury	Federal Agency	Tax Exempt
1970-1979	38.5	4.5	29.0	19.9	2.3	4.8	17.5
1980-1984	38.9	5.3	30.7	12.7	3.2	7.2	21.3
1985-1990	36.2	4.9	27.3	8.7	5.5	10.0	14.8
1991	38.8	4.8	29.2	9.7	6.2	12.2	12.9
1994	36.0	5.0	25.9	8.5	7.3	13.1	13.7

Sources: Congressional Budget Office and Federal Reserve System "Flow of Funds Accounts."

The insurance industry invests mostly in corporate bonds, commercial mortgages, and stocks. The composition of investments vary by type of insurer; for example, life insurance companies insure against long-term risks and therefore invest in assets with longer maturities such as corporate bonds and mortgage loans. Property-casualty companies hold fairly liquid investments—in assets such as short-term government bonds, stocks, and tax-exempt securities. Life/health insurers dominate the market for corporate bonds and commercial mortgages and, at the end of 1994, were the nation's largest holders of corporate and foreign bonds and the second largest holders of commercial mortgages. The market for tax-exempt securities relies heavily on the property-casualty industry for funds. The industry was the nation's third largest holder of tax-exempt securities in 1994, with 12 percent of the market.

STRUCTURE

Regulatory Framework

The states regulate insurance and insurers in the United States. Insurers must meet the licensing and operating standards of each state in which they to do business. Solvency regulation rests primarily with each insurer's domiciliary state but rate regulation—assuring that rates are adequate, not excessive and not unfairly discriminatory—is performed by all states for insurance firms operating in their respective jurisdictions. States also regulate policy forms and coverages, market conduct, and product availability.

The National Association of Insurance Commissioners (NAIC), a voluntary association of the heads of state insurance departments, works to standardize regulatory requirements through the issuance of NAIC Model Laws (e.g., the recently adopted risk-based capital standards for both life and property-casualty insurers) which states are urged to enact. A relatively new NAIC program accredits states that have enacted specific model laws (or their equivalent) and meet certain performance criteria. The program was created to strengthen the state regulatory system following several highly-publicized insurer failures in the 1980s and early 1990s and to defuse Federal insurance regulatory initiatives.

All states maintain guaranty funds (both life/health and property-casualty) to limit policyholder losses in the event of insurer insolvency. These funds, supported by assessments against insurers, do not cover all lines of business or all losses and most have coverage caps and other limitations.

Concentration

Concentration in the insurance industry has increased somewhat as the result of recent merger activity. Property-casualty insurance is more concentrated than life insurance, although neither industry is concentrated in an overall sense.[11] Greater concentration exists in particular lines of insurance and markets are quite concentrated in some local areas. In 1993, the top three insurance groups writing homeowners insurance accounted for over 40 percent of the premium for that line; in auto insurance, the top three groups accounted for just over 35 percent of the premium.

The insurance industry has undergone a wave of merger and acquisition activity in recent years in response to overall economic conditions, new competitors and an emphasis throughout the industry on cost reduction. Both the life and the property-casualty segments of the insurance industry have been subject to this activity. The dollar value of mergers and acquisitions in the insurance industry reached $12.5 billion in 1994, surpassing prior records in both segments of the industry.[12] Mergers and acquisitions in life insurance exceeded $7.3 billion and the number of property-casualty mergers and acquisitions rose from 33 with a value of $1.9 billion in 1993 to 65 with a value of $5.3 billion in 1994. About 73 broker mergers occurred in 1994, about the same number as in the last couple of years but only half the number of mergers occurring in 1989 and 1990.

It is not yet clear whether the record merger and acquisition activity will result in increased or decreased competition. The majority of consolidations in the property-casualty industry may be the result of insurers spinning off or shedding non-core lines of business which would result in an increase, rather than a reduction, in competition.[13]

Further consolidation in both the life and the property-casualty sectors is likely as a response to continuing competitive pressures in both sectors. For life insurers, this

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[11] ISO, *Insurer Financial Results: 1994.* Using net written premiums, ISO calculated the Herfindahl-Hirschman Index (HHI) of market concentration for the property-casualty industry at 292 for year-end 1994, up from 222 at year-end 1979. HHIs below 1,000 indicate unconcentrated markets.

[12] Conning & Company, *Mergers & Acquisitions: The Thinning of the Herd,* 1995*;* ISO, *Insurer Financial Results: 1994*; Christopher Dauer, "Insurer 'Herd' Thins as M&A Activity Speeds Up," *National Underwriter,* April 3, 1995.

[13] Dan Lonkevich, "Pricing and Consolidation: Farewell to the P/C Cycle," *BestWeek,* July 24, 1995.

pressure comes from domestic market saturation and the entry of non-traditional insurers (banks, mutual funds and health maintenance organizations) into traditional life insurance domains.[14] Among property-casualty insurers, increased capacity is the result of sustained growth in surplus, automation in "commodity" lines,[15] and migration of commercial coverage to alternative markets.[16]

PERFORMANCE

A variety of measures suggest that the overall recent performance of the insurance sector has been modestly successful. Output has been consistent with national growth, employment has grown at modest rates overall, wages are relatively high, and industry analysts consider the industry's financial performance solid but unremarkable.

Output and Employment

Output of insurance carriers grew 1.5 percent annually from 1981 to 1993, keeping pace with national growth (Table 3). Output of insurance agents, brokers, and providers of other insurance services grew 2.3 percent.

From 1981 to 1994, total insurance carrier employment grew at an average annual rate of 1.7 percent. Employment among insurance agents and brokers grew at 2.5 percent. Total employment in the insurance industry has been growing, but the predominant growth has been in the health segment of the industry as shown in Table 6. Managed care in particular has seen employment growth. Life insurance employment peaked in 1986 and has declined steadily since then. Employment in property-casualty insurance has shown slow but steady increases over the last decade. Employment among agents, brokers and service personnel peaked in 1991 and has since declined.

[14] Larry G. Mayewski and Michael L. Albanese, "Strength, Strategy or Both," *Best's Review* L/H Edition, January, 1995.

[15] Accounting for about 60 percent of the property and casualty business, the "commodity" lines include automobile, homeowners and basic commercial insurance. Competition for these products is based on price.

[16] Moody's Investors Service, "U.S. Property and Casualty Insurance: Let Consolidation Begin," April 1995.

Table 6
Employment in Insurance 1975-1993

	Home Office Personnel			Agents, Brokers, Service Personnel	Total
	Life Insurance	Health Insurance	Other		
1975	520,500	122,100	442,700	356,600	1,441,900
1980	531,900	141,900	550,300	463,800	1,687,900
1985	559,300	170,700	561,600	548,200	1,839,800
1990	547,500	241,600	673,100	663,300	2,125,500
1991	560,000	258,700	675,900	666,300	2,160,900
1992	550,300	270,100	675,200	656,600	2,152,200
1993	561,800	278,500	678,100	662,100	2,180,500

Source: Employment and Earnings; U.S. Department of Labor, Bureau of Labor Statistics

A breakdown of employment by occupation in the insurance industry shows the general trend in the economy toward the service sector and the trend toward more efficient organization (Table 7). Insurance carriers increased total employment by about 2 percent a year from 1983 to 1994 and insurance agents and brokers increased total employment by about 5 percent a year. Executive, administrative and managerial employment increased by 6.2 percent for agents and brokers.

Among insurance carriers, the occupation category that gained the most share was professional and technical workers, which includes claims adjusters and medical professional and technical workers. By 1994, over 10 percent of all insurance carrier employees were professional and technical workers. The largest decline was in marketing and sales.

Table 7
Insurance Industry Employment, By Occupation

	Average Annual Change 1983-94	Percent Distribution 1983	1994	Change
INSURANCE CARRIERS				
Total, all occupations	2.1	100.0	100.0	
Exec., administrative and managerial	2.8	18.7	20.2	1.5
Professional and technical	5.0	7.9	10.8	2.9
Marketing and sales	-1.2	18.3	12.8	-5.5
Clerical	2.4	53.2	54.5	1.3
Other occupations[1]	1.7	1.9	1.8	-0.1
INSURANCE AGENTS AND BROKERS				
Total, all occupations	5.0	100.0	100.0	
Exec., administrative and managerial	6.2	17.8	20.3	2.5
Professional and technical	7.0	2.5	3.1	0.6
Marketing and sales	2.9	25.6	20.5	-5.1
Clerical	5.4	52.8	55.2	2.4
Other occupations[1]	1.4	1.2	0.8	-0.4
ALL SERVICES[2]				
Total, all occupations	2.4	100.0	100.0	
Exec., administrative and managerial	2.6	9.1	9.3	0.2
Professional and technical	3.0	18.8	19.9	1.1
Marketing and sales	2.5	13.3	13.5	0.2
Clerical	2.2	22.4	21.9	-0.5
Other occupations[1]	2.2	36.4	35.4	-1.0
ALL INDUSTRIES				
Total, all occupations	2.9	100.0	100.0	
Exec., administrative and managerial	3.5	9.0	9.6	0.6
Professional and technical	3.8	15.9	17.5	1.5
Marketing and sales	3.6	9.3	10.1	0.8
Clerical	2.9	19.9	19.8	-0.1
Other occupations[1]	2.3	45.9	43.1	-2.8

1/ Other occupations include service occupations; agricultural, forestry, and fishing occupations; precision production, craft, and repair occupations; and operators, fabricators, and laborers.
2/ All services include transportation; communications; electric, gas and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; and miscellaneous services.
Source: Bureau of Labor Statistics, National Industry-Occupation Employment Matrix.

Financial Results

Life insurance

The past twenty years have been marked by a dramatic product shift from traditional life insurance to annuity products and retirement asset management. This shift is significant both because it brings insurers into competition with other financial services providers—banks, securities firms and mutual funds—and because of the greater financial risk-taking associated with some of the new products. Table 8 presents income data for selected years.

Table 8
Income—Life/health Insurers
(Billions of dollars)

	1970	1980	1990	1992	1993
Total Income	$49.1	$130.9	$402.2	$426.9	$466.4
Total Premium Receipts	36.8	92.6	264.0	282.1	319.6
Investment Income	10.1	33.9	111.9	121.4	124.2
Other Income	2.1	4.3	26.3	23.5	22.6

Note: Detail may not add to total because of rounding.
Source: American Council of Life Insurance

Industry financial analysts rate the overall financial performance of the life insurance industry as healthy, but sluggish.[17] Insurance companies have sought to strengthen their financial strength in response to stricter solvency scrutiny by regulators and their own expectations of future financial and strategic challenges. Mortgages and other higher risk assets have become a smaller share of the insurers' portfolio as government securities have grown in importance. Table 9 shows the industry's asset holdings for selected years.

Table 9
Assets—Life/Health Insurers
(Billions of dollars)

	1970	1980	1990	1992	1993
Total Assets	$207.3	$479.2	$1,408.2	$1,664.5	$1,839.1
Corporate Securities	124.9	252.2	697.1	801.9	857.5
Bonds	73.1	179.6	582.6	670.2	729.7
Stocks	15.4	47.4	128.5	192.4	251.9
Mortgages	**74.4**	**131.1**	**270.1**	**246.7**	**229.1**
Policy Loans	16.1	41.4	62.6	72.0	77.7
Government Securities	11.1	33.0	210.8	320.1	384.1
Real Estate	6.3	15.0	43.4	50.6	54.2
Miscellaneous	17.0	31.7	110.2	112.5	112.4

Note: Detail may not add to total because of rounding.
Source: American Council of Life Insurance

Insolvency and financial impairment among life insurers have declined in number and severity since 1991, a year which saw a record 62 financially impaired companies and the demise of both Mutual Benefit and Executive Life. The concern generated by these companies' problems led to increased solvency oversight and new NAIC-promulgated risk-based capital standards.

Property-casualty Insurance

The property-casualty industry has a solid balance sheet but analysts consider the industry's profitability weak.[18] Table 10 shows selected financial results for property-casualty insurers for the past decade. Net income fell sharply in 1994, primarily as a result of catastrophe losses. Nonetheless, 1994 marked the tenth consecutive year in

[17] *BestWeek, Best's Review, Moody's Investors Service, National Underwriter, and Business Insurance*(various issues).

[18] Ibid.

which industry surplus grew.[19] Companies with distinct underwriting skills and/or low-cost operations are posting solid returns whereas diversified insurers are struggling.

Table 10
Financial Results—Property-Casualty Insurers
(Dollars in billions)

	1983	1985	1990	1992	1993	1994
Combined Ratio[1] (%)	109.9	114.6	108.3	114.6	105.7	108.5
Written Premium	$109.2	$144.9	$218.1	$227.8	$241.7	$249.8
Earned Premium	107.2	133.3	216.0	226.0	235.6	243.4
Losses Incurred	75.8	102.9	150.0	168.8	157.2	166.1
Loss Adjustment Expense Incurred	11.5	15.7	27.8	30.3	30.3	31.7
Other Underwriting Expenses	31.0	37.6	56.8	60.3	63.3	65.0
Policyholder Dividends	2.2	2.2	2.6	2.6	2.7	3.0
Underwriting Income (Loss)	-13.4	-25.0	-21.2	-36.0	-17.8	-22.4
Investment Income	16.0	19.5	32.9	33.7	32.6	33.0
Miscellaneous Income (Loss)	-0.3	-0.1	-0.4	-0.3	-0.3	0.1
Operating Income	2.3	-5.6	11.2	-2.5	14.6	10.7
Realized Capital Gains	2.1	5.5	2.9	9.9	9.8	1.7
Federal Income Tax (Credit)	-1.2	-2.0	3.3	1.5	5.1	2.3
Net Income after Taxes	5.6	1.9	10.8	5.8	19.3	10.1
Return on Year-end Net Worth (%)	8.3	4.0	8.6	4.4	10.4	5.5
Year-end Surplus	$65.8	$75.5	$138.4	$163.1	$182.3	$190.6

[1] The combined ratio measures the amount insurers must pay to cover claims and expenses per dollar of premium income. A combined ratio exceeding 100 percent indicates claim costs and other expenses in excess of premiums.
Source: *Best's Aggregates and Averages, 1994.*

Private auto liability and physical damage insurance account for almost 40 percent of net premiums written by property-casualty insurers, followed by workers' compensation at 12.6 percent, and homeowners multi-peril insurance at 8.3 percent. Despite representing only a small share of the premium income over the period, catastrophe losses have accounted for approximately 65 percent of inflation-adjusted losses since 1970.[20] The problems are most apparent in personal lines coverages where state regulators have kept rates low and discouraged market withdrawals despite significant exposures by some insurers in some high-risk areas.[21]

Natural disasters have significantly affected the financial results of property-casualty insurers in recent years. The costliest catastrophe year for insurers was 1992 when catastrophe losses cost the industry $18 billion. The second costliest year was 1994 with losses of $16 billion. These losses have had a negative impact on the industry, but their

[19] A decade of surplus growth was last achieved between 1947 and 1956. ISO, *Insurer Financial Results: 1994.*

[20] ISO, *Insurer Financial Results: 1994.*

[21] There was a relative lull in the occurrence of natural disasters for the twenty years preceding Hurricane Hugo in 1989. During that period, the population density (the number of people per square mile of land area) in high-risk areas multiplied. Between 1960 and 1990, the population density along the Southeast Atlantic Coastal region increased by 128.7 percent while over the same period the population density of the total United States increased by 37.6 percent. And, over this same period, property values rose while insurance premiums for catastrophe coverages stayed relatively flat. *(The Second Report of a Coastal Trend Series—50 Years of Population Change Along the Nation's Coasts: 1960-2010*; National Oceanic and Atmospheric Administration (NOAA) U. S. Department of Commerce.)

greater significance lies in highlighting the potential for far greater catastrophe losses in the future; e.g., if Hurricane Andrew, the most costly natural disaster to date, had hit Miami rather than Homestead, Florida, insured losses could have been $40 billion rather than $15 billion.[22]

The industry and individual companies are pursuing various avenues of relief. Some insurers have withdrawn from offering some high-risk coverages; however, withdrawals and premium increases have met with resistance from property owners and regulators. Other insurers have sought to reduce coverage through lower limits and higher deductibles. Insurers support the use of risk modeling to assess and predict risk for rate making rather than relying solely on historical loss experience. Their increased emphasis on mitigation and loss reduction includes encouraging adoption and enforcement of appropriate building codes and risk-rating of communities. They also favor cost-effective retrofitting of existing structures. The industry has also sought new sources of reinsurance capacity such as a Federal reinsurance pool. No Federal pool has been created, although other forms of reinsurance capacity have emerged including new Bermuda catastrophe insurers, catastrophe futures and state reinsurance facilities.

The Clinton Administration has transmitted to Congress recommendations for actions to be taken by individuals, communities, insurers and others to foster mitigation and loss prevention.[23]

PRODUCTIVITY

Productivity growth in an industry reflects the efficient use of resources and often results in lower costs and prices. Measuring productivity in the insurance industry as in other service industries, is difficult.[24] The insurance industry is especially susceptible to measurement problems since none of the various output measures—such as the level of premiums earned, the number of claims processed, or the number of policies underwritten—are comprehensive measures of all aspects of insurance.

For inter-industry analysis, gross product originating per employee provides the most comprehensive measure to compare productivity.[25] Table 11 shows that productivity growth in the insurance industry by this measure has lagged other industries and on average has declined annually since 1981.

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[22] ISO, *The Impact of Catastrophes on Property Insurance*, January 1994, quoting an estimate based on EQE International's WINDCAP program. Similarly, if Hurricane Iniki had hit Honolulu, the insured cost could have been $15 billion rather than $1.6 billion, and a recurrence on the 1906 San Francisco earthquake would today cost more than $40 billion in insured losses.

[23] The Administration proposal was transmitted to Congress on February 16, 1995.

[24] In a presentation at a July 21, 1995, conference on Service Sector Data Improvements sponsored by the U. S. Department of Commerce, Joel Popkin argued that accurate measurement of productivity growth (e.g., value-added per full-time employee) for insurance carriers would shift the average annual rate for 1977-89 from -1.8 to about 3.8 percent.

[25] Gross product originating (value added) for the insurance industry is calculated using net premiums for life, non-life, and health insurance carriers and business receipts for agents, brokers, and providers of other insurance services.

Table 11
Productivity[1] of Selected Industries
(Average annual growth rates)

	81-90	90-93	81-93
ALL INDUSTRIES	0.8	1.2	0.9
Durable manufacturing	3.4	5.0	3.8
Nondurable manufacturing	2.5	0.9	2.1
Transportation	2.2	3.3	2.5
Communications	4.7	5.0	4.8
Electric, gas, and sanitary services	1.4	2.5	1.6
Wholesale trade	3.3	4.7	3.7
Retail trade	1.6	2.0	1.7
Finance, insurance, and real estate	-0.4	1.4	0.0
Insurance carriers	-1.2	2.5	-0.3
Insurance agents, brokers, and services	-0.1	-1.6	-0.4
Services	-0.7	-0.6	-0.7
Health services	-1.7	-1.7	-1.7
Legal services	-2.0	-1.5	-1.9

1/ Productivity measure is value-added per worker.
Sources: Bureau of Labor Statistics and Bureau of Economic Analysis

A Tillinghast/Towers Perrin study found an overall 6 percent decline over the five year period 1988-1992 in the productivity of ordinary life companies measured as the total cost of delivering a unit of product.[26] Distribution expenses are the largest component of life insurer costs and, as competitive pressures mount from other financial service providers, insurers will be seeking more efficient distribution avenues.

WAGE RATES

Workers in the insurance industry earn fairly high wages compared with other industries as Table 12 shows. In 1994, average hourly earnings in the industry ranged from $13.33 to $14.79, above the average for all workers ($11.13). Communications and transportation and public utilities workers were the only service industry employees to earn higher hourly rates. Outside of services, mining and construction workers earned more than insurance industry workers.

[26] Cited in Moody's Investors Service, *Industry Outlook/Life Insurance Outlook,* August 1994. Moody's also references, "How to Win the Productivity Challenge" by Scott McAlpine, and Roger Heath in *Emphasis 1994/2.*

Table 12
Average Hourly Earnings, Selected Industries

	1972	1994	Average Annual Growth Rate
TOTAL PRIVATE	$3.70	$11.13	5.1
Service-producing	3.38	10.57	5.3
Goods-producing	4.22	12.71	5.1
Agricultural services	n.a.	8.59	n.a.
Mining	4.44	14.89	5.7
Construction	6.06	14.72	4.1
Manufacturing-nondurable goods	3.48	11.25	5.5
Manufacturing-durable goods	4.07	12.67	5.3
Transportation and public utilities	4.65	13.86	5.1
Communications	4.15	15.25	6.1
Wholesale trade	3.85	12.05	5.3
Retail trade	2.75	7.49	4.7
Finance, insurance, and real estate	3.36	11.83	5.9
Insurance carriers	3.53	13.97	6.5
Life insurance	3.63	13.33	6.1
Medical service & health Insurance	3.23	13.45	6.7
Fire, marine, and casualty insurance	3.53	14.79	6.7
Services	3.27	11.05	5.7

Source: Bureau of Labor Statistics

III. FORCES SHAPING THE INDUSTRY

The profile of the insurance industry of the future will depend heavily upon the industry's adaptation to current changes in insurance markets. Such changes include increasing competition from other financial service institutions, alternative insurance mechanisms, reduced growth in traditional markets but new opportunities in global markets, and new information technology.

INCREASING COMPETITION

Integration of Financial Services

The sharp demarcation that has long existed in the United States between insurers and banks is beginning to erode. Both sectors have moved into the marketing of retirement and investment annuity products—a trend encouraged by the recent Supreme Court decision affirming the Comptroller of the Currency's policy of permitting national banks to sell annuities.[27] In addition, the continuing Congressional debate over financial services reform suggests changes are likely although the precise dimensions and timing of reform are uncertain.

As life insurers have shifted from traditional life insurance to annuities and other retirement security products, banks too have increased their focus on this market. Moreover, in the future, banks are likely to expand into sales of property-casualty products such as homeowners and auto insurance. The current product overlap between insurance companies and banks applies mainly to the sale of annuities and asset management services.

Increased competition between banks and insurers is forcing changes in insurance distribution systems as insurers seek more efficient models in order to compete more effectively. In some instances insurers are underwriting products for bank sales, in other cases they are seeking their own more streamlined distribution systems. This restructuring is likely to increase cost pressure on insurers relying on agents for product distribution and could limit growth opportunities for insurance agents. Consumers should benefit as a result of the more efficient distribution systems.

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[27] *NationsBank of North Carolina N.A. v. Variable Annuity Life Insurance Company.* The Supreme Court held that annuities are investment products rather than insurance products. The decision did not change the existing prohibitions against banks underwriting insurance or owning insurance companies.

Convergence of the two sectors would accelerate with the passage of financial services reform measures. Pending Congressional proposals address the appropriate relationship between banks, securities firms, and insurers; the form of the relationship; the powers of bank regulators to interpret federal statutes when state statutes conflict; and state regulation of insurance products sold by banks. The most critical issue for insurers is whether regulators will permit banks to own their own insurance subsidiaries.

The Clinton Administration supports financial services reform including permitting affiliations between securities firms, insurance companies, other financial companies and banks. This support is based on a belief that current rules are overly restrictive.[28] Permitting banks to write insurance through their own subsidiary companies could significantly change the insurance marketplace and the structure of the industry. In the long term, domestic financial services reform could greatly improve market efficiencies and significantly enhance the international competitive stance of U.S. insurers.

Competing Insurance Mechanisms

Alternative insurance mechanisms—captive insurers, risk retention groups and self insurance—now may account for up to one-third of commercial coverages.[29] High costs and limited availability of some commercial liability coverages in the mid-1980s led some firms to shift to self-insurance or alternate insurance mechanisms. Self insurance commonly is used for workers compensation and health insurance coverages while risk retention groups and captives are used for liability coverages such as products, medical malpractice, and general liability.

These new arrangements—originally considered stop-gap measures—were institutionalized as companies learned that they could control and manage some risks more efficiently through these alternative modes of coverage than through conventional insurance alone. In many instances, firms use self-insurance in conjunction with conventional insurance, with self-insurance covering the lower, more predictable, layers of coverage. As a result, the conventional insurance market has been left with the more volatile, higher risk coverages. The availability of alternative insurance mechanisms may have contributed to slow premium growth in property-casualty lines in recent years.[30]

MATURING DOMESTIC MARKET

Historically, U.S. insurers have concentrated primarily on the domestic market. Economic and population growth was sufficient to generate adequate growth of the

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[28] Testimony of Treasury Secretary Robert E. Rubin before the House Committee on Banking and Financial Services, March 1, 1995. The Administration would continue reasonable fire walls but would permit affiliated companies to be subsidiaries of either the insured depository institution or the institution's parent company.

[29] Conning & Company, Strategic Study Series, *Property-casualty Alternative Markets -- Analysis and Opportunities,* 1994. See also Moody's Investors Service, *U. S. Property & Casualty Insurance: Let Consolidation Begin,* April 1995.

[30] ISO, *Insurer Financial Results: 1994.*

industry. After many years of growth, domestic market opportunities for insurance are likely to be limited over the next few years because of slower growth in the economy and the aging of the population. The proportion of U.S. residents over the age of 44 rose only slightly from 1980 (70 million) to 1992 (80.6 million), but will jump nearly 10 percentage points (140 million) by 2025 (Table 13). Census Bureau projections show the population of 25 to 44 year olds growing from 83.8 million in 1995 to only 87 million in 2025, and their share of the total population declining significantly from 32 percent to 26 percent.

Table 13
Population Levels And Projections By Age Group
(Population in hundreds)

	1980	Percent	1992	Percent	1995	Percent	2025	Percent
Total	226,546	100.0	255,082	100.0	263,434	100.0	338,338	100.0
Under 25 year-olds	93,776	41.4	92,084	36.1	94,499	35.9	111,309	32.9
25-44 year-olds	62,716	27.7	82,366	32.3	83,820	31.8	86,889	25.7
Over 44 year-olds	70,053	30.9	80,629	31.6	85,113	32.3	140,139	41.4

Source: 1994 Statistical Abstract

DEVELOPING WORLD MARKETS

Despite continuing barriers to market entry in some countries, international insurance markets are becoming increasingly open to foreign competitors. Liberalized environments brought about by trade agreements and other restructuring of international markets coupled with increased competition and structural change domestically should increase international opportunities for U. S. insurers.

Reduced Entry Barriers

The most important and comprehensive of recent market-opening formal agreements is the General Agreement on Trade in Services (GATS), the first multilateral trade agreement to include trade in services. By fostering progressive liberalization and freer access to the service markets, GATS should stimulate the growth of services trade, just as GATT has stimulated merchandise trade since its inception in 1947. GATS principles are established and an interim agreement is in place; a final GATS agreement on insurance should be reached in 1997.

Other agreements that should lead to the opening of additional insurance markets include the North America Free Trade Agreement (NAFTA), which offers access to Mexico's large and growing insurance market, and the U.S.-Japan Framework for a New Economic Partnership, which opens the Japanese market to U.S. insurers. The United States has also concluded bilateral agreements with Korea and Taiwan.

New Insurance Markets

Reduced entry barriers, when fully realized, should permit greater participation by U. S. insurers in the mature insurance markets in Western Europe. In most of Europe, the demand for life insurance and pensions is growing. Growth markets of note are Spain, Portugal, and Italy in the EU; Greece; and Poland, Hungary, and the Czech Republic in Eastern Europe.[31] The greater opportunities, however, lie with developing countries where market penetration is minimal and economic and demographic conditions favor insurance purchases.

Successful macroeconomic stabilization and structural adjustment programs enabled major developing countries to transform their economies from the stagnation of the 1980s to robust economic growth during the 1990s. The success of free market reforms, privatization, deregulation, and liberalization of trade and investment helped developing countries to outperform the industrial countries, raising real national and per capita income levels. This has led to a demand for insurance, particularly life insurance, in emerging markets, especially in Asia and Latin America.

With few exceptions, all countries in Latin America have implemented economic policies to achieve macroeconomic stability.[32] The most notable achievers -- Argentina, Chile and Mexico -- are deregulating the insurance business and have opened their markets to foreign services trade and allowed joint ventures of foreign insurers with local firms. Even without successful stabilization policies, most countries in Latin America have managed to privatize and liberalize industry in varying degrees, including the insurance industry.

The Clinton Administration has pledged to continue its efforts to open international markets to U. S. goods and services including insurance.[33]

INDUSTRY INVESTMENT IN INFORMATION TECHNOLOGY

As technology continues to drive down the cost of processing and transmitting data, the opportunities and challenges presented to the insurance industry expand. Information technology (IT) is changing the nature of insurance products and could lead to significant changes in the structure and operation of insurance providers in the future.

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[31] Thomas H. Kelly, *Trends in Distribution in Europe, A LIMRA International Perspective*, International Insurance Council, New York, May 4, 1995.

[32] International Monetary Fund, *World Economic Outlook*, October 1994, p. 7.

[33] See remarks of U. S. Secretary of Commerce Ronald H. Brown at the International Insurance Society, Inc. on July 10, 1995 in which, among other things, he stated, "The President has directed the Administration to continue to press other countries to open their markets to U. S. goods and services. We believe that insurance providers from all countries should be able to enter and operate in foreign markets without unnecessary regulations or restrictions. Ultimately, we seek open, competitive insurance markets in which sound firms compete fairly on the price and quality of their products."

The insurance industry invested $14.5 billion in information technology in 1994, up from $185 million in 1977.[34] Over 80 percent of total equipment investment by insurance carriers in 1994 was for IT-related equipment while insurance agents and brokers put almost 95 percent of their total investment in IT equipment (Table 14). Only the communications industry—which, historically, has invested heavily in information technology—had a comparable share of total investment in equipment going to IT equipment in 1994 (83 percent).

Table 14
Industry Investment in Information Technology as a Share of Total Equipment Investment
(Percent)

Industry	1960	1973	1981	1990	1994	1960-94	1973-94
All industries	10.1	12.6	25.3	38.1	48.6	38.5	36.0
Manufacturing-durable goods	2.8	2.7	14.9	32.9	44.6	41.8	41.8
Manufacturing-nondurable goods	2.7	5.4	20.0	27.7	34.9	32.1	29.5
Transportation	1.5	1.2	12.2	28.2	36.4	34.9	35.2
Communications	75.9	85.9	85.7	82.8	83.1	7.1	-2.8
Electric, gas, and sanitary services	3.3	4.5	15.8	28.3	33.6	30.3	29.1
Wholesale trade	2.2	7.1	39.4	55.8	66.5	64.4	59.4
Retail trade	0.8	3.7	30.1	42.3	51.8	51.0	48.1
Finance, insurance, real estate	34.7	23.4	28.5	41.9	56.7	22.0	33.3
Insurance carriers	**12.1**	**20.6**	**38.8**	**69.6**	**82.8**	**70.7**	**62.2**
Insurance agents, brokers, & services	**34.9**	**39.5**	**84.8**	**90.8**	**94.6**	**59.7**	**55.1**
Services	14.3	17.9	21.0	34.2	46.7	32.4	28.9

Source: Bureau of Economic Analysis

Despite substantial investment in information technology by insurers, there is little precise measurement of the impact of such investment on performance. No comprehensive quantitative studies have been done to determine how and to what degree information technology has changed the way the industry operates and performs. Most of the evidence is anecdotal.

Company CEOs have reported that the most significant benefits to the insurance industry from technology gains in telecommunications and computer and data processing are lower operating costs, faster processing time, and the substitution of electronic transfers for paper processing.[35] The same survey data suggest that personal lines are more likely than commercial lines to substitute technology for people (58 percent compared with 39 percent). If this is the case, it may reflect the commodity nature of some of the personal coverages as differentiated from the more complex risk assessment and underwriting required with many commercial coverages.

[34] Information technology equipment includes office, computing, and accounting machinery, communications equipment, scientific and engineering instruments, and photocopy and related equipment.

[35] Towers Perrin/Tillinghast, *CEO Survey--Overview of Results, Property-casualty Insurance Industry*, 1994.

A survey of independent insurance agents found over 95 percent of agents surveyed reported that automation helped them control costs.[36] According to the survey agents' out-of-pocket costs fell 5 percent, staffing requirements fell 33 percent, and efficiency increased 57 percent.

Electronic mail, video-conferencing, laptops, car faxes, and cellular telephones allow offices without boundaries. Shared data bases and local area computer networks (LAN) allow faster processing of policy applications and claims, and more rapid matching of policies and premiums. New computer software permits virtually instant actuarial analysis—leading to more rapid, accurate pricing of customized insurance products and facilitating globalization.

There are anecdotal reports of particular cost savings. The use of an application for electronic proof of insurance filings for automobile claims is reported to reduce costs by 90 percent while significantly improving customer service. A major insurer was able to reduce the time required to transmit a policy to a customer from 15 to 5 days using networked personal computers.[37] The NAIC has developed the prototype of an electronic rate and form filing system that would permit an insurer to file new rates and forms with insurance departments electronically with significant cost and efficiency benefits.[38]

Over the long term, observers expect the new technology to have far-reaching effects on industry structure and operations. Among the projected effects of new technology on the life insurance industry are the creation of new products and new businesses.[39] Similar results could occur in the property-casualty industry despite the higher underwriting risk associated with many of the property-casualty products. Automation is especially important for the property-casualty commodity lines where competition is largely based on price.[40]

The combined effect of information technology and cost-control strategies is leading to downsizing and consolidation throughout the insurance industry. Insurers are reducing staff, eliminating unprofitable ventures, and merging operations to gain efficiencies and strategic position. In terms of firm structure, some analysts envision a trend away from the fixed-location monolith with heavy overhead to the streamlined virtual corporation and virtual office—changes which should permit better, faster and cheaper service, greater efficiency and flexibility and lower costs.[41]

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[36] Agency-Company Organization for Research and Development (ACORD), *Investing in Your Future, Automation and Interface Survey Report*, 1994.

[37] Howard Gleckman, "The Technology Payoff," *Business Week*, June 14, 1993.

[38] Margo D. Beller, "Regulators OK $1.75 Million to Fund Electronic Rate, Form Filing System, *The Journal of Commerce*, March 16, 1995.

[39] Kenneth J. H. Pinkes, comments on "The Structure, Conduct, and Regulation of the Life Insurance Industry," by Kenneth M. Wright, published in *The Financial Condition and Regulation of Insurance Companies*, (proceedings of a conference sponsored by the Federal Reserve Bank of Boston), Richard W. Kopcke and Richard E. Randall ed., 1991.

[40] Moody's Investors Service, *U. S. Property & Casualty Insurance: Let Consolidation Begin*, April 1995.

[41] Mark M. Klein, "The Virtue of Being a Virtual Corporation," *Best's Review* L/H.

Concern that insurers failing to reap the cost-lowering effects of technology will fall behind strategically and slip financially is leading to the evaluation of technology use as a rating consideration.[42] Although technology is not a separate rating category, Best's reports it is paying increasing attention not only to whether technology is used by a company but also to how it is used and how its competitors are using it.[43]

In the long term, information technology will transform the shape and scope of the insurance industry permitting ready accessibility to insurance products and services from all parts of the globe. In the short term, downsizing and consolidation will drive the industry as it adjusts to the marketplace of the future.

[42] "Technology and Ratings," *Best's Review* L/H, April 1994.

[43] *Ibid.*

IV. CONCLUSION

Increased competition from other financial institutions on the life insurance side and, to a lesser degree, from self-insurance and captives on the property side, will force renewed focus on efficiencies and carefully targeted markets. The growth of information technology could force changes in products, distribution systems, and markets. Risk exposures—particularly in areas of catastrophe coverages—will continue to pose threats to profitability and solvency for property-casualty insurers.

Despite some continuing barriers to market entry in some countries, international insurance markets are increasingly open to foreign competitors. The recent international trade liberalization agreements championed by the United States, coupled with other market-liberalizing actions, have increased market opportunities for U. S. insurers. The fast-growing countries in Asia and in Latin America represent the best opportunities for higher profits for the industry. Despite an historical proclivity for servicing mainly the domestic market, U. S. insurers may embrace international market opportunities in response to increased market saturation at home and the enhanced communication and information transmittal capabilities engendered by new information technology.