An Analysis of the Title Insurance Industry*

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and

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Abstract:

There are numerous links, both direct and indirect, between real estate markets and insurance products. One of the direct links that has been the focus of much attention recently is homeowners insurance, especially in hazard prone areas. Another direct link not receiving as much attention is title insurance. It is the intent of this paper to provide an overview of the title insurance industry and shed new light on a product very few people truly understand. This paper presents an analysis of the structure, performance and problems of the suppliers of title insurance. It also focuses on recent developments with regards to solvency, mergers and acquisitions, entry and exit barriers, regulation, rating bureaus and competition.

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Introduction

There are numerous links, both direct and indirect, between real estate markets and insurance products. One of the direct links that has been the focus of much attention recently is homeowners insurance, especially in hazard prone areas. Another direct link not receiving as much attention is title insurance. This situation is changing, partially due to the decision of Fannie Mae[1] to require that mortgage lenders verify the rating of the title insurance firms they use with an independent agency once every six months. Fannie Mae's requirements, in effect since 1994, have sparked the National Association of Insurance Commissioners (NAIC) to form an electronic database of the title insurance industry.

Similar to the Cummins and Weiss (1992) analysis of the property liability insurance industry and Wright's (1992) analysis of the life insurance industry, this paper is designed to provide a foundation for research of the title insurance utilizing an approach common in the industrial organization literature. This paper presents an analysis of the structure, performance and problems of the suppliers of title insurance. It also focuses on recent developments with regards to solvency, mergers and acquisitions, entry and exit barriers, regulation, rating bureaus, and competition. The goal of this paper is in fact to provide a better understanding of a product used by so many people, and understood by so few.

The remainder of the paper is organized in the following way. The balance of this introduction discusses the basics of real estate transactions, title searches and title insurance. The next section presents the market structure of the title insurance industry. This is followed by a focus on problems, both current and potential, that may affect title markets. The next section

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[1] Fannie Mae is the Government Sponsored Enterprise that, along with Freddie Mac, forms the majority of the secondary mortgage market in the United States. These two organizations handle 3 out of every 4 private mortgages in the United States. Fannie Mae is America's largest source of mortgage funds. For more information

discusses the financial condition of the individual firms that provide title insurance. The final section contains the conclusion.

Real Estate Transactions and Title Searches

There are two basic types of title insurance: coverage for the homeowners and coverage for the mortgage lenders. Title insurance for the owner is issued for the purchase price of the property and lasts as long as the purchaser's ownership interests in the property. Title insurance for the lenders is similar to personal mortgage insurance in that the coverage amount decreases with the principal loan amount over time and eventually disappears, along with the lender's interest (American Land Title Association). The lender's policy is usually issued with the owner's policy for an additional nominal fee (Chicago Title and Trust, 1998).

Prior to 1987, there were no deductibles or coinsurance required in standard title insurance policies. Typically, coinsurance and deductibles are used as risk sharing mechanisms to control adverse behavior of the insureds (e.g., moral hazard). Because title insurance is designed to insure against events that have occurred prior to the insured's involvement with the property, not against future events, these risk sharing mechanisms are unnecessary.[2] Since 1987, however, standard title insurance policies that are issued for less than 80 percent of the market value of the property contain coinsurance provisions. This feature is used to prevent under-insuring the property, not moral hazard.

Since a majority of mortgage lenders require *lenders title insurance* as part of the mortgage requirements, a background discussion of real estate transactions is in order. At the

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on these two organizations visit their respective websites (www.fanniemae.com and www.freddiemac.com).

[2] Title insurance coverage is mostly (although not exclusively) for losses arising in the past. There are some special cases where title insurance does cover future events.

time of closing, the purchaser and lender must be satisfied that: 1) there are no title defects and 2) the seller actually owns the title to the property. In addition, it should be noted that title insurance is the *lingua franca* of the secondary mortgage market because of its uniform coverage of the title and the validity and priority of the mortgage. To verify the condition of the title, a title insurance company must complete a title search. A title search is an examination of all public records to determine whether any defects exist in the chain of title. A defect is any hidden risk that may cause loss of title or create an encumbrance on the title (Chicago Title and Trust, 1998).

The search begins with researching public records or re-indexed copies of the public records, called title plants, that contain detailed information about each piece of property and its owners in a given region (city or county). Written documents that affect the land (liens, loans, and easements) are required to be recorded in the public record of the county where the real estate is located.[3] The conclusion of the title search produces an abstract, or summary report, which is then used by the title insurance company in issuing a commitment. This commitment, made prior to the issuance of a title insurance policy, protects the policyholder from losses arising from defects in the title (Galaty *et al*, 1996).

Title Insurance

Standard title insurance policy coverage (American Land Title Association owner's policy) includes defects in public records, forgeries, incompetent grantors, incorrect marital statements, and improperly delivered deeds, that may lead to potential liabilities. Koch (1993, p. 5) states that "title insurance provides indemnification to the degree that the policy/report is incorrect and loss

[3] It is important to note that not all liens are noted in the public record; inheritance taxes, franchise taxes and in some cases real estate taxes are not recorded. The purpose of this public recording system is to protect potential purchasers who otherwise would have no knowledge of these liens. Title insurers rely heavily on these public

or damage results". This policy also covers unrecorded liens not known by the policyholder. Items not covered by the policy include: defects and liens listed in the policy, defects known to the buyer, and changes brought about by zoning (although zoning coverage is available).

If any defects are found, the insurer may use its discretion to exclude them from coverage:

> The title insurer searches and examines the public record to identify those matters of record that affect real property and then determines whether any of these defects in title pose a threat of loss (Koch, 1993, pg. 5).

This marks a major difference between a typical property-casualty (P&C) insurance policy (occurrence policy) and a title insurance policy. A typical P&C insurer expects a higher frequency of losses than a typical title insurer. This difference is reflected in the degree of risk and level of risk avoidance services provided by the insurer. Typical P&C premiums are charged annually and contain a large risk bearing capacity (this capacity varies by line of insurance), while title insurance premiums are charged once (premiums average about 1/2 of 1 percent of property value) and contain little risk bearing capacity.[4]

Another difference between a normal P&C policy and a title insurance policy is the length of coverage. A typical P&C contract is annual, while the title coverage is at least for the length of ownership of the property.[5] Unfortunately for title insurers, there are no statutes that require notification of property sale to title insurers from previous transactions. Thus, a title insurer has no way of knowing if its policy coverage has ended unless it is also the title insurer for the new owner. Exhibit A-1 in Appendix A provides further direct comparisons of title insurance and P&C insurance.

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records, which is one of the main reasons that title insurers have been able to keep losses low.

[4] The premium is designed to cover the expenses of the title search and a small risk of future losses.

[5] Over the period 1991-1996, property was held an average of 14.1 years in the western states and 16.8 years in the eastern states (*BestWeek*, 1996).

Market Structure

We also present in this paper the market structure of the title insurance industry: the type and number of firms in the market, organizational forms, distribution channels, insurer ratings, market share, market concentration and barriers to entry and exit. We begin with size. Table 1 compares the amount of direct premiums written, reinsurance assumed and ceded, and net premiums written in the title industry with other lines of the P&C industry.

As shown in Table 1, reinsurance is rarely used in the title insurance industry. Title insurers generally only need reinsurance for very large single risks. That is, a single title policy on a large commercial transaction may exceed a title insurer's capacity to handle that risk. When these cases arise, and title insurers do require reinsurance, the title insurance industry itself has enough capacity to handle its own reinsurance contracts. That is, when necessary, title insurers have the ability to reinsure one another. Because it is a single risk contract, the title industry can provide adequate risk spreading without the need to look for reinsurers outside the title industry. Thus, third party reinsurers outside the title industry have rarely been utilized.

It is interesting to note that title insurance has larger net premiums written than medical malpractice insurance. A significant literature exists on medical malpractice insurance, yet little has been written on title insurance. This may be due to the fact that no useful database on title insurers had been available prior to the NAIC's 1996 database.

BestWeek (1996) asserts that because of the large service and underwriting components of title insurance, the P&C lines of insurance that are most similar are surety and boiler and machinery. Thus, based on premium volume, title insurance is the largest service oriented line of insurance. Graphs 1 and 2 in Appendix C contain earned premiums by year (1992-1996) for title insurers.

TABLE 1
1996 Reinsurance by Line

	DPW (000's)	Reinsurance Assumed as a % of DPW		Reinsurance Ceded as a % of DPW		NPW (000's)
		Affiliated	Non-Affiliated	Affiliated	Non-Affiliated	
Total Auto Liability	$83,753,552	47.01%	5.19%	47.54%	8.36%	$80,649,297
Total Auto Physical	$45,652,763	43.32%	4.61%	42.44%	6.55%	$44,710,478
Homeowners	$27,393,359	51.16%	4.18%	52.27%	10.23%	$25,435,695
Workers Comp.	$27,033,214	72.28%	8.55%	72.52%	15.32%	$25,136,032
Other Liability	$22,897,993	58.30%	7.68%	61.54%	26.93%	$17,749,113
Com. Multi-Peril	$21,221,328	70.74%	5.96%	71.85%	15.68%	$18,922,675
A&H	$9,099,813	31.29%	7.62%	39.75%	13.52%	$7,791,918
Inland Marine	$7,294,090	49.28%	11.66%	52.41%	31.63%	$5,536,232
Fire	$5,562,660	48.90%	36.81%	53.20%	37.22%	$5,301,072
TITLE	**$5,011,454**	**<1%***	**<1%***	**<1%***	**<1%***	**$5,013,556**
Med. Malpractice	$5,920,950	19.80%	4.59%	20.83%	20.86%	$4,896,474
Allied	$5,226,982	73.62%	25.80%	73.54%	62.19%	$4,569,758
Surety	$2,806,610	36.71%	16.86%	36.88%	23.74%	$3,368,756
Ocean Marine	$2,164,588	69.95%	30.54%	72.36%	35.59%	$2,003,304
Farmowners	$1,382,565	41.65%	5.38%	41.84%	14.50%	$1,252,890
Aircraft	$1,493,745	62.49%	54.75%	62.46%	88.61%	$988,440
Fidelity	$971,227	38.54%	10.09%	37.85%	16.53%	$915,415
B&M	$849,640	53.58%	29.54%	50.32%	32.96%	$848,219
B&T	$134,964	39.41%	7.17%	40.99%	13.47%	$124,321
Glass	$14,670	66.18%	1.77%	70.85%	3.89%	$13,675
Total U.S. P&C	$280,454,933	51.48%	12.49%	52.61%	15.54%	$268,730,294

Source: Best's Aggregates and Averages 1997 (Annual Statements Part 2B Consolidated Industry Totals), NAIC Title Insurance Database 1996.
[*]Part 2B Operations and Investment Exhibit does not differentiate between Affiliated and Non-affiliated reinsurance.

Type and Number of Firms

The NAIC received annual statements from 76 title insurance firms doing business in 1996,[6] (representing 98.4 percent of total premiums earned, 97.5 percent of total assets of the industry and 98.7 percent of total net income of the industry). In other words, the 76 title firms filing with

[6] See Appendix G for a listing of firms and groups available through the NAIC. 1996 is the first year where a

the NAIC represent the vast majority of the title industry.[7] Similar to the P&C insurance market, however, there are groups of title insurers under common ownership. This significantly reduces the number of completely independent decision centers. Instead of 76 independent firms competing in the market, there are only 45 independent decision centers.[8]

Of the 76 firms, 75 are listed as stock.[9] Thirty-one of the firms are independent (i.e., not a member of a group), with the remaining 45 firms divided among 14 groups. The largest group in terms of number of title firms is the Reliance group with 9 firms. Of the 14 groups, 11 are publicly traded,[10] comprised of 41 firms. Only one of the publicly traded groups, Investors Title, is not traded on the NYSE; it is traded on NASDAQ. Surprisingly, only one group lists title insurance as its primary line of business: Lawyers Title Insurance Group.

TABLE 2
Public Decision Centers

Ticker Symbol	Group Name	# of Co.'s in Group
FAF	FIRST AMERICAN TITLE	4
LTI	LAWYERS TITLE INSURANCE GROUP	4
JP	JEFFERSON-PILOT CORPORATION	1
ORI	OLD REPUBLIC GROUP	3
REL	RELIANCE GROUP INC.	9
Y	ALLEGHANY CORPORATION GROUP [11]	7
ITIC	INVESTORS TITLE	2
KRE	CAPITAL REINSURANCE GROUP	1
FNF	FIDELITY NATIONAL FINANCIAL INC.	8
UC	UNITED COMPANIES GROUP	1
PMA	PMI GROUP OF COMPANIES	1

Source: NAIC Title Insurance database 1996.

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significant amount of data is publicly available from the NAIC.

[7] Those title insurers receiving a special waiver from the State Department did not file annual reports with the NAIC. According to Claire Lenz at the NAIC, there were only 2 or 3 firms that received such a waiver.

[8] The 1997 annual statement database will only include 44 decision centers with the acquisition of Reliance's Title Group by Lawyers Title Group, now known as the Land America Title Co.

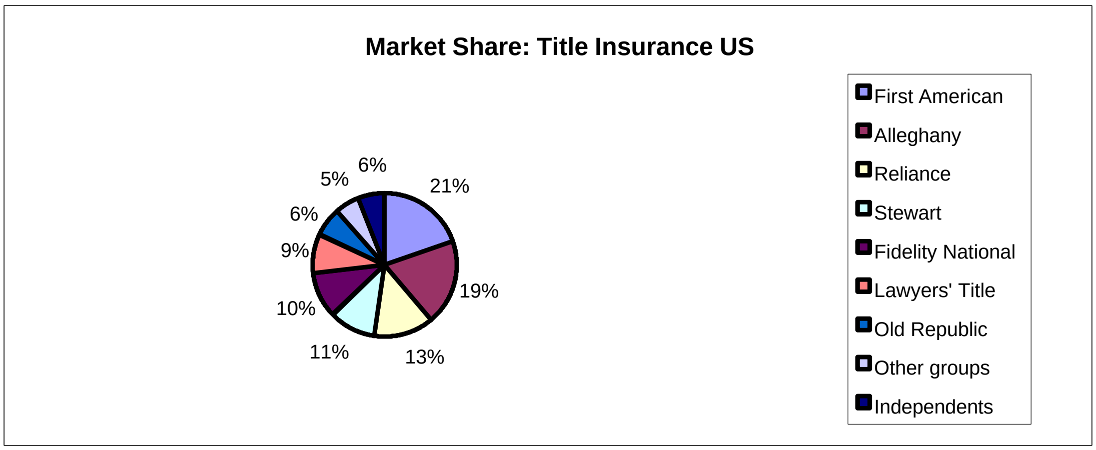
[9] Seagate Title & Abstract Co. is listed as a Consolidated Fire and Casualty Co.

[10] The three groups that are not public are: Stewart Title Co's, TI Corp. and Lawyers Title Guaranty.

[11] Also known as the Chicago Title Group.

Market Share

The title insurance industry appears to be a relatively concentrated insurance market. The top seven decision centers control 89 percent of the market (DPW), while the top three control 53 percent.



Source: NAIC Title Insurance database 1996, authors' calculations.

The Herfindahl index (based on premiums written) for the title industry (nationwide) is documented in Table 3. Although there has been changes in the number of firms writing premiums, the Herfindahl index has not changed significantly over the last five years.

TABLE 3
Title Insurance Herfindahl Index by Year

Title Insurance	1996	1995	1994	1993	1992
Herfindahl	0.1286	0.1268	0.1270	0.1280	0.1302

Source: Authors' calculations, NAIC 1996 Title Insurers database

Table 4 compares the 1996 Herfindahl from the title insurance industry with selected lines in the P&C industry. This table shows the title insurance Herfindahl is significantly greater than larger lines of business of P&C insurers. However, this figure compares favorably to the Herfindahl index of lines of business that generate small amounts of premium, such as the mortgage guarantee line.

TABLE 4
1996 Herfindahl Indices from Selected Lines

	Title	Homeowners	Mortgage Guarantee	Private Passenger Auto Liability	Auto Physical Damage
Herfindahl	**0.1286**	0.0740	0.2249	0.0644	0.0600

Source: NAIC P&C Insurers database, NAIC 1996 Title Insurers database, Authors' calculations.

Given that insurance is regulated at the state level, it is not useful to measure competition and market share at the national level. Furthermore, there are firms that are major competitors at the state level, but they appear insignificant when we look at the national numbers. This leads to difficulty in aggregating state numbers to a national level. Fortunately, the NAIC database allows study of the title insurance markets at the state level. Appendix D contains a state by state comparison of market shares, decision centers and Herfindahl indices.

Examining Appendix D, beginning with the market share of the top 5 decision centers by state, we see that the title insurance industry is relatively concentrated at the state level. The market share of the top 5 decision centers by state is never below 70 percent. As for the market share of the top 3 title insurance decision centers, only once is it below 50 percent (Texas).

Distribution Systems

There are three distinct distribution systems used in title insurance: policies written directly, policies written through affiliated agents and policies written through nonaffiliated agents. The following table segregates premiums written for 1996 by distribution system.

TABLE 5
1996 Premiums by Distribution Channel

	1996 Premium
Direct Policies	$800,170,011

Affiliated Agents	$3,129,387,249
Nonaffiliated Agents	$1,081,896,694
Total	$5,011,453,954

Source: NAIC Title Insurers database 1996.

The title insurance industry has led the way in the use of mixed distribution systems. While it is common to see title insurers with more than one distribution system in place in a given county or state, this is a relatively new phenomenon in the P&C industry. As recently as 1996 (Kim, Mayers, and Smith, 1996) it was uncommon to find P&C insurers with multiple distribution systems within a given region or state.

The possibility of having a mixed distribution system allows the title insurance industry to structure its distribution with more flexibility. This flexibility is necessary for two reasons. First, title insurance is more susceptible to shifts in demand than other P&C lines (discussed in more detail in a later section). Second, title insurers have a fairly high percentage of costs being fixed (personnel, title plants). Therefore, flexibility in distribution aids title insurers in remaining profitable. *BestWeek* (1996, p. 15) states that

> An important management test is the ability to strike the appropriate balance between agent and direct distribution systems. Many choices exist and selecting the right mix of distribution by region or by state can have a positive effect on earnings.

Entry and Exit

Analysis of entry and exit to the market is made difficult for a variety of reasons. Although the NAIC has been receiving the annual statements for title insurers for years, 1996 was the first year that a database was formed. One fact that seems clear is that there has been an overall reduction in the number of firms in the market.[12] In addition, based on Schedule P of the NAIC database, the

[12] *BestWeek* (1996) reports there were over 85 firms in the market in the early eighties. We discuss this point in more details in a later section.

firms that remain are not the same firms that were in the market a decade ago (see Table 6).[13] This suggests that there is a lot of entry and exit in the title insurance market.

From the Schedule P, we are able to obtain the number of firms and their direct premiums written by year for the last 10 years. What schedule P reveals is how many of the 76 firms reporting to the NAIC in 1996 were writing premiums in the preceding 10 years. The problem with using the Schedule P for an analysis of entrance and exit of firms is that it introduces a survivorship bias into the analysis; only the firms that have survived until 1996 are included. Table 6 shows the number of surviving firms writing direct premiums for the last ten years. This table mistakenly indicates that the number of firms in the market has been steadily increasing since the late eighties. This is in direct contrast to the fact that *BestWeek* (1996) reports that there were over 85 title insurers in 1986.

TABLE 6
Number of Firms in the Market
with Positive Premiums Written

Year	# of firms
1996	68
1995	68
1994	64
1993	60
1992	59
1991	58
1990	57
1989	52
1988	51
1987	49

Source: NAIC Title Insurance database 1996.

Regulation of the Title Industry

Title insurance, similar to most other insurance products, is regulated at the state level. The

[13] There is also the possibility that schedule P does not accurately account for name changes and mergers and

insurance commissioner is responsible, in most states, for the regulation of title insurance. Similar to the P&C industry, the level of regulation varies from state to state. All aspects of title insurance are potentially regulated: licensing, corporate form, agents, business scope, policy forms, title plants, searches and examinations and rate regulation.

One surprising regulation in more than half of the states is that title insurance can only be sold by title insurers, and that title insurers are prohibited from selling other lines of insurance. There are, therefore, no economies of scope available to title insurers, at least with respect to other lines of insurance. Since title insurers were historically a banking subsidiary (1870s through 1930's), this legislation may seek to keep separate "insurance functions" from "banking functions" similar to the Glass-Stegal Act.

NAIC Model Acts

The NAIC has developed model acts for many insurance products and services including title insurance. The two models passed by the NAIC that deal with title insurers are: "The Title Agents Model Act" (September 1995) and "The Title Insurers Model Act" (March 1996). These were designed to provide the foundation for industry wide financial security (*BestWeek*, 1996).

Reserves

As a result of the Tax Reform Act (TRA) of 1986, incurred but not reported reserves (IBNR) must appear in the GAAP statements, but do not appear on the SAP statements of title insurers. According to Lipshutz (1994) there is no qualitative difference between IBNR and the Statutory Premium Reserve. He rationalizes the 1986 TRA by saying that Statutory Premium Reserves fill

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acquisitions over the last 10 years. Therefore, entry and exit analysis using schedule P may be inaccurate.

the economic role of IBNR reserves without the need of accounting for the latter as a different component of the total reserves.

> By statute, title insurers are required to carry liability reserves, the known claims reserve (KCR) and the statutory premium reserve (SPR). The KCR is the aggregate estimated amount that is required to settle all claims submitted to the underwriters and unpaid as of the balance sheet date. Since title policies have no termination date, the SPR is required and gradually reduced to reflect the long-tail nature of the company's liability. The SPR is considered a liquidation reserve since state statutes also require a company to segregate investment grade assets in an amount equal to its SPR. These SPR formulas vary significantly from state to state and reflect a state's underlying title framework and customs, but not necessarily its loss experience (*BestWeek*, 1996, pg. 9).

This is markedly different from P&C insurance where IBNR reserves represent a relatively large proportion of total reserves, especially in long tail lines. The small proportion of total reserves accounted as IBNR is even more surprising given that title insurance is a very long tail line.

Rate Regulation

The purpose of rate regulation is consumer protection. Most state laws require that rates need to be adequate, not excessive and non-discriminatory. Rate regulation in title insurance, similar to other lines of insurance, takes one of five forms: competitive pricing (no regulation), use and file rates (moderate regulation), file and use rates (less moderate regulation), prior approval of rates (strict regulation) and commissioner promulgation (commissioner sets rates). See Appendix D for a summary of state rate regulation.

Problems with Title Insurance

Solvency, Mergers and Acquisitions, and Independent Rating Companies

Many problems that arise in the title insurance industry are similar to those that affect P&C

insurers. Solvency, a major focus of any discussion involving insurance, may be a relevant problem for title insurers. Just because solvency has not been a major problem in title insurance in the past,[14] it does not preclude solvency from being a problem in the future. Given that a regulator's mandate is consumer protection, ensuring those firms underwriting insurance stay in business is a major aspect of that mandate.

Mergers and acquisitions in the title insurance industry, as with any industry, are very common. In the early 1980s there were nearly 200 title insurers competing nationally.[15] By 1992, there were less then 100 filing annual statements with the NAIC (Clarke, 1992). The 1996 NAIC database is down to 76 firms. This approximate 10 percent[16] reduction in the number of title insurers in the market is twice the size of the approximately 5 percent[17] reduction in the number of insurers in the P&C insurance industry from 1984 to 1996.

Fannie Mae mandates some solvency protections. One requirement is that lenders must use title insurers that have been rated by an independent agency in the last 6 months.[18] Rating agencies have been used in the P&C and life insurance fields for years. Research by Ambrose and Seward (1988) and Ambrose and Carroll (1994) has shown that higher rated firms, in both life and property and liability, have lower rates of insolvency. Agencies that rate the claims-paying ability of title insurers include Standard and Poor's Corp., Duff and Phelps Credit Rating Co.,

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[14] Few title insurance firms have reached insolvency (only 2 between 1985 and 1991). TitleUSA of Texas in 1989 became insolvent and Owners Title Insurance Company was placed in receivership in 1991 (Lipshutz 1994).

[15] Although Clarke (1992) contends that there were nearly 200 title insurers in the early 1980's, Dr. Rich McCarthy of the American Land Title Association disputes this number. While 200 firms may be an exageration, mergers and acquisitions are prevalent in title insurance. *BestWeek* (1996) states that the number of firms has dropped from 85 to less than 70 since 1986. While the NAIC database has 76 firms, only 68 of those firms had positive premiums written in 1996 (See Table 6).

[16] Assumes the number of title insurers going from 85 in 1986 to 76 in 1996.

[17] In 1984 there were 3474 P&C insurers (1984-1985 P&C Fact Book). In 1996 there were approximately 3300 (1997 P&C Fact Book).

[18] NAIC Model Acts (see later section) and Actuarial Guidance White Papers are other means to aid in solvency.

Moody's Investors Service, Lace Financial Corp. and Demotech Inc.[19] A more detailed discussion of the ratings of title insurers and their financial condition is provided in a later section.

Rate Bureaus

Aside from solvency, the activities of title insurance rate bureaus are another concern for regulators.[20] A rate bureau is an organization established to recommend joint rates for its members. Prior to June 12, 1992, there were thirteen states with rate bureaus in place.[21] On June 12, 1992, in FTC vs. Ticor Title Insurance Co. et al., the U.S. Supreme Court sided with the FTC in finding that rate bureaus were guilty of horizontal price fixing for title searches and examinations. The decision provided guidelines for rate bureau reformation. Those guidelines are:

- A state statutory intent to displace competition with state control of the business of insurance,
- Statutory provision for rating bureaus for title insurers,
- Actual rate review and findings by commissioners that the rate filed by the rating bureau is adequate and reasonable prior to use,
- Public hearings upon request (Morris, 1998).

These guidelines drastically changed the way that rate bureaus may operate. Previously rating bureaus were industry entities, whereas the new guidelines establish a quasi-regulatory rating bureau protected by state statute. The main result of the Ticor decision is in the drastic reduction in the role that rate bureaus play in the title insurance industry. Prior to the Ticor decision, rate bureaus were influential in the industry. Following Ticor, this influence has been greatly reduced or even eliminated in some states.

[19] Currently, A.M. Best does not rate title insurers.
[20] Rate bureaus should not to be confused with *solvency rating agencies* such as Lace and Moody's.
[21] Arizona, Connecticut, Idaho, Louisiana, Montana, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Wisconsin and Wyoming.

Barriers to Entry

Title Plants

One impediment to competition in the title insurance market is barriers to entry. While minimum capital standards are entry barriers, regulators deem substantial capital necessary for solvency concerns. A barrier unique to the title insurance industry is the title plant. The title plant is the primary source of data for title searches. Title plants essentially duplicate all the public records for land property. The title insurer (or the title agent) maintains these plants, required by statute in some states. In these "title plant states", title plants must meet some minimum requirements (Koch, 1993).

Although owning a title plant is required in many states, its market value is difficult to determine.[22] This is due to the fact that it is not a marketable asset; a title insurer looking to sell its title plant would have a difficult time finding a buyer. No title insurer competing in the same market as the seller would buy the title plant since they already have their own, unless of course, the new title plant is a significant improvement over the buyer's own title plant. Thus, the most likely buyers are new title insurers or existing title insurers looking to expand into a new market.[23]

Regardless of valuation problems, title insurers list actual and book values of title plants in their annual statements. The value of the plant varies widely, depending on which and in how many states the title insurer operates. The average book value is approximately $1million per state for a title plant.[24]

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[22] FASB 61 provides the accounting standards for title plants. FASB 61 requires that the cost incurred in the construction of a title plant be capitalized until the title insurer can use it to do searches.
[23] That is, existing title insurers that do not directly compete with the selling insurer in that area.
[24] For example, the average book value of title plants for firms that operate in Colorado (and have a title plant) is $1M. Average book value for title plants for nationwide firms is about $37M. The book values of title plants can

Based on reported title plant values, there appear to be 15 states that do not require title plants. We reach this conclusion based on the fact that within these 15 states, we observe many firms that do not list title plants as an asset.[25] Exhibit B-1 in Appendix B contains a table comparing the number of title insurance decision centers operating by state. Note the difference in the number of firms in operation between the title plant and non-title plant states. Exhibit B-1 indicates fewer decision centers operated in title plant states (8.2 versus 11.4 in non-title plant states). This supports the view that title plants act as an entry barrier. Further evidence is provided by the Herfindahl index, which is, on average, greater in title plant states.

It is also interesting to note that on average title plant states are smaller than non-title plant states with respect to direct premium written (DPW) ($86 million versus $126 million). This 3-to-2 difference is surprising considering the fact that the two largest title insurance markets, California and Texas with $882 million and $630 million in DPW respectively, are title plant states. Exhibit B-2 in Appendix B shows that even when correcting for market size, title plant states have fewer decision centers operating within those states due to the title plant requirements. This result is robust to model selection, both standard OLS and two-staged least squares results are reported in Exhibits B-2 and B-3.

The difference in the number of firms and in the concentration stems from the fact that there are significantly fewer independent title insurance firms on average in title plant states (.75 in title plant states versus 3 in non-title plant states). The average market share of independent title

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be found in schedule H of the NAIC annual statement database.

[25] Alabama, Arizona, Colorado, Connecticut, Delaware, Florida, Georgia, Maryland, North Carolina, New Jersey, Ohio, Pennsylvania, South Carolina, Utah and Washington. New York requires a title plant but does not allow the title insurer to list the title plant as an admitted asset. Of the 76 firms in the study, 33 do not list title plants. Further study reveals that of the 33 firms without title plants, 17 are either members of a group (where at least one member had a title plant) or had no direct premiums written in 1996. For the remaining firms, two rented title plants and the remaining 14 only wrote business in non-title plant states.

firms is 3.2 percent in title plant states (with a maximum of 18 percent in Arkansas) compared with 7.0 percent in non-title plant states (with a maximum of 32 percent in Connecticut).

Another issue that needs to be addressed with respect to title plants is efficiency. It is highly inefficient for each company to maintain duplicates of the public record, when all that would be necessary is access to a public record database. Forming one database, with maintenance costs spread over the entire title insurance market, would be much more efficient. A compromise between the two extremes may be joint title plants, where more than one company support a common title plant. These options may reduce the fixed costs associated with the title plant.

It should also be noted that technological advances have aided in the cost effectiveness of title plants. Title insurers are becoming more automated in all aspects of operations, including order taking, title searches and policy issuance (*BestWeek*, 1996). These advances, along with the computerization of the public record, should enable title insurers to more efficiently maintain the title plants, increase profit margin, and reduce the barrier to entry that title plants may present.

Controlled Business Arrangements

Palomar (1997) defines a controlled business arrangement as one provider in a real estate transaction owning controlling interest in another provider. Under the Real Estate Settlement Procedures Act of 1974, controlled business arrangements are allowed as long as the consumer is informed of the relationship among service providers and no rebates or kickbacks are exchanged between service providers. Rebates and kickbacks are prohibited to prevent reverse competition, whereby title insurers offer substantial rebates to primary service providers (lenders or real estate agent) to induce them to use their products. Reverse competition refers to the payment of rebates being included in and increasing the cost of title insurance.

Controlled business arrangements, while facilitating one stop shopping for potential homeowners, may also discourage new entry into the title insurance industry by almost requiring partnerships with established players. Aside from controlled business arrangements, affiliated business arrangements can be formed through partnerships among service providers rather than purchasing interests. Affiliated businesses could create the same barriers to entry as controlled business arrangements.

Combined with the possible need to invest in a title plant, we see that there are significant barriers to entry in the title insurance industry. This makes the low profitability of title insurers, discussed later, more puzzling.

Banks and Insurance

Another problem facing the title insurance industry is banks selling insurance. Although only "small town" banks currently have the right to sell insurance,[26] merger of banking and insurance activities seems imminent.[27] If the bank's ability to sell insurance is expanded, the title insurance market could be the most affected insurance market. This fact has not been lost on the title insurance industry. The American Land Title Association has been challenging the entry of banks into title activities since 1986 (Palomar, 1997).

There are arguments both for and against banks acting as title agents, or being the title insurer. Aside from title activities being a profit center for banks, banks involved in title activities could have a competitive advantage over title insurers that are independent from banks. It can act

[26] The rationale being those towns of less than 5,000 do not generate enough insurance premium to support an agent.

[27] For example, the Citicorp-Travelers merger occurred while we were writing this paper.

as a lender, provide the title search and abstract, act as an insurer in case of a loss and collect title fees along with all the other closing costs. By consolidating a majority of the closing services, banks enjoy synergy and economies of scope that may put traditional title insurers at a disadvantage. Arguments against banks entering title markets include conflict of interest and additional risks to bank portfolios.[28]

The Market for Title Insurance

Just as other types of insurance experience so-called "underwriting cycles", so does title insurance. Title insurance cycles are market cycles in that they stem from the market's reliance on real estate transactions. P&C cycles on the other hand are profit cycles.[29] Since real estate transactions are interest rate sensitive, any change in interest rates is going to affect title insurers because title insurance is only purchased during real estate transactions (commercial or residential) and the refinancing of mortgages.[30] These market cycles can be more harmful to title insurers than underwriting cycles to P&C insurers, given the high fixed costs that title insurers incur. Moreover, market cycles in title insurance are less predictable than profit cycles in P&C insurance.

Much research has been done on the cyclical nature of the supply of insurance in the P&C market.[31] While title insurers may face the same regulatory constraints as P&C insurers, they do not have the same capacity constraints. Because of the difference in premium structure between

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[28] For more information on bancassurance see Mattewson and Quigley (1997), Stinson (1997) and Pace (1995). See also Palomar (1997) for a detailed discussion of reasons why banks should or should not provide title services.
[29] Although interest rate changes have been used to attempt to explain underwriting cycles (Doherty and Kang, 1988), interest rates do not explain the liability crises or capacity constraints that affect cycles in the P&C industry (Doherty and Garven, 1995).
[30] A more detailed examination of this relationship will be discussed in a later section.
[31] Gron (1994), Winter (1994), Cummins and Outreville (1987).

the two lines (large vs. small risk bearing capacity), title insurers have the ability to adapt to changing markets more quickly than P&C insurers. Moreover, title insurance markets, because they do not face the same capacity limitations (smaller loss reserves) as P&C markets, are more demand driven.

While the demand for most lines of P&C insurance remains fairly consistent from year to year, demand for title insurance varies. To analyze the changes in demand for title insurance, we ran a two-staged least squares regression using the data provided in the Schedule P Part 1. With only one filing year in our database, Schedule P allows for the tracking of premiums through time since it contains 10 years worth of data. While autocorrelation was not a problem with the data, there was a distinct trend of dropping mortgage rates throughout the period. The two-staged least squares regression allowed us to control for this trend. This is done by regressing the annual thirty year fixed mortgage rates on time in the first stage and then utilizing the residuals in the second stage regression as an independent variable.[32] The dependent variable in stage 2 is industry wide direct premiums written (DPW) corrected for inflation (in constant dollars). Table 7 contains the regression results.

TABLE 7
Two-Staged Least Squares Regression Output

Stage 1: Dependent Variable: 30 year mortgage rates

Regression Statistics	
Multiple R	0.894595437
R Square	0.800300996
Adjusted R Square	0.775338621
Standard Error	0.558922529
Observations	10

[32] Historical monthly and annual mortgage rates are available at www.freddiemac.com.

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	702.8938788	122.5477675	5.735672653	0.000436107
Year	-0.348424242	0.061535345	-5.66218067	0.000474676

Stage 2: Dependent Variable: DPW (constant dollars)

Regression Statistics	
Multiple R	0.79138751
R Square	0.6262942
Adjusted R Square	0.51952111
Standard Error	295215747
Observations	10

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-1.64241E+11	64728166754	-2.53739232	0.038811546
Residuals	-420013936.6	186742388.6	-2.24916228	0.059271314
Year	83957494.72	32502184	2.583133943	0.036306133

This result is intuitive. Title insurance is purchased at the time of real estate transactions. The number of real estate transactions varies with mortgage rates. As mortgage rates drop the number of purchases and refinancing rise and the demand for title insurance increases. This relationship makes title insurers ideal candidates to hedge their interest rate risk on the futures market.

Miscellaneous

There are some problems that are prevalent in other lines of insurance that are not present in title insurance. Because Fannie Mae requires lender title insurance, the title insurance industry does not have an adverse selection problem. Moreover, offering substantial discounts[33] on the owner's

[33] Charges as low as $50, to add an owner's policy to the lender's policy.

title policy increases the incentives for all homeowners to purchase title insurance. Also, since the title insurance covers historical liens against the property, there is no incentive for altered behavior by the consumer (i.e., no moral hazard).

Although there is no moral hazard on the part of the policyholder, title insurance agents are faced with some moral hazard. Agents are often asked to handle mortgage payments on behalf of the buyer. This can represent hundreds of thousands to millions of dollars according to *BestWeek* (1996). This introduces an important fiduciary duty on the part of the insurance agent that is not present in P&C lines of insurance to the same degree. There are instances where insurance agents have mishandled the money they were asked to manage. This is known as agent defalcation. According to Lipshutz (1994), defalcation problems have been increasing because of the lowering moral standards in the population (the impact of lower moral standards on P&C insurance fraud is studied by Tennyson, 1994).

Financial Condition

The final section of this paper covers individual firms' financial condition. Similar to P&C insurers, title insurers provide a mechanism whereby purchasers of title insurance can spread risk. The spreading mechanism allows individuals to transfer the larger risk of liens on the property for a small one-time premium. Because of the timing of the cash flows,[34] the financial condition of the title insurers is of utmost importance. And since title insurance premiums have little risk bearing capacity, pricing and an accurate title search becomes vital to title insurers.

[34] Premiums are paid in the beginning of the policy period, losses are discovered and paid over time.

Pricing of Title Insurance

There are few industries where the price of a product is determined prior to realizing the costs associated with producing it. Insurance is one of those industries. The pricing of title insurance has been alluded to previously in this paper. We provide here a more formal discussion. Since the title insurance product does not vary from one provider to another, title insurers compete in two basic areas: pricing and quality of service. The quality of service can be measured using state records of complaints, promptness of claims settlement, or other measures of professionalism or service. An analysis of the pricing of an insurance product is a little more complicated.

To analyze insurance pricing in the P&C field, several methods have been used. Cummins and Weiss (1992) use the inverse loss ratio given as the ratio of premiums earned to losses incurred. Harrington (1988), Winter (1990), and Cummins and Danzon (1990) use the economic premium ratio which is the ratio of premiums earned to discounted losses. In addition, Myers and Cohn (1987) develop a pricing formula using the present value of losses and taxes. These pricing tools are very useful in P&C lines but do not contribute much in the way of analysis of title insurance pricing. The reason is that all these methods focus on losses, whereas losses contribute only a small portion of title insurance premiums. A majority of the title insurance premium is composed of expenses related to the title search and abstract. These expenses are incurred at the same time that premiums are collected. Therefore, the present value concerns in title insurance are not as important as in P&C lines. Commissions and expenses are the major pricing concern for title insurers as noted by their high expense ratios (see Graphs 3 through 10 in Appendix C).

One concern that seems prevalent in both P&C insurance and title insurance is price-cutting. Price cutting, or the “winner’s curse” as described by Danzon and Harrington (1990), is the theory that the insurer which wants the business the most will end up selling the product at a price that is unprofitable. For other insurers to remain competitive, they must also cut premiums, leading to destructive competition.[35]

There may be some evidence of price cutting in title insurance; the two largest title insurers groups have been losing money, as shown by their overall operating ratio[36] being greater than one over the last five years, while the third largest is only marginally profitable. One explanation is that these publicly traded firms all have interests outside title insurance, and have been using the title insurance line as tax write-offs. While tax write-offs are speculation by the authors, if this is true, it could explain the general lack of profitability in the title insurance industry, along with the destructive competition rationale. Price cutting is only one possible explanation. Another possible explanation may be that profits are accounted for in other areas of controlled business arrangements. It is left as an open question as to other possible explanations.

Profitability of Title Insurers

Just as there are difficulties in assessing insurance pricing, there are also difficulties in analyzing the profitability of the suppliers of insurance. Two ratios used to gauge profitability are the combined ratio and the overall operating ratio. We also examine net income as a measure of profitability. We use these measures to compare individual vs. group firms and public vs. private firms.[37]

Graph 3 (Graphs 3 through 10 are in Appendix C) displays the combined ratios of the industry for the last five years. Note that the combined ratio is greater than one every year.

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[35] This theory holds only in the absence of regulation. Regulatory bodies may put a price floor in the market, thus setting minimum premiums that may be charged.
[36] The overall operating ratio is the combined ratio minus the ratio of the investment income to premiums earned. The combined ratio is the sum of the loss ratio and the expense ratio.
[37] The results for public vs. private and individual vs. group do not vary much; mainly because all the public

Comparing combined ratios of the individual firms with group decision centers (Graph 4) reveals that across the years, individual firms have had consistently lower combined ratios. This may lend credibility to the argument that the group title decision centers have been used by their parents as a tax write-off.

Graphs 9 and 10 contain similar comparisons using the overall operating ratio. Over the last 5 years, approximately 50 percent of the firms in the database have an average overall operating ratio less than or equal to one. In the groups, eight of the twelve groups earning premiums in 1996 had an overall operating ratio less than or equal to one over the previous five years. However, as previously mentioned, the two largest groups have averaged above one, while the third largest is just below one. Over the last 3 years, 20 of the 45 individual firms had an overall operating ratio below one, and only 5 of the 12 groups can say the same.

Another measure of profitability, taken straight out of the annual report, is net income, which we present in Graphs 7 and 8. Net income takes into account net operating gain or loss, net investment gain or loss, total other income and federal and foreign income taxes incurred. Table 8 shows the number of firms with negative net income for each of the previous 5 years and the number of firms with a negative average net income over the entire period. This table also breaks these numbers down between individual firms and group decision centers.[38]

TABLE 8
Number of Firms with Negative Net Income

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decision centers are groups, with only two small groups that are private.

[38] CAPM Cost of Capital has been calculated for the publicly traded groups. The Betas with the market are fairly low. This seems natural given the more direct relation between premium income and interest rates, rather than direct relationships with the market. Appendix E contains the CAPM Cost of Capital for the title industry over the 5-year period.

	1996	1995	1994	1993	1992	Five year period
Independent	17	15	18	6	7	9
Group	2	3	2	0	0	2
Total # of Units	19	18	20	6	7	11

Source: Authors' calculations based on NAIC 1996 title insurance database.

Financial Ratios

Historically, IRIS ratios have been used to assess the financial stability of P&C insurers. Their main purpose is to provide regulators with a warning about which firms may be heading toward insolvency. Again, not all of these ratios are applicable to title insurance. On the other hand, some of the ratios that are easily available for title insurance and may be applicable are the leverage ratios. These ratios have been good predictors of insolvency in the P&C industry. Table 9 provides those leverage ratios for the title insurance industry for the last five years. Lipshutz (1994) presents a comparison of the title insurance ratios with the P&C ratios.

TABLE 9
Leverage Ratios

Leverage Ratios Year	Premium to surplus	Loss Reserve to surplus	Total Reserve* to surplus	Liabilities to surplus
1992	3.502	0.279	1.206	1.552
1993	3.413	0.225	1.066	1.391
1994	3.496	0.226	1.188	1.464
1995	2.953	0.229	1.321	1.536
1996	3.309	0.195	1.272	1.544

Source: Authors' calculations based on NAIC 1996 title insurance database. *- Loss reserve plus statutory premium reserve.

It is clear that the title insurance industry needs a systematic process of identification of financially shaky firms other than the four leverage ratios aforementioned. The P&C industry has moved from the IRIS ratios to FAST ratios supplemented by Risk-Based Capital requirements. The title industry needs to follow the same approach as the P&C industry in using ratios and Risk-Based Capital requirements in an attempt to accurately predict future insolvencies.

Ratings

Numerous agencies rate title insurers. We shall concentrate on ratings by Lace Title Rating Corporation.[39] Lace divides the rating of title insurers among peer groups. Each firm is assigned to a peer group based on the total assets of the individual firm. Even if a firm is a member of a group, each individual firm is assigned a rating. For example, the seven firms affiliated with the Chicago Title group each have their own rating. Rate assigned to each firm can be C, C+, B, B+, A and A+. The rating is based on the individual firm's claims-paying ability.

Of the 11 firms that have assets over $100 million, only two have a claims paying rating below A. These two are members of the Fidelity National group. In fact, there exists a high correlation between total assets and the Lace rating. Of the 10 firms whose assets are between $25 and $100 million, only three have a claims paying rating below A. Two of these are members of the Fidelity National group. In peer group 3, firms with assets between $10 and $25 million, 9 of 17 have a rating below A, including the two firms affiliated with Fidelity National. Finally, for the 50 title insurance firms whose assets are worth less than $10 million, 38 have a rating below A, including every firm affiliated to Fidelity National.

Table 10 presents weighted average ratings for the groups (by total assets) and the average individual firm (again weighted by total assets). We assigned value 5 to a rating of A+, 4

[39] Demotech is another title insurance rating agency. Their ratings, in ascending order, are L, M, S, A, A' and A''. Demotech rates the great majority of insurers as A or above. The ratings of Lace and Demotech are relatively similar. On average, however, Lace appears to give lower scores more frequently than Demotech.

to A, 3 to B+, 2 to B, 1 to C+ and 0 to C.

Table 10
Lace Rating

Group	Average Rating	Total Assets (000's)
First American	4.05	$ 616,276
Alleghany	4.05	$ 794,792
Reliance	4.58	$ 591,350
Stewart	4.93	$ 312,113
Fidelity National	1.05	$ 408,840
Lawyers' Title	5.00	$ 376,597
Old Republic	5.00	$ 250,609
Other groups	4.01	$ 190,036
Independents	3.14	$ 207,466

Source: Authors' calculation based on Lace Title Insurance Rating, 1996.

Among the group decision centers, only Fidelity National has a poor claims-paying ability. Over 80 percent of the market is being serviced by a firm or a group that has a claims paying ability rating above A. If we were to remove Fidelity National from the sample, we would find over 90 percent of the market being serviced by a firm that has a claims paying ability rating above A. This means that even if the title insurance industry has been losing money, the Lace rating agency does not believe that such losses affects the ability of insurers to pay its claims.

Conclusion

The title insurance industry is coming under increasing scrutiny; Fannie Mae's independent ratings requirement is just the beginning. A renewed focus on reducing the closing costs associated with residential real estate transactions is sure to direct both regulatory and consumer focus and criticism on the title industry. Furthermore, commercial lenders and Wall Street firms may be concerned about the claims-paying ability of title insurers in large commercial real estate transactions. Continuing merger and acquisition activity will increase concentration in a market that has been highly concentrated in the 1990s. Profitability should be a major concern. Banks selling title insurance may signal a major change in market structure. There are serious efficiency questions raised with requirements of individual title plants. The ability of title insurers to remain profitable during real estate cycles will depend on the proper balance of independent vs. exclusive agent distribution as well as the use of automation technology.

The future is not entirely bleak. Continued low interest rates should keep demand high. Title insurers should look to the futures market to hedge their interest rate risk. Independent ratings will enable consumers to pick high quality title insurers and protect the market against insolvencies. Moreover, the claims paying ability of title insurers is high on average, which means that rating agencies believe this industry to be financially secure.

The object of this paper was to raise questions about the title insurance industry. How are title insurers able to incorporate multiple distribution systems within a state? How can the title insurance industry arrive at good predictors of financial distress? What role can reinsurance play in the financial security of the title insurance industry? These and other questions need to be answered to provide a clearer understanding of the functioning of the title insurance industry.

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Appendix A

Exhibit A-1 – Key Elements of Title Insurance Compared With P&C Insurance

Features	Title Insurance	P&C Insurance*
Protects Against	Past Events	Future Events
Scope of Coverage	Specific	Broad
Rates	Expense Driven	Market Driven
Expenses – Administrative and Acquisition	High	Low
Expenses - Loss	Low	High
Policy Term – Length of Coverage	Undefined, potentially infinite	Finite
Premium (GAAP)	Fully Earned at Issue	Earned over Policy Term
Rate Regulation	Modest	High
Rate Activity	Virtually None	Tied to Inflation, Business Cycles
Loss Frequency	Low to Moderate	High
Loss Severity	Low	Moderate
Distribution	Agents/Representatives	Agents/Representatives/ Mass Marketed
Marketing Success	Based on Service	Based on Rates
Competition	Concentrated Market	Fragmented Market

Source: *BestWeek*, 1996 * - P&C policies refer to occurrence policies not claims-made policies. Claims-made policies more closely resemble title insurance policies although the claims-made policies may be more restrictive depending on the retro date.

Appendix B
Exhibit B-1 – Title Plant vs. Non-Title Plant States
A Comparison of Number of Decision Centers Operating by State

Title Plant State	Number of Decision Centers	Herfindahl Index	DPW ($ 000,000)	Non-Title Plant State	Number of Decision Centers	Herfindahl Index	DPW ($ 000,000)
AK	5	0.4681	18.09	AL	12	0.1698	31.94
AR	9	0.1568	18.99	AZ	10	0.1838	162.54
CA	11	0.1589	882.51	CO	11	0.1391	154.67
DC	9	0.2595	8.87	CT	8	0.1955	59.22
HI	6	0.3166	27.25	DE	10	0.3064	10.44
ID	7	0.2246	47.88	FL	15	0.1410	505.77
IL	9	0.3317	96.16	GA	13	0.1545	69.64
IN	10	0.2029	48.69	MD	7	0.1921	79.66
IA	3	0.5547	0.64	NJ	12	0.1482	143.56
KS	9	0.2279	13.97	NC	11	0.1499	47.60
KY	11	0.3505	21.03	OH	16	0.1750	154.34
LA	9	0.2610	37.73	PA	15	0.1304	202.69
ME	8	0.2123	8.41	SC	13	0.1566	32.76
MA	7	0.1921	80.00	UT	10	0.1890	94.55
MI	8	0.1782	177.32	WA	8	0.2509	139.16
MN	7	0.1779	43.36				
MS	10	0.3093	14.28				
MO	9	0.1810	29.27				
MT	7	0.2739	24.31				
NE	9	0.1741	20.43				
NV	9	0.1467	68.46				
NH	7	0.1946	13.05				
NM	9	0.1428	57.71				
NY	11	0.1587	335.76				
ND	7	0.2333	2.33				
OK	10	0.1741	15.59				
OR	7	0.2137	119.97				
RI	7	0.2667	6.96				
SD	6	0.3000	5.67				
TN	10	0.1506	57.48				
TX	10	0.1337	630.62				
VT	8	0.2143	4.53				
VA	11	0.1412	98.43				
WV	9	0.1711	4.80				
WI	7	0.2143	57.96				
WY	7	0.4185	9.50				
avg	**8.27**	**0.2357**	**86.28**	**avg**	**11.4**	**.1788**	**125.90**
std	**1.81**	**0.0957**	**178.88**	**std**	**2.69**	**.0466**	**119.93**

Exhibit B-2

Standard OLS Regression Output
Dependent Variable: Number of Title Insurers by State

Regression Statistics	
Multiple R	0.652930317
R Square	0.426317999
Adjusted R Square	0.402414582
Standard Error	1.955764651
Observations	51

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Constant	10.75593566	0.544052663	19.77002667	1.04054E-24
DPW	4.45306E-09	1.7163E-09	2.594572455	0.012523881
Title	-2.908399918	0.599089135	-4.854703164	1.31991E-05

DPW - Direct Premium Written by state
Title - dummy variable assigned a value of 1 if the state requires a title plant

Exhibit B-3

Two-Staged Least Squares Regression Output

Stage 1: Dependent Variable: DPW

Regression Statistics	
Multiple R	0.1715154
R Square	0.0294175
Adjusted R Square	0.0096097
Standard Error	162789403
Observations	51

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	139020088	40697351	3.415949	0.001286
Title	-59869006.74	49126656	-1.218666	0.228806

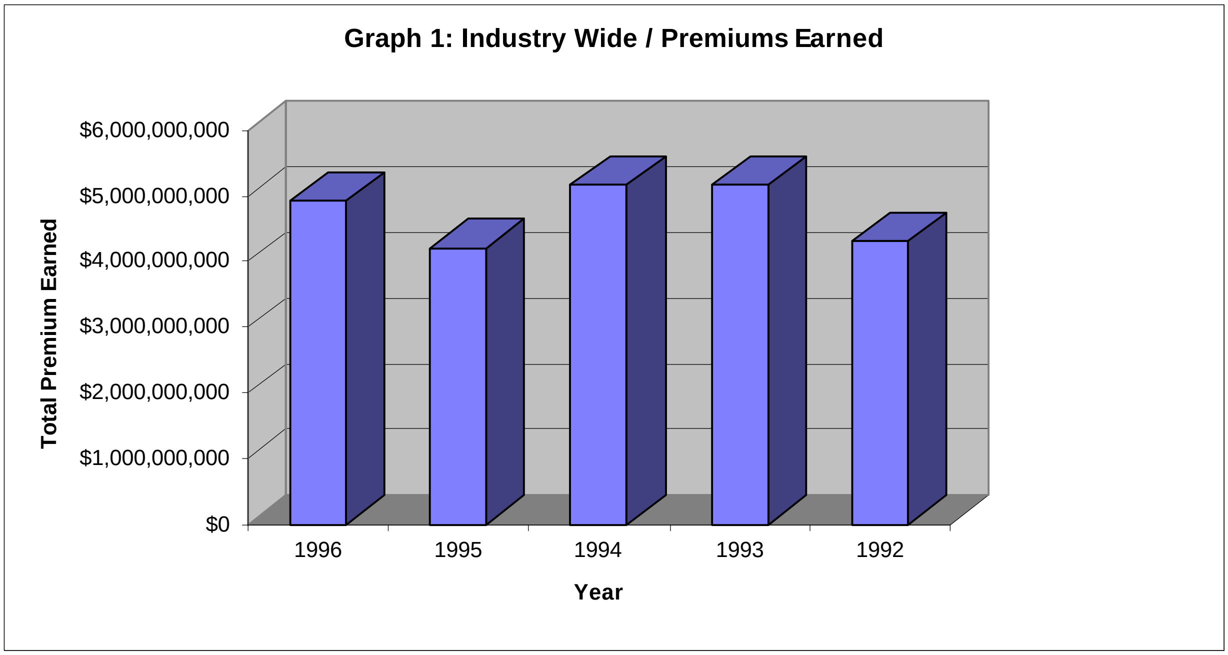
Regression Output
Stage 2: Dependent Variable: Number of Firms

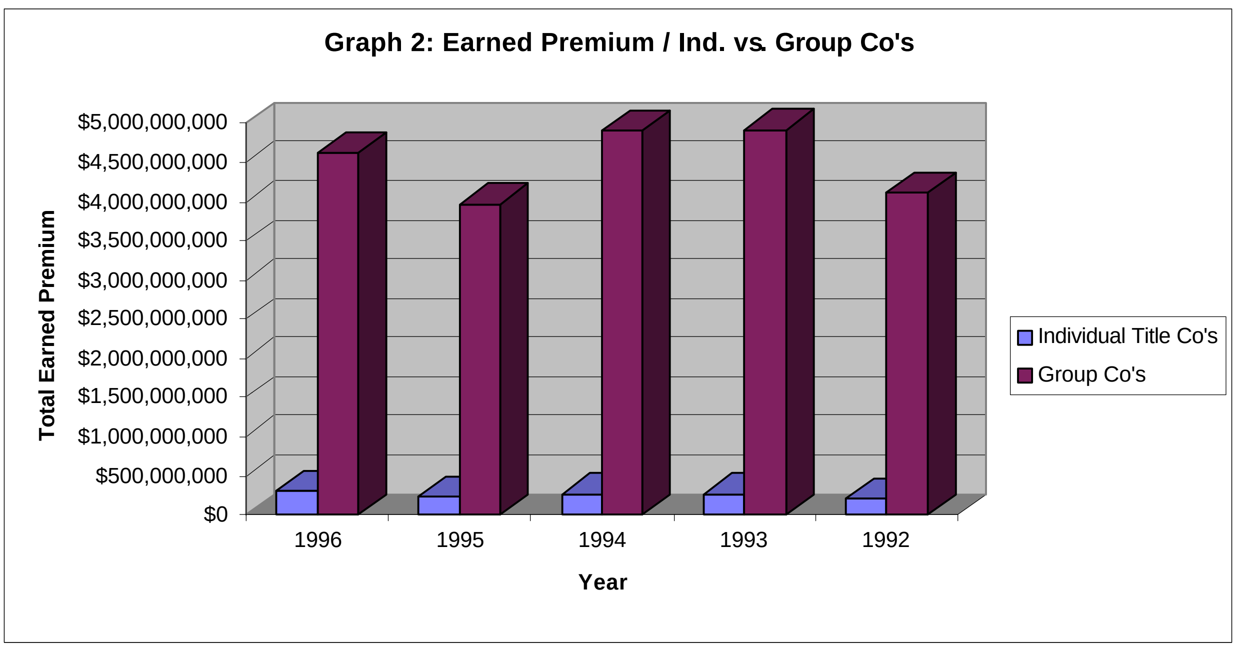
Regression Statistics	
Multiple R	0.652930317
R Square	0.426317999
Adjusted R Square	0.402414582
Standard Error	1.955764651
Observations	51

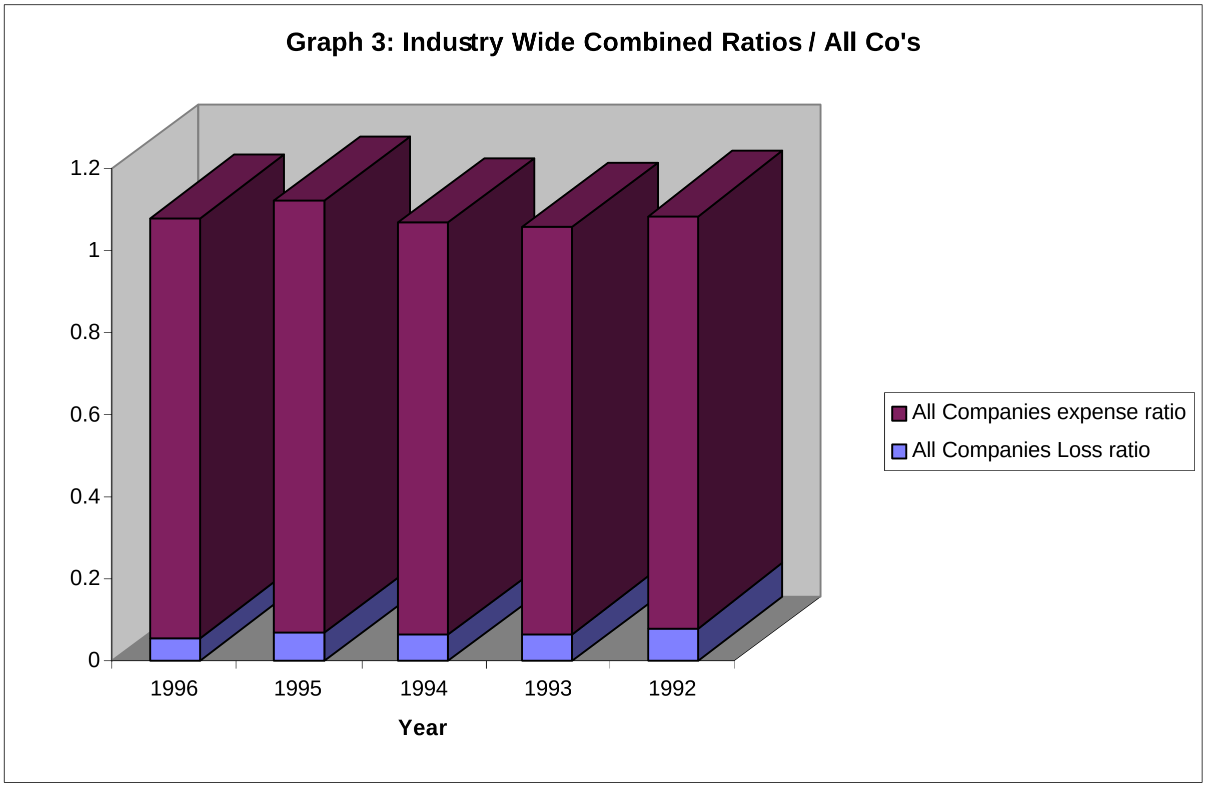
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	11.375	0.488941163	23.26455792	8.7001E-28
Title	-3.175	0.590211499	-5.37942755	2.1896E-06
DPW Residual	4.45306E-09	1.7163E-09	2.594572455	0.01252388

DPW Residual – residual values from Stage 1 regression

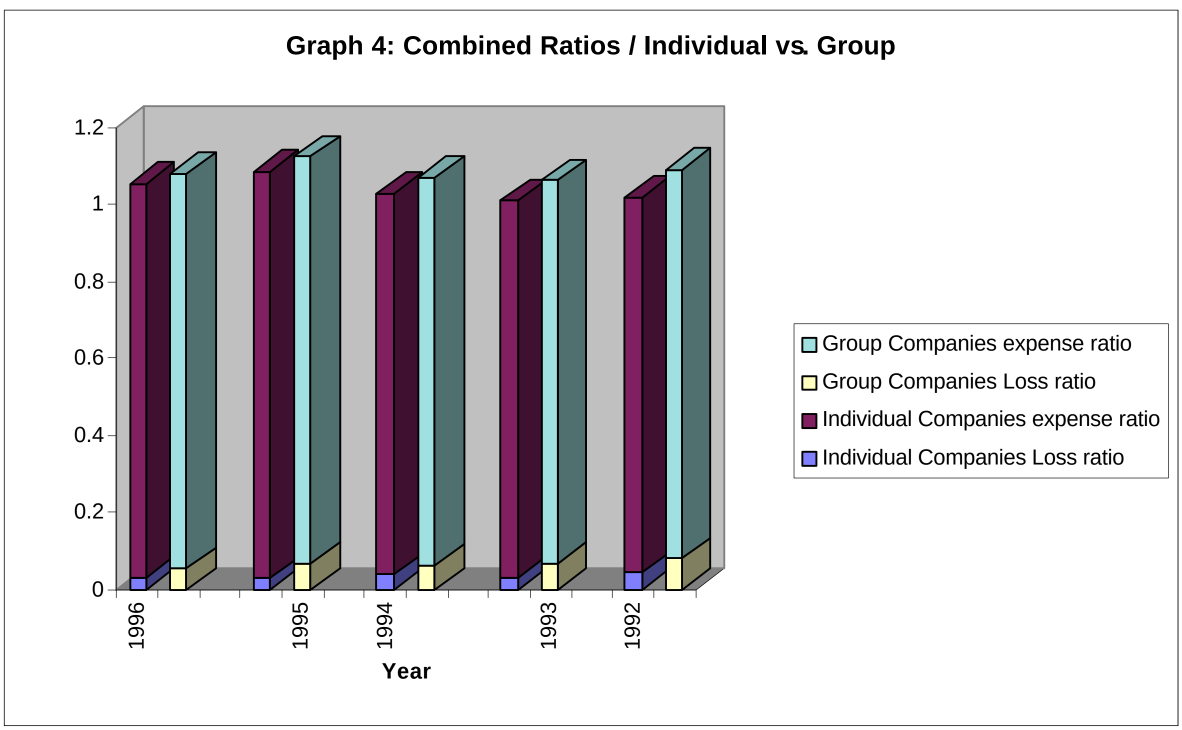
Appendix C


Graph 1: Industry Wide / Premiums Earned
$6,000,000,000
$5,000,000,000
$4,000,000,000
$3,000,000,000
$2,000,000,000
$1,000,000,000
$0
Total Premium Earned
1996
1995
1994
1993
1992
Year

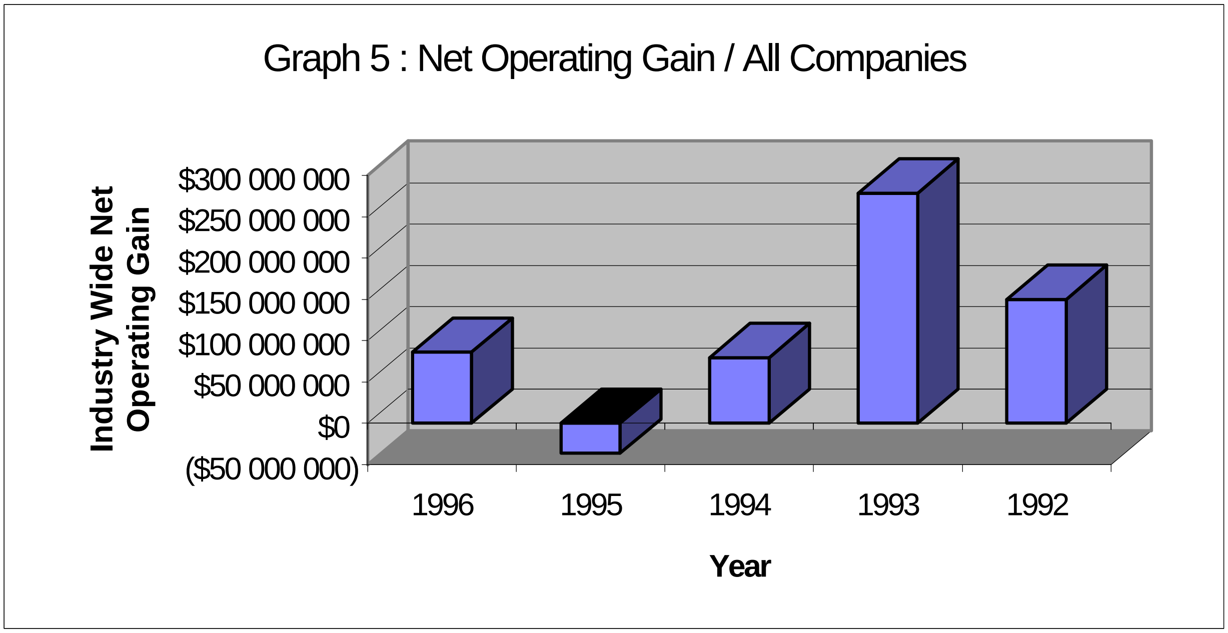

Graph 2: Earned Premium / Ind. vs. Group Co's
$5,000,000,000
$4,500,000,000
$4,000,000,000
$3,500,000,000
$3,000,000,000
$2,500,000,000
$2,000,000,000
$1,500,000,000
$1,000,000,000
$500,000,000
$0
Total Earned Premium
1996
1995
1994
1993
1992
Year
Individual Title Co's
Group Co's

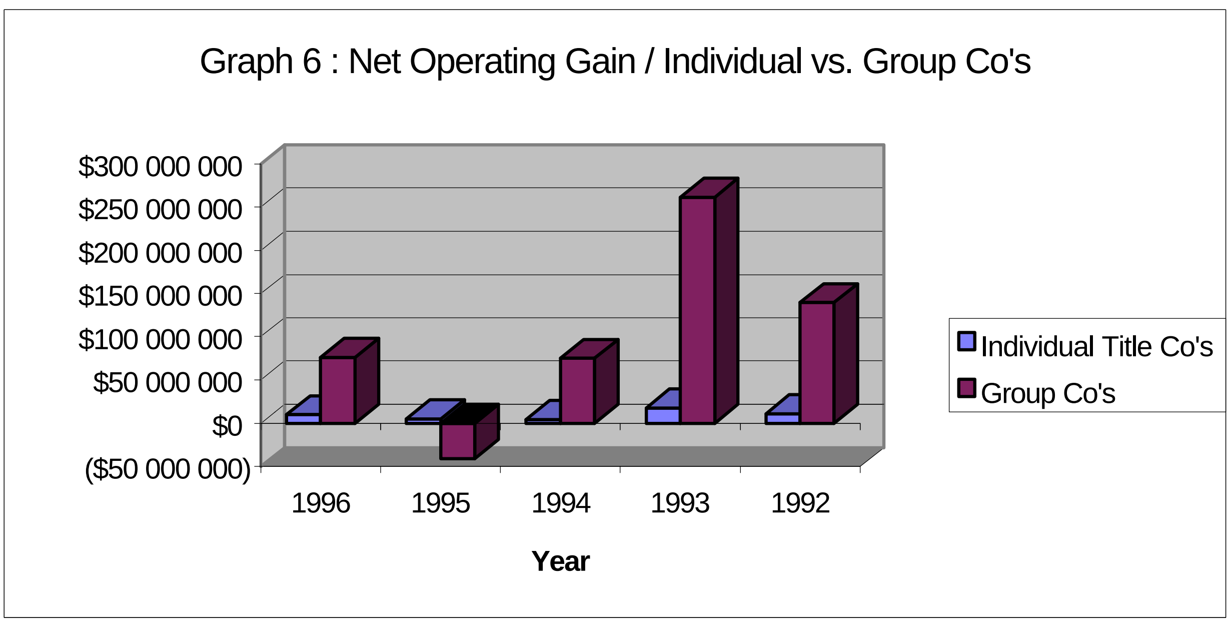


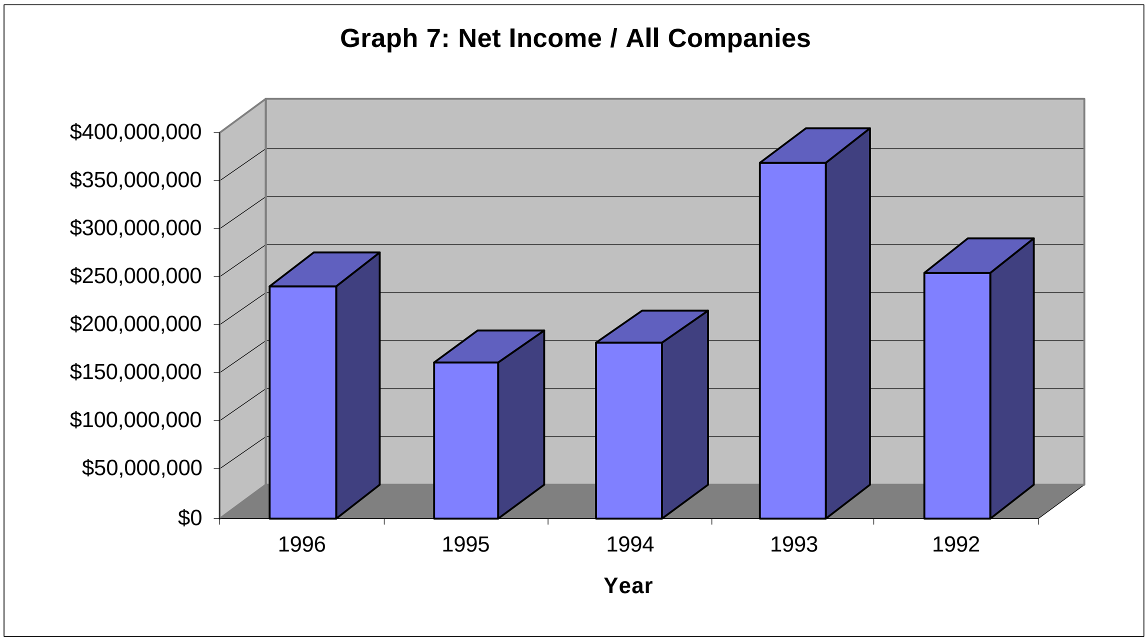
Graph 3: Industry Wide Combined Ratios / All Co's
1.2
1
0.8
0.6
0.4
0.2
0
1996
1995
1994
1993
1992
Year
All Companies expense ratio
All Companies Loss ratio

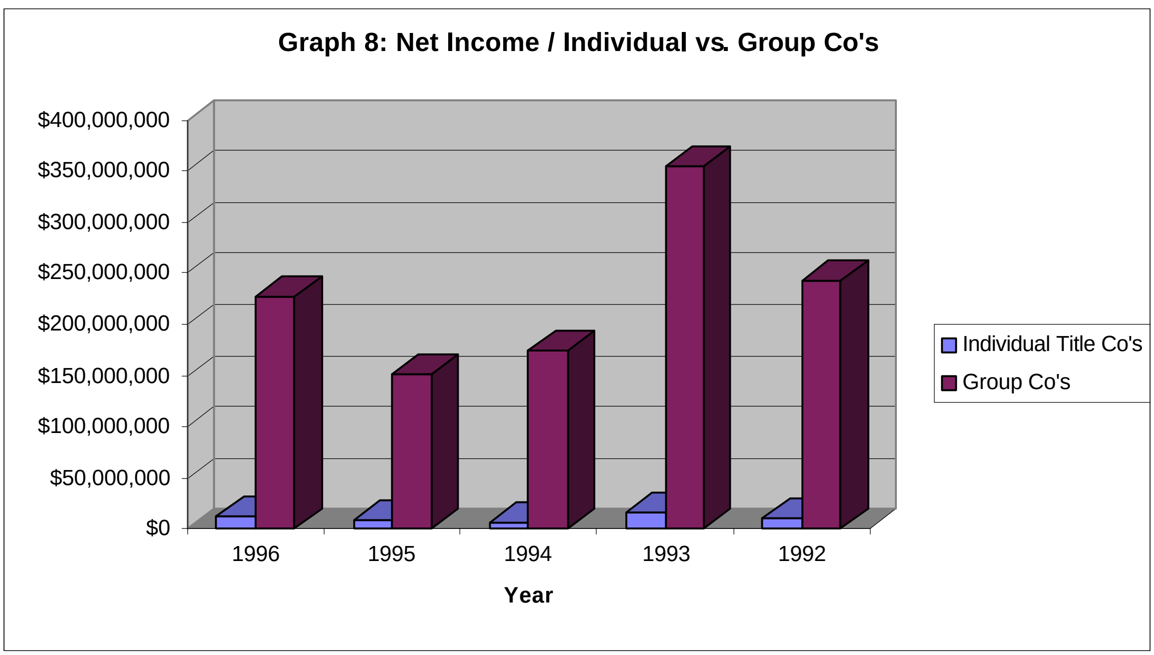


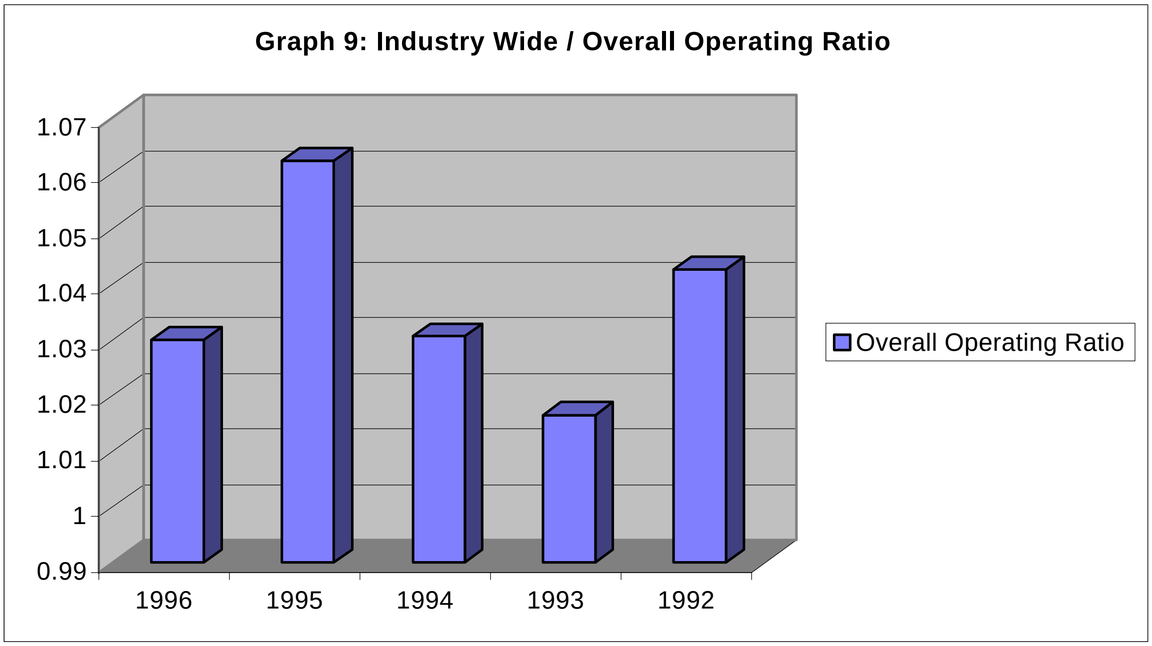
Graph 4: Combined Ratios / Individual vs. Group
1.2
1
0.8
0.6
0.4
0.2
0
1996
1995
1994
1993
1992
Year
Group Companies expense ratio
Group Companies Loss ratio
Individual Companies expense ratio
Individual Companies Loss ratio


Graph 5 : Net Operating Gain / All Companies
Industry Wide Net Operating Gain
$300 000 000
$250 000 000
$200 000 000
$150 000 000
$100 000 000
$50 000 000
$0
($50 000 000)
1996
1995
1994
1993
1992
Year


Graph 6 : Net Operating Gain / Individual vs. Group Co's
$300 000 000
$250 000 000
$200 000 000
$150 000 000
$100 000 000
$50 000 000
$0
($50 000 000)
1996
1995
1994
1993
1992
Year
Individual Title Co's
Group Co's


Graph 7: Net Income / All Companies
$400,000,000
$350,000,000
$300,000,000
$250,000,000
$200,000,000
$150,000,000
$100,000,000
$50,000,000
$0
1996
1995
1994
1993
1992
Year


Graph 8: Net Income / Individual vs. Group Co's
$400,000,000
$350,000,000
$300,000,000
$250,000,000
$200,000,000
$150,000,000
$100,000,000
$50,000,000
$0
1996
1995
1994
1993
1992
Year
Individual Title Co's
Group Co's


Graph 9: Industry Wide / Overall Operating Ratio
1.07
1.06
1.05
1.04
1.03
1.02
1.01
1
0.99
1996
1995
1994
1993
1992
Overall Operating Ratio

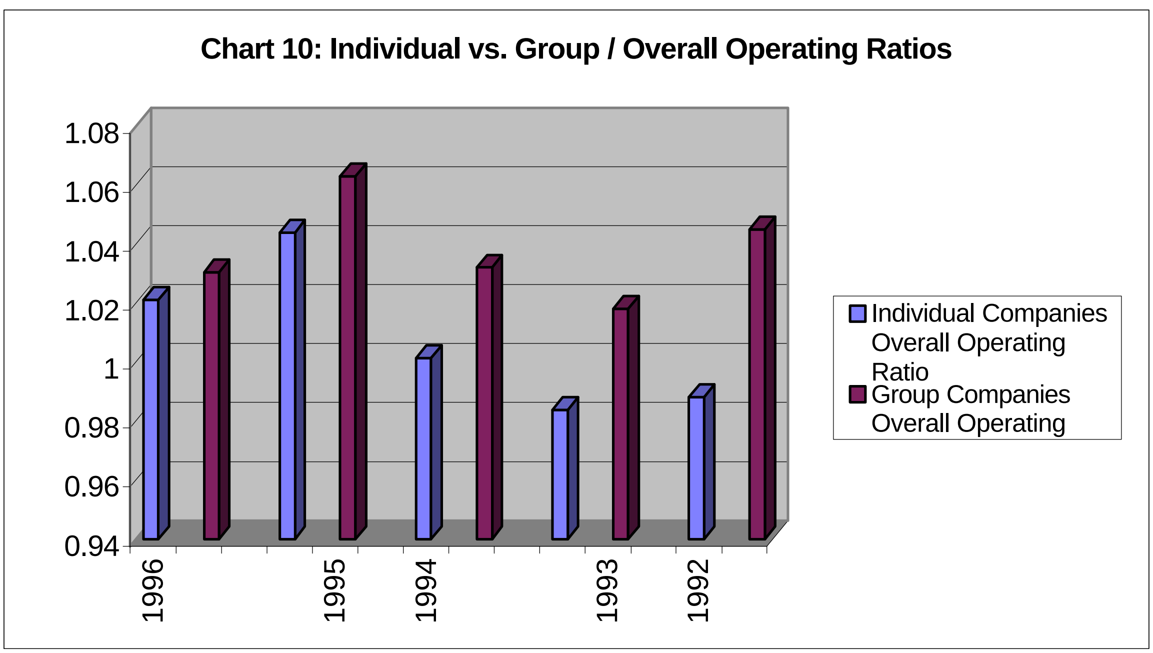


Chart 10: Individual vs. Group / Overall Operating Ratios
1.08
1.06
1.04
1.02
1
0.98
0.96
0.94
1996
1995
1994
1993
1992
Individual Companies Overall Operating Ratio
Group Companies Overall Operating

Appendix D
State by State Comparison

State	Number of Decision Centers	Market Share of Top 5 Firms	Herfindahl Index by Decision Centers	Rate* Regulation	State	Number of Decision Centers	Market Share of Top 5 Firms	Herfindahl Index by Decision Centers	Rate* Regulation
AL	12	86.6546	0.1698	C	NE	9	83.5333	0.1741	F&U
AK	5	100.000	0.4681	F&U	NV	9	75.6490	0.1467	PA
AZ	10	80.2884	0.1838	PA	NH	7	89.3541	0.1946	PA
AR	9	82.9285	0.1568	C	NJ	12	78.7678	0.1482	PA
CA	11	82.0793	0.1589	F&U	NM	9	75.4930	0.1428	R
CO	11	72.5777	0.1391	PA	NY	11	85.3659	0.1587	PA
CT	8	85.8855	0.1955	PA	NC	11	74.6207	0.1499	PA
DE	10	95.1345	0.3064	F&U	ND	7	92.8852	0.2333	PA
DC	9	96.7476	0.2595	C	OH	16	81.7473	0.1750	F&U
FL	15	74.0259	0.1410	R	OK	10	81.5440	0.1741	C
GA	13	83.4707	0.1545	C	OR	7	91.2394	0.2137	PA
HI	6	99.9830	0.3166	F&U	PA	15	73.5904	0.1304	PA
ID	7	97.4928	0.2246	F&U	RI	7	97.0530	0.2667	PA
IL	9	87.2765	0.3317	C	SC	13	76.5708	0.1566	PA
IN	10	86.0991	0.2029	C	SD	6	99.5484	0.3000	PA
IA	3	100.000	0.5547	**	TN	10	80.7837	0.1506	PA
KS	9	88.5612	0.2279	F&U	TX	10	73.8192	0.1337	R
KY	11	98.1356	0.3505	F&U	UT	10	79.9534	0.1890	PA
LA	9	85.1481	0.2610	PA	VT	8	90.8088	0.2143	U&F
ME	8	96.2225	0.2123	PA	VA	11	76.4275	0.1412	C
MD	7	85.9439	0.1921	PA	WA	8	93.7686	0.2509	PA
MA	7	85.9439	0.1921	C	WV	9	83.7766	0.1711	C
MI	8	88.6494	0.1782	PA	WI	7	88.3376	0.2143	F&U
MN	7	91.3620	0.1779	F&U	WY	7	94.2800	0.4185	PA
MS	10	92.4380	0.3093	C					
MO	9	84.7882	0.1810	PA	**avg**	**9.1961**	**86.6262**	**0.21899**	
MT	7	91.1843	0.2739	F&U	**std**	**2.5300**	**1.11976**	**0.012293**	

Source: Authors' calculations based on 1996 NAIC Title Insurer database. Source for regulation: (Gosdin, 1996).

C: competitive rates (no regulation); U&F: use and file; F&U: file and use; PA: prior approval; R: commissioner promulgates rates;

*- Rate Regulation applies to title insurance only.

**- Title insurance is prohibited in Iowa (Lipshutz, 1994), all title insurance is written outside the state.

Appendix E
CAPM Cost of Capital for Publicly Traded Title Groups

Year	Value Weighted Market Return	Risk Free Rate of Return	Industry Wide CAPM Cost of Capital	GAAP & RCG Return on Equity
1996	20.21 %	5.30 %	13.58%	15.87%
1995	30.68 %	5.60 %	16.60%	10.18%
1994	.397 %	3.90 %	2.15%	11.00%
1993	11.52 %	2.90 %	7.94%	23.40%
1992	9.24 %	3.51 %	7.02%	19.77%
1991	30.18 %	5.60 %	16.83%	N/A
Avg	10.69%	4.47%	9.46%	16.05%
Std dev	5.92%	1.18%	5.69%	5.65%

Source: Authors' calculations, CRSP Indices and SBBI files.

CAPM Cost of Capital for Publicly Traded Groups Only. Return on Equity is Industry Wide (Net Income / Surplus).

Appendix F
Title Insurers Submitting NAIC Annual Reports in 1996

Title Firm	State of Domicile	Group Code	Group Name
TITLEAMERICA INSURANCE CORP	FL	0	
LAND TITLE INSURANCE CORP	CO	0	
CHARTER TITLE INSURANCE CORP	WA	0	
TITLE RESOURCES GUARANTY CO	TX	0	
BENEFIT LAND TITLE INSURANCE CO	CA	0	
WASHINGTON TITLE INSURANCE COMPANY	NY	0	
NEVADA TITLE INSURANCE COMPANY	NV	0	
NORTH AMERICAN TITLE INS CO	CA	0	
GUARANTEE TITLE & TRUST COMPANY INC	OH	0	
LAND TITLE INS CO OF ST LOUIS	MO	0	
SEAGATE TITLE & ABSTRACT CO	OH	0	
EASTERN STANDARD INSURANCE CO	NC	0	
PENN TITLE INS CO	PA	0	
OLYMPIC TITLE INS CO	OH	0	
ALAMO TITLE INS OF TEXAS	TX	0	
NATIONAL TITLE INS CO	FL	0	
ARKANSAS TITLE INSURANCE CO	AR	0	
SECURITY TITLE GTE CORP BALTIMORE	MD	0	
SOUTHERN TITLE INS CORP	VA	0	
ATLANTIC TITLE INSURANCE CO	SC	0	
NEW JERSEY TITLE INS CO	NJ	0	
CONESTOGA TITLE INS CO	PA	0	
WESTERN NATIONAL TITLE INS CO	UT	0	
CONNECTICUT ATTORNEYS TITLE INS CO	CT	0	
OHIO BAR TITLE INS CO	OH	0	
TA TITLE INSURANCE COMPANY	PA	0	
AMERICAN GUARANTY TITLE CO	OK	0	
MANITO TITLE INS CO	PA	0	
GULF COAST TITLE INS CO INC	AL	0	
ATTORNEYS TITLE GUARANTY FUND INC	CO	0	
OREGON TITLE INS CO	OR	0	
FIRST AMERICAN TITLE INS CO OF OR	OR	70	FIRST AMN TITLE
FIRST AMERICAN TITLE INS CO OF TX	TX	70	FIRST AMN TITLE
FIRST AMERICAN TITLE INS CO	CA	70	FIRST AMN TITLE
FIRST AMERICAN TITLE INS CO OF NY	NY	70	FIRST AMN TITLE
LAWYERS TITLE INS CORP	VA	99	LAWYERS TITLE INS GRP
TITLE GUARANTEE & TRUST CO	OH	99	LAWYERS TITLE INS GRP
TITLE INSURANCE COMPANY OF AMERICA	TN	99	LAWYERS TITLE INS GRP
LAND TITLE INS CO	CA	99	LAWYERS TITLE INS GRP
JEFFERSON PILOT TITLE INS CO	NC	107	JEFFERSON-PILOT CP
OLD REPUBLIC GENERAL TITLE INS CORP	OH	150	OLD REPUBLIC GRP
OLD REPUBLIC NATIONAL TITLE INS CO	MN	150	OLD REPUBLIC GRP
MISSISSIPPI VALLEY TITLE INS CO	MS	150	OLD REPUBLIC GRP
TRANSNATION TITLE INS CO	AZ	159	RELIANCE GROUP INC
COMMONWEALTH LAND TITLE INS CO	PA	159	RELIANCE GROUP INC
INDUSTRIAL VALLEY TITLE INS CO	PA	159	RELIANCE GROUP INC
TRANSNATION TITLE INS CO OF NY	NY	159	RELIANCE GROUP INC

TITLE INSURANCE COMPANY	AL	159	RELIANCE GROUP INC
TITLE & TRUST CO OF FLORIDA	FL	159	RELIANCE GROUP INC
DISTRICT REALTY TITLE INS CORP	MD	159	RELIANCE GROUP INC
COMMONWEALTH LAND TITLE INS OF NJ	NJ	159	RELIANCE GROUP INC
STATE TITLE INS CO	PA	159	RELIANCE GROUP INC
TICOR TITLE INSURANCE COMPANY	CA	269	ALLEGHANY CORP GRP
CHICAGO TITLE INSURANCE CO	MO	269	ALLEGHANY CORP GRP
CHICAGO TITLE INS CO OF OREGON	OR	269	ALLEGHANY CORP GRP
SECURITY UNION TITLE INS CO	CA	269	ALLEGHANY CORP GRP
CHICAGO TITLE INS CO OF PUERTO RICO	PR	269	ALLEGHANY CORP GRP
PACIFIC NORTHWEST TITLE INS CO INC	WA	269	ALLEGHANY CORP GRP
TICOR TITLE GUARANTEE CO	NY	269	ALLEGHANY CORP GRP
STEWART TITLE GUARANTY CO	TX	340	STEWART TITLE COS
STEWART TITLE INS CO	NY	340	STEWART TITLE COS
INVESTORS TITLE INS CO	NC	627	INVESTORS TITLE
NORTHEAST INVESTORS TITLE INS CO	SC	627	INVESTORS TITLE
CAPITAL TITLE REINSURANCE COMPANY	NY	636	CAPITAL REINSURANCE GROUP
NORTHERN COUNTIES TITLE INS CO	CA	642	T I CORP
FIDELITY NATIONAL TITLE INS CO TN	TN	670	FIDELITY NATIONAL FINANCIAL IN
NATIONS TITLE INSURANCE COMPANY	KS	670	FIDELITY NATIONAL FINANCIAL IN
FIDELITY NATIONAL TITLE INS CO PA	PA	670	FIDELITY NATIONAL FINANCIAL IN
FIDELITY NATIONAL TITLE INS CO CA	CA	670	FIDELITY NATIONAL FINANCIAL IN
NATIONAL TITLE INS OF NY INC	NY	670	FIDELITY NATIONAL FINANCIAL IN
FIDELITY NATIONAL TITLE INS CO NY	NY	670	FIDELITY NATIONAL FINANCIAL IN
NATIONS TITLE INS OF NEW YORK INC	NY	670	FIDELITY NATIONAL FINANCIAL IN
FIDELITY NATIONAL TITLE INS CO	CA	670	FIDELITY NATIONAL FINANCIAL IN
ATTORNEYS TITLE INSURANCE FUND	FL	750	LAWYERS TITLE GTY
UNITED GENERAL TITLE INS CO	LA	947	UNITED COS GROUP
AMERICAN PIONEER TITLE INS CO	FL	1135	PMI GROUP OF COMPANIES