The Effects of an Optional Federal Charter on Competition in the Life Insurance Industry

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Abstract

In this report we examine the likely effects of an Optional Federal Charter (OFC) regulatory system on competition in the life insurance and annuities industry and related markets. Increasingly, many US insurers advocate the creation of an OFC and the associated regulatory framework for several reasons. Primarily, they believe that the adoption of an OFC would reduce the costs and impediments imposed by the current state-based regulatory system. Further, they believe that the adoption of an OFC structure will facilitate interstate operations and enhance the industry's competitiveness relative to other financial service providers and international insurers. The proposal of an OFC system has generated an intensive debate on a number of issues, including its implications for market competition and the associated effects on consumers. Based on our analysis, we conclude that the life insurance industry is structurally competitive based on its inherent characteristics but that many insurers have not fully achieved maximum efficiency due, at least in part, to the barriers and costs caused by state regulation. Our analysis further leads us to the opinion that the creation of an OFC, properly structured and implemented, would likely increase competition in the US life insurance industry, the broader market for financial services, and international insurance markets.

Executive Summary

Introduction

The current system of state regulation of insurance in the US has its roots in the early 1800s and was reaffirmed by Congress with the enactment of the McCarran-Ferguson Act in 1945. At that time, the insurance industry supported state regulation believing that it was still well suited to the nature and scope of insurers' operations and the structure of insurance markets. However, since 1945, there have been dramatic changes in the industry and the nature of the markets in which it competes. Insurance markets have become national and international in scope and life insurers are also competing with other financial institutions in the sale of investment-oriented products. Hence, many insurers believe that the state system of regulation has become an increasing drag on their efficiency and competitiveness, prompting their support for some form of federal regulation.

This has led to the proposal of an Optional Federal Charter (OFC) that would allow insurers to choose to be federally regulated or remain state regulated. The OFC proposal has generated an intensive debate involving a number of issues. One important issue is the implications of an OFC for competition in life insurance/annuities and related markets and the resulting effects on consumers – this is the issue addressed by this report. Based on economic theory and our assessment of the industry's structure, conduct and performance and its regulation, we conclude that an OFC would likely increase the competitiveness and efficiency of life insurance and financial services markets (nationally and internationally) with beneficial effects for consumers in terms of lower prices and a wider array of products to meet their needs and preferences.

Conceptual Framework

The economic theory of competition and the interaction of market structure, conduct and performance provide the foundation for our analysis. Markets which are structurally competitive in terms of the number and size distribution of insurers and the lack of significant entry/exit barriers compel firms to act independently, and produce products that consumers value at the lowest possible cost. Ultimately, competition leads to the best possible market outcomes for consumers. However, even markets that are inherently competitive may be subject to regulatory impediments that can increase firms' costs and reduce their efficiency with adverse effects on consumers. Some regulation of insurance is warranted, as it is for other industries that play a fiduciary role, but regulatory structures and policies must be effective and efficient to allow insurance markets to function properly and deliver the maximum benefits of competition.

Overview of Life Insurance Markets and Their Regulation

Life insurance and annuities markets have grown and evolved with needs and preferences of consumers. In terms of general trends, term life insurance has become more significant relative to other forms of life insurance, especially industrial life and credit life insurance. It appears that consumers are increasingly using term life for death protection and using other types of vehicles (e.g., mutual funds) for investments and savings purposes. In

terms of the competition for consumers' savings, the growth of the life industry's sales has lagged behind those of other financial institutions. Still, it appears that there is significant unfulfilled potential for the sale of products that have or could be developed by life insurers. Many households do not have adequate death protection based on standard benchmarks and there is a substantial and growing need for alternative savings and retirement products such as annuities. While state regulators have sought to increase the efficiency of their policies and processes, the state system may still be hampering life insurers' ability to compete on an even playing field with other financial institutions (that are federally regulated) and offer an optimal array of products at the lowest possible cost to better serve consumers.

The Structure, Conduct and Performance of Life Insurance Markets

Our analysis of the structure, conduct and performance of the life insurance industry leads to four major conclusions. The first is that the life insurance and annuity industry is not concentrated at the state or national level. The second conclusion is that, while the industry is not concentrated, many life insurers appear to be inefficient in terms of both costs (their costs are too high relative to the most efficient insurers) and revenues (they are "under producing" relative to the most efficient insurers). While its market structure supports a high level of competition and there is no evidence of any "concerted behavior" (i.e., oligopolistic conduct), the industry does need to increase its level of efficiency. Even in a structurally competitive industry, regulatory constraints can reduce firms' efficiency. Given the relative ease of entry, the low levels of concentration and other indications of competitive behavior, one must look for other sources, e.g., regulation, as a potential cause of economic inefficiency.

Third, while the industry is relatively inefficient on the whole, it has still responded quickly to technological change, such as increasing its use of the Internet to enable consumers to obtain information and compare insurers' prices and products. Finally, evidence from the banking industry suggests that if there is significant regulatory reform created by an OFC there are likely to be increased benefits due to more rapid technological progress, mergers and acquisitions, and efficiency/profitability gains. Life insurers also would be able to compete more effectively with other financial institutions, nationally and internationally, on a more level playing field which would be in consumers' interest.

The Effects of an OFC on Competition

An OFC, based on current proposals, would likely produce substantial benefits to consumers in terms of improvements in regulation and facilitating greater efficiency and competition among insurers. Some have expressed concerns that an OFC would lead to a competition between federal and state regulators that would ultimately degrade rather than improve regulation. However, we argue that if good regulation benefits consumers and they value these benefits, then insurers will be motivated to seek optimal regulatory jurisdictions that would increase rather than diminish firm value. This should lead to better rather than worse regulation.

Further, an OFC would enhance competition between insurers, increase efficiency, promote more rapid technological change, and encourage product innovation. There is also the potential to increase competition between insurers and other financial service providers in national and international insurance markets. Finally, we conclude that all companies, except for the very smallest, are likely to benefit from the option of writing business on national basis under a uniform regulatory framework. These benefits would come from reducing the non-trivial compliance costs associated with the current state regulatory framework. At the same time, insurers that opt to remain state regulated and offer value to consumers relative to federally-regulated national insurers should remain viable and profitable.

I. Introduction

A. Context for Study

As the insurance industry has grown and evolved in the US and internationally, the framework of its regulation has received increasing attention. Insurance in the US is somewhat unique in that it is primarily regulated by the states. State regulation was reaffirmed with the passage of the McCarran-Ferguson Act in 1945 in which the federal government delegated insurance supervision to the states, retaining the prerogative of Congress to supersede state regulation when and where it specifically chooses to do so.

At the time of McCarran, the insurance industry (and the states) largely supported primary reliance on state regulation. However, the industry has changed considerably since that time. Insurance companies, both property-casualty and life-health, have grown in size and in the geographic scope of their operations across state and national boundaries. The industry has also changed significantly in terms of offering a much wider array of differentiated products to meet the needs of consumers in fierce competition with other financial institutions. These developments have dramatically changed the economic environment for life insurers and compelled many of them to support an alternative federal framework that would not be subject to state regulatory barriers.

The states to their credit have sought to increase the coordination and efficiency of their supervision of the industry, but many national insurers believe that state regulation has still lagged behind the evolution of the industry and is inherently challenged in its effort to achieve a "harmonious" regulatory system. Under the current system, each state retains the prerogative to determine how insurers will be regulated within its jurisdiction and the extent to which it will reduce its barriers to entry and

competition. State sovereignty is the essence of the state's position on insurance regulation but this position is difficult to reconcile with insurers' desire for a uniform regulatory system and seamless markets.

The principal public policy argument of federal regulation advocates is that state regulation adds significant transactions costs and impedes the operation of insurance companies and the sale of insurance products across state boundaries. Each state exercises its authority to license the insurers allowed to sell insurance within its boundaries, reviews and approves the products sold to persons and some businesses, and regulates other aspects of the financial condition and market practices of insurers. A number of state regulatory constraints affect life insurers. Among these constraints, the policy form approval process is particularly problematic, although it is not the only constraint that concerns insurers.

The need for life insurers to obtain the approval of state regulators for the life insurance and annuity products they sell to consumers adds time and cost to the introduction of new products. Further, individual state requirements can require insurers, in some instances, to modify their products to meet each state's requirements. The empirical evidence tends to support insurers' contention that this situation adds considerable cost to the sale of insurance products and hampers competition and innovation (e.g., Grace and Klein 2000 and Pottier 2007). Other state regulatory constraints that life insurers find problematic include but are not limited to obtaining state licenses, investment restrictions and other financial regulations, state deposit requirements, and the way in which market conduct is regulated.

Because of these concerns and the desire to increase their national and international competitiveness, many insurers advocate the development of an optional federal charter (OFC) that would allow insurers to choose to be federally regulated and operate in various states subject to federal supervision. The states strongly oppose an OFC, contending that it would undermine state regulation and ultimately work to the detriment of consumer protection. One of the important issues involved in this debate is the effects of an OFC on competition in life insurance/annuities and related markets. This is the issue addressed by this report.

B. Purpose and Design of Study

The concept of an OFC and its specific design and implementation involve a number of interesting issues and questions that have been raised in Congressional hearings and other venues. One question policymakers have asked is how an OFC would ultimately affect competition and the benefits that it produces for consumers. This question is asked with respect to various sectors of the insurance industry – property-casualty, health and life insurance and annuities. This report seeks to address this question with respect to the third sector – the markets for life insurance and annuity products. When we use the term "life insurance industry" in this report we are referring to the full array of life insurance and annuity products sold by life insurance companies and the markets associated with these products. We also consider the effects of an OFC on competition in broader financial services and international markets.

We have divided our analysis into several parts. We begin with the development of a conceptual framework appropriate for our analysis and review the literature pertinent to the study of competition in life insurance. We also provide an overview of the life

insurance industry, its evolution and it regulation that is pertinent to understanding the effects of an OFC on competition and consumer welfare. This is followed by a detailed examination of the structure, conduct and performance of the life insurance industry in the US and related markets with the principal objective of assessing its competitiveness and efficiency in serving consumers. We then consider how an OFC might affect competition in life insurance/annuity markets at a state, national and international level.

We should note that our analysis encompasses additional issues and topics related to the central thrust of the study. These additional subjects include the competitive position of the life insurance industry within the broader market for financial services in which life insurers and their products compete with products offered by other financial institutions. As these other institutions are typically federally regulated, this raises the concern that life insurers suffer from a competitive disadvantage relative to other financial institutions. Similarly, we also look at the issue of how an OFC would affect the competitiveness of US life insurers in international markets.

C. Summary of Findings

Based on our analysis, we conclude that the life insurance industry is structurally competitive based on its inherent characteristics, but that it has not fully achieved its potential efficiency due, at least in part, to the barriers and costs caused by state regulation. A large number of life insurers appear to be operating at efficiency levels below what is optimal and we believe that major factors contributing to this inefficiency is the state regulatory structure and its policies. Our analysis further leads us to the opinion that the creation of an OFC, properly structured and implemented, would likely increase competition and efficiency in the US life insurance industry, the broader market

for financial services, and international insurance markets which should have positive benefits for insurance consumers, all other things equal. Our conclusions and opinions apply only to the effects of an OFC on competition and we are not presenting an opinion for or against the creation of an OFC. Still, the likely competitive effects of an OFC are an important consideration that should play a prominent role in a thorough and informed debate on its relative merits.

II. Conceptual Framework

In this section, we review the basic theory of competition and different market structures (e.g., pure competition, monopolistic competition, workable competition, etc.) generally and applied to the life insurance industry specifically. We also summarize previous research on competition in insurance markets and particularly in life insurance. Additionally, we compare prior research on the life insurance industry to that for the banking and financial services industries. Finally, we discuss what theory has to say about the effects of regulation on competition and the literature on this topic. This conceptual framework is important to understanding how we assess the competitiveness of the life insurance industry and the market effects of an OFC.

The role and nature of competition is central to the public policy arguments surrounding insurance regulation and an OFC. Competition is desirable because it ensures that consumers receive the maximum benefits possible in the production and sale of a product or service. As explained below, competition compels firms to be efficient, fulfill the needs and preferences of consumers, and charges prices no higher than necessary to cover the costs of serving consumers. Further, the structure and inherent competitiveness of an industry has significant implications for the proper role and design of regulation. Regulation is only warranted when and where a significant market failure arises that the government can remedy in an efficient way that increases consumers' welfare.

B. Theory of Competition

1. The Ideal of "Perfect Competition"

The characteristics of a competitive market provide a benchmark for comparing alternative market structures and evaluating markets in the real world. Competition is considered desirable from society's standpoint because it ensures that resources are being used in the best way possible. An industry is considered *perfectly competitive* when the number of firms selling a homogeneous commodity is so large, and each firm's share of the market is so small, that no firm is able to affect the price of the commodity by varying its output. In addition, perfect competition requires that there are no barriers to the entry and exit of firms and resources are perfectly mobile in and out of the market. The long-run equilibrium outcome of a competitive market possesses three desirable properties:

1. The incremental or marginal cost of producing the last unit of output will be equal to the price that consumers are willing to pay for it.

2. There will be no "excess" or "economic" profits. Investors will receive a return just sufficient to induce them to maintain their investment at the level required to produce the industry's equilibrium output efficiently.

3. Each firm will be producing at an output level where its average cost will be at a minimum, i.e., maximum efficiency.

In essence, a large number of firms and the lack of barriers to entry and exit lead to independent and competitive pricing which results in optimal market performance. Conversely, high market concentration and entry barriers will tend to constrain competition and cause suboptimal performance.

Under perfect competition, consumer welfare is maximized. Consumers receive the products and services they are willing to pay for at the lowest possible price. In essence, consumer preferences determine how prices, products, and the quality of service

are balanced to optimize the purchases they make. Competition also encourages firms to continue to improve existing products and develop new ones that consumers value. Hence, the market outcomes under perfect competition are the best that can be obtained (given the necessary costs of producing a given product).

The theory of "contestable markets" developed in the early 1980s also plays a significant role in how economists think about the conditions necessary to sustain a competitive market (Baumol, Panzar and Willig, 1982). Under this theory, even high market concentration may not permit firms to maintain a price above the competitive price if entry and exit are costless and can occur rapidly. Although few markets may be characterized by costless entry, many are subject to a significant threat of entry that can still have a strong disciplinary effect on a market. For this reason, while economists continue to examine concentration in their structural analysis of markets, entry and exit conditions may ultimately be the most decisive factor affecting competition.

Some economists also might argue that perfect competition requires complete and perfect knowledge. Ideally, all firms should know the relevant technologies and buyers and sellers should be fully informed about all aspects of the product and the market. Conditions with respect to consumer information and consumer choice may be more relevant when other conditions for perfect competition are violated. Information is particularly relevant to insurance markets as adverse selection and moral hazard and other information problems can have significant effects on how insurance markets function. Many issues in insurance regulation and public policy can ultimately be traced to the availability and cost of information. We examine these issues in some detail as our discussion of competition and insurance regulation proceeds.

2. Monopolistic Competition

Monopolistic competition is another possible market structure. This market structure is of particular interest because we believe that it comes closest to the actual structure of most life insurance markets. Under monopolistic competition, there are numerous firms, but they do not sell a homogenous commodity. Their products are sufficiently differentiated so that each firm effectively faces a separate demand curve for its product. This is why economists use the word "monopolistic" in their label for this type of structure. However, the word "competition" is also used because firms' products are highly substitutable requiring them to compete on price as well as the other features of their products. Because consumers will switch for a small difference in price or quality in such a situation, firms are forced to compete, be efficient and charge prices that just cover their costs, as is the case with perfect competition. Because insurers vary their products and quality of service to some degree but also compete aggressively on price, insurance markets come closest to the model of monopolistic competition.

The description of this type of market structure also is pertinent to life insurers' competition with other financial institutions. One way this occurs is through the ownership of insurance companies by non-insurance holding companies (e.g., banks) which was essentially prohibited until the passage of the GLB Act in 1999. The GLB Act eliminated the limitations on banks' involvement in insurance. A second form of competition is the competition between certain life insurance products and other investment products sold by financial institutions, e.g., mutual funds. Many consumers might consider the purchase of permanent life insurance or an annuity versus investments in mutual funds and other financial products to meet their savings and asset accumulation

needs. Hence, life insurers' products must not only be competitive against each other, but they also must be competitive with other investment products.

3. Workable Competition

The conditions for perfect competition are never satisfied in reality. Many industries are characterized by a limited number of firms, considerable product diversity among firms, some entry/exit barriers, information limits, externalities, and other structural departures from the model of perfect competition. Hence, competition will always be something less than perfect. For this reason, the concept of "workable competition" has been developed as a practical standard to evaluate the structure and performance of industries (Scherer and Ross, 1990). Arguably, workable competition exists when the structural characteristics of a market reasonably approximate the conditions for perfect competition (or monopolistic competition) and government intervention cannot improve the performance of the market. This view appropriately focuses analysis on the question of whether regulation or other forms of government intervention can make a market work better. It also motivates the question of how an industry or market would be best regulated.

The analysis of insurance markets requires the examination of market structure and performance in a dynamic context. If a market is relatively unconcentrated, entry barriers are low, profits appear to be in line with (or do not exceed) those of other industries of similar risk, and there is no evidence of gross inefficiency, then it is unlikely

that government intervention could significantly improve performance.[1] Workable competition does not require that all firms in the market operate at maximum efficiency at all times or that no sale is ever made at a price above the "competitive price" or firms' average cost. What is relevant is whether the market, over the long run, rewards efficient firms and punishes inefficient firms. When this occurs, then a market will be driven to greater efficiency over time to the maximum benefit of consumers.

4. Other Market Structures

The main alternatives to a structurally competitive market are monopoly and oligopoly. These market structures have little if any relevance to life insurance as our analysis will show, but they do represent benchmarks to which the structure of life insurance markets may be compared. They also help to explain why economists review measures of market structure, conduct and performance in assessing a market's competitiveness.

A monopoly occurs when there is only one seller of a commodity for which there are no close substitutes. A monopolist possesses market power that allows it to constrain the quantity of a good supplied to raise the market price. In other words, under a monopoly, the quantity of a good sold and purchased is lower and the price paid is higher than under perfect competition. The monopolist sets quantity and price to maximize profits and consumer surplus is reduced to zero. Hence, absent regulation, consumers are disadvantaged by a monopoly and social welfare is less than what would be achieved under perfect competition. For this reason, governments seek to break up monopolies or

[1] Note, that in analyzing a "real-world" market, economists must recognize that it already may be subject to a certain level and type of regulation. In this instance, the relevant question become whether, at the margin, a change in regulation would improve market performance.

regulate them closely if they offer significant economies of scale or other advantages. As we will discuss below, because life insurance is not characterized by ever-increasing returns to scale, there would be no advantage to government establishment of a single life insurer, nor would market conditions allow a life insurer to achieve a monopoly position.

Oligopoly occurs when there are only a few relatively large sellers and each possesses a share of the market sufficient to cause them to recognize the interaction of their decisions in determining the market price and output. This recognition creates a basis for cooperative behavior and limits on competition, explicit or implicit, for the purpose of increasing profits and/or protecting inefficiency. Entry barriers further facilitate explicit and implicit cooperative behavior by preventing new firms from entering the market and undermining existing price and output arrangements among firms already in the market. Entry also can be deterred if exit from the market would be costly. Again, as we discuss below, market conditions do and would not allow life insurers to engage in oligopolistic behavior nor is there any evidence of such behavior.

B. The Structure-Conduct-Performance Hypothesis

Based on the theory of competition and alternative market structures discussed above, economists postulate a theoretical relationship between market structure and market results, which is labeled the **structure-conduct-performance hypothesis** (Scherer and Ross, 1990). The basic hypothesis is that market structure determines market conduct, which, in turn, determines market performance. A market with easy entry and exit and a relatively large number of firms causes firms to behave independently and competitively, which leads to good market performance. Exceptions to these conditions and other structural flaws can cause market problems which require

regulation, if feasible, to protect consumers and produce market outcomes consistent with the public interest.

The structure-conduct-performance framework is depicted in Figure II.1. **Market structure** encompasses cost conditions or structures, the number of buyers and sellers and their size distribution, the height of barriers to entry into (and exit from) the market, the degree of vertical integration, the nature of buyer and seller information, and the degree of product differentiation. **Market conduct** refers to the actual behavior (i.e., degree of independence) of firms in setting prices and output levels, product design, advertising, innovation, and capital investment. **Market performance** includes price, profit, and output levels, the efficiency of production and allocation, the rate of technological progress and product innovations, the availability of insurance and products that meet consumer needs and preferences, quality of service, and equity. The solvency of firms and the availability of coverage also are important aspects of performance in insurance markets.

Analyzing industries like insurance is complicated by the presence of regulation and other forms of government intervention that affect market conditions. In essence, regulation can be an artificial element of an industry's or market's structure. Hence, it is important to identify and evaluate government institutions and policies that may significantly affect market structure, conduct and performance, along with other factors. For example, regulatory requirements for admission and exit can have a significant impact on the number, type and size of insurers in a market and their behavior. Analyzing government's influence on the market is often a difficult task given the complex

interaction between regulation and market forces, but it is necessary to understanding all of the relevant determinants of market outcomes.

1. Market Structure

In analyzing the structure of a particular market or industry, economists typically measure market concentration, e.g., the combined market share of leading firms in a market, and evaluate barriers to entry and exit. As discussed above, high levels of market concentration could enable firms to engage in explicit or implicit collusion, but the threat of entry into the market can impose competitive discipline even on highly concentrated markets.

From an economic standpoint, the cost conditions facing firms can be a significant determinant of the degree of market concentration. Significant economies of scale that persist over large levels of output will tend to increase market concentration as large firms can operate more efficiently and sell products at lower prices than small firms. However, there can be limits to economies of scale and some markets can support relatively large numbers of firms because economies of scale are limited or end at lower levels of output.[2] Also, in markets where firms differentiate their products and/or target certain "market niches", one can find the presence of both small and large firms that are viable and profitable as they utilize their relative comparative advantages.

Barriers to exit can also discourage entry. This may be most typically encountered where a firm must invest heavily to enter a market and a significant portion of its costs

[2] Most industries are character by "U-shaped" average cost curves. This means that firms experience increasing returns to scale at lower levels of output that eventually bottom out and then diminishing returns to scale are experienced at levels of output higher than the "minimum efficient scale" (MES). The bottom of the average cost curve often can be flat (reflecting constant returns to scale) over some level of output (beyond the MES) above which firms begin to experience diminishing returns to scale.

are effectively "sunk", i.e., they cannot be recovered if the firm decides to exit the market or sell its operations to another insurer. The greater proportion of entry investments that constitute sunk costs, the more carefully a firm will consider the decision to enter a market.

2. Market Conduct

Market conduct can be somewhat more difficult to quantify and analyze because it involves a number of aspects of firms' behavior that are not readily subject to quantitative measurement. In some industries, it is possible to track firms' prices and output levels to look for evidence of concerted actions that would not be explained by underlying economic conditions (e.g., changes in input costs or demand).

Innovation is also an important aspect of market conduct and it is particularly important in life insurance. Continual innovation to either improve efficiency or develop products that better meet consumer needs is consistent with a high degree of competition. This kind of innovation indicates a dynamic and competitive industry that is continually seeking ways to better serve consumers. In competitive markets, the failure to innovate can have adverse consequences for firms as they loose business to firms offering better or more desirable products. Otherwise, consumers are disadvantaged by not being able to buy products that best fit their needs and preferences.

3. Market Performance

Market performance can be assessed by examining various market outcomes including profitability, efficiency, availability of products, and quality of service, among others. In examining profits, economists attempt to determine if an industry or market is

generating a “fair rate of return”, i.e., profits/earnings or a rate of return that cover firms’ risk-adjusted cost of capital. Persistent returns that considerably exceed a fair return may indicate insufficient competition or other market problems, although it should be recognized that increasing insurer efficiency or other “reasonable factors” could explain such performance if firms’ profits lag behind changes in their cost conditions. It is also possible that an individual firm can earn “above-average” profits for a period of time because it possesses a comparative advantage that other firms cannot quickly replicate. However, in a competitive market, the overall industry should not be able to sustain excessive profits indefinitely.

Inadequate profits can also be a problem if insurers face challenges in correcting the source of low earnings. As we will see in our empirical analysis, insurers may “tolerate” substandard returns for a period of time if they believe that the causes can be corrected or that other factors will turn things around. However, if low profits are experienced over a long period and cannot be readily fixed, then some insurers may exit or retrench from certain markets or merge with other insurers to improve their efficiency.

Efficiency measures are used to examine how well an insurer is employing and allocating its inputs. A readily available but somewhat crude measure of efficiency is the ratio of an insurer’s expenses to the premiums that it writes. The most sophisticated efficiency measurements use econometric techniques to determine an “efficient frontier” for a group of insurers and then examines how closely individual insurers operate relative to the efficient frontier.

Other aspects of market performance or outcomes can be somewhat more difficult to measure using objective and precise quantitative measures. These other areas include

quality of service and availability. As we discuss below, there are not good measures of availability that exist for life insurance and quality of service is also somewhat difficult to quantify. Consumer surveys and complaint ratios are the two most likely candidates for assessing quality of service, but for reasons we discuss below, these measures are subject to a number of limitations and biases.

C. Application to the Life Insurance Industry

In considering the abstract categories of different market structures, life insurance markets appear to be most akin to the structure of monopolistic competition. Of course, life insurers sell a variety of products and compete in numerous markets with characteristics that vary somewhat. For example, single-year renewable term life insurance might be viewed as the closest thing to a "homogeneous good" given that its basic provisions probably do not vary significantly among insurers. However, even if the basic coverage provisions for this insurance are similar there are other things that are embodied in what a life insurer actually sells with such a policy. These things include the quality of service provided by the insurer, its financial condition, its method of distribution, and other attributes that may be important to some consumers. Hence, it could be argued that there is some degree of "product differentiation" among insurers even in the market for this most basic of life insurance coverages. As we will show, this differentiation does not appear to diminish competition but it can help to explain why there is some price differentiation even for similar term life insurance policies sold by different insurers.

Clearly, as one looks at more complex life insurance and annuity products, coverage provisions and other product aspects vary to a greater degree among insurers.

Indeed, this is a major focus of competition among life insurers that are also competing with other financial institutions. The objective in this competition is to offer products that meet different consumer needs and preferences at an attractive price. Hence, differentiation and competition are reflected in such things as price, coverage provisions, and rates of return on cash accumulation, among other product-insurer features. As noted above, quality of service and financial strength can take on added importance in long-term contracts and products where there are more frequent interactions between the insurer and the policyholder.

1. Assessing Market Structure in Life Insurance

Measuring market concentration in life insurance can present some challenges. Unlike other industries where "sales" (e.g., premiums written in property-casualty insurance) are readily used as measures of output and market shares, for many life insurance products, premiums may not be indicative of an insurer's relative presence or share of a market. Alternative measures might be the amount of insurance in force, reserves or assets (typically used to measure firm size in life insurance). However, with exception of separate accounts business, life insurers' assets are typically not allocated among its products or markets in their financial reporting.

With respect to entry and exit activity, sales or premiums may be sufficiently informative for life insurance, although it should be recognized that a life insurer may still have a large number of contracts in force even if it has ceased new sales. Assessing entry/exit barriers is somewhat more challenging for life insurance. In some markets, such as term life, entry barriers may be restricted to getting regulatory approvals of products and obtaining sufficient consumer recognition to make sales.

For more complex and long-term contracts, entry barriers could be more significant but may not reach the level that would have an adverse impact on competition. Here, reputation, agent relationships and expertise may play a greater role in the successful entry of an insurer. Developing these attributes may require greater investments by life insurers than what is required for selling simple term life insurance. Some entry investments in life insurance, such as branding and advertising, may have the characteristics of sunk costs. However, other investments such as the acquisition costs of selling long-term contracts and developing agent relationships may be assets that can be sold to other insurers. This could act to lessen barriers to entry.

2. Assessing Market Conduct in Life Insurance

Evaluating market conduct in life insurance can present some special challenges that would not be encountered in other industries. In other industries, economists look for concerted or coordinated actions among firms in pricing and output decisions that cannot be explained by external factors or changes in cost conditions or demand. As we discuss in Section IV, there is no obvious evidence of such concerted practices in life insurance. There can be trends in prices and product features but this appears to be driven more by external factors such as changes in interest rates and consumer needs and preferences, i.e., insurers are responding to market changes as price takers (as would be expected in a competitive market) rather than as price makers.

With respect to process and product innovation, there is considerable qualitative information available for life insurance even if innovation is not subject to quantitative measurement. As we discuss in subsequent sections, innovation is readily apparent as a strong phenomenon in the markets for permanent life insurance, retirement products and

long-term care insurance, among other types of products sold by life insurers. There are numerous trade publication articles on life insurers' development of new products and ways of reaching and serving consumers.

3. Assessing Market Performance in Life Insurance

As noted above, evaluating firms' profits is one of several ways that economists assess market performance. There may be short periods in which life insurers appear to be earning profits that exceed what would be considered a "fair rate of return" but as we will show in Section IV, fierce competition and other factors have tended to suppress life insurers' profits. In life insurance, significant declines in mortality rates could result in short-term or even medium-term "extra profits" but insurers would be expected to eventually lower their prices to reflect the improved mortality in order to remain competitive. Prices may change more rapidly for short-term contracts than long-term contracts that are already in force. Even for more complex and "unique" products, life insurers are unable to fend of competition that dissipates any short-term gains they may have been able to achieve.

Indeed, life insurers seem more likely to encounter periods of low profits rather than high profits. Low profits may be caused by a number of factors including competition from other financial institutions, low returns on investments relative to product guarantees, and disintermediation when interest rates and stock market returns rise. Life insurers generally appear to "keep on plugging" through these periods as they make adjustments to restore their returns to more adequate levels. Low-profit periods could contribute to some consolidation within the industry as insurers seek greater

efficiency and boost their capacity to improve their competitiveness against large financial institutions that are based in the US or other countries.

With respect to analyzing life insurers' efficiency, we will follow an approach that is typically used for all industry sectors. In our empirical analysis, we review the most recent efficiency studies of life insurers and discuss how insurers' actual performance matches up with estimates of the most efficient performance possible. As we discuss above, we would expect that firms in a competitive market would be operating at or close to maximum levels of efficiency. However, there may be impediments to achieving maximum efficiency, including regulatory barriers.

Availability is generally not viewed as a problem in life insurance, other than penetration of the "middle-market". This is a problem that insurers appear to be working hard to solve and may be more of a problem on the demand side than insurers' failure to develop and market to this segment. Hence, we are not aware of any "availability" measures for life insurance that would provide any substantive insights. One might look at the adequacy of life insurance coverage among households but any associated measures may be affected more by consumer demand than the supply of insurance products.

Quality of service is an area that gets more attention, especially if it encompasses insurers' market practices in areas such as marketing and ongoing financial advice. While this area may receive greater attention, good measures of quality of service are hard to come by. There are consumer surveys of their perception of insurers' quality of service but the publicly available information from these surveys tends to be limited to a small number of the largest firms. Complaint ratios are sometimes used as imperfect measures

of quality of service but there are number of problems with using complaint ratios because they can be affected by various factors unrelated to quality of service. These other factors can include the markets or consumer segments that insurers target, the complexity of the products they sell, their distribution systems, and other aspects of their interactions with consumers.

We should note that with some life insurance products, there is little that insurers can do to provide a substantial amount of service to consumers. For example, for term life and some permanent life insurance products, sales are fairly straight-forward as are the payment of claims. Other products may be characterized by more complex transactions and insurer/agent advice, as well as more interactions between insurers and insureds. However, even for these products, there are still limitations on objective measures of service.

D. Regulation

1. The Need for Regulation

Most financial institutions are subject to some form of regulation. At the very least, they are subject to financial supervision because of their fiduciary role. Regulators seek to limit the financial risk assumed by these institutions and require them to prudently manage the funds entrusted to them. This is an essential objective of the financial regulation of life insurers to ensure that they will be able to pay the benefits they are obligated to pay under their contracts and/or return funds to policyholders according to the provisions of their contracts. Of course, there is a difference between effective and efficient financial regulation and financial regulatory policies that impose unnecessary

constraints or requirements on insurers that ultimately do not serve the best interests of consumers.

The need for financial regulation arises out of the difficulty faced by individual consumers in assessing the financial condition of insurers. Policyholders also face certain challenges in continuing to monitor the financial condition of the insurers that hold their funds and compelling them to manage their funds in a prudent manner. In theory, regulators should be able to more efficiently and effectively police insurers' financial condition and risk than individual policyholders. Ultimately, proper financial regulation can facilitate more efficient insurance markets by increasing consumers' confidence in the financial condition of insurers and discouraging the operation of insurers that would mismanage policyholders' funds.

A second need for regulation arises out of the market practices of insurers and other financial institutions. Many consumers may have difficulty in interpreting and fully understanding insurance contract provisions, especially for more complex life insurance and annuity products. It is not feasible for regulators to ensure that every consumer makes an optimal purchase decision for his or her needs, but regulators can try to ensure that insurance products meet certain minimal conditions in terms of their basic coverage provisions and do not intentionally mislead consumers.

Abuses or unfair treatment can occur in other aspects of the market interactions of insurers or consumers. This does not mean that most insurers would intentionally engage in unfair practices in the absence of regulation but sometimes it is necessary to subject all insurers to a minimal level of regulation to weed out the few companies that would seek to take unfair advantage of consumers. We should note that this type of regulation and

minimization of market abuses arguably tends to level the playing field for all insurers and enhance consumer confidence in the life insurance industry as a whole.

A number of issues arise and continue to be debated in the regulation of life insurance markets practices, especially with respect to how insurance products are sold or "represented" and the "suitability" of the sale of certain products to certain consumers. US regulation has tended to take a "prescriptive" approach, i.e., imposing a detailed set of rules that govern what insurers can do, must do, and cannot do. The problem with such an approach is that it can be arbitrary and burdensome to insurers, and may discourage or prevent some transactions that would be in a consumer's best interest. Further, any rules-based system is subject to "gaming" by unscrupulous insurers that would allow them to slip around the rules and still engage in abusive practices.

Some insurers and others have advocated a less prescriptive approach that places greater reliance on insurers' self-regulation. The formation of the Insurance Marketplace Standards Association (IMSA) reflects the industry's attempt to improve life insurers' self-compliance activities, subject to an independent certification mechanism (see Grace and Klein, 2006). In a system that employs both government and self-regulation, insurers that demonstrate good internal controls would be subject to less intrusive monitoring and those that do not would be subject to greater regulatory supervision. Many US regulators have been reluctant to adopt such an approach and progress has been slow in developing a more efficient regulatory system for supervising insurers' market practices.

It is important to note that many insurers and the ACLI have expressed a desire for better regulation, ideally provided by a federal regulator, rather than reliance on self-regulatory organizations (SROs) such as IMSA. The current proposed OFC legislation

includes the same provisions for insurance as that imposed on the securities industry. Under such a plan, the federal regulator may choose to delegate certain responsibilities to an SRO, e.g., an entity like NASD that would be different than IMSA. The role and nature of SROs that might be utilized in an OFC framework is an issue beyond the scope of this report. Our point is only that SROs can potentially serve a useful function but we acknowledge that there may be other approaches that would function effectively and efficiently in an OFC framework.

2. Alternative Regulatory Frameworks

The issues discussed above pertain to regulatory policy and methods but there is also the question of the best institutional framework for insurance regulation, e.g., state-based, federal or some combination of the two. A full discussion of all of the issues associated with the framework for insurance regulation is beyond the scope of this report, but we can offer some observations relevant to competition.

In some sense, the system of state regulation in the US is an artifact of the historical origins of the industry. The first insurance companies tended to confine their operations to a specific city or state. Hence, it was understandable that local and state governments took the lead in establishing the initial regulations for insurance. However, as insurers have extended their operations across state and national boundaries, it naturally begs the question of why federal regulation has not taken the place of state regulation to facilitate efficient and competitive insurance markets.

Several arguments might be made to support some form of federal regulation of life insurance as competition-enhancing, whether it be mandatory or optional for insurers. With respect to licensing and financial regulation, all other things equal, it would seem to

be less costly for multi-state insurers to have to deal with and meet the requirements of one regulatory agency rather than many. To the extent that costs and entry barriers would be effectively reduced by having one regulator, we would expect that federal regulation would tend to increase competition and lower the effective price of insurance. Further, consumer confidence in the industry's financial condition may be enhanced if the federal regulator could more efficiently and effectively concentrate its resources on the financial supervision of each insurer employing appropriate policies.

One area of financial regulation that concerns life insurers is how the states regulate their investments. This matter involves the investment strategies that insurers are allowed to pursue versus the investment strategies that other financial intermediaries (FIs), e.g., banks, mutual funds, etc., are allowed to use. More specifically, other FIs are permitted to use aggressive hedging strategies, whereas insurers typically are not. The financial world is quickly and dramatically changing, yet states typically resist permitting insurers to use strategies that are commonly used by other FIs. It is possible that state regulators may be apprehensive simply because they lack the resources to monitor and evaluate these strategies. This could impose another competitive disadvantage on life insurers compared to other FIs. It is possible that a federal regulator with better analytical resources could permit life insurers to engage in broader investment and hedging strategies that would be appropriate, more efficient and more consistent with the rules governing other financial institutions.

With respect to market regulation, federal regulation, in theory, could also improve market competition and efficiency. Insurers could design and introduce a product that would qualify for sale in all states and would be subject to only one set of

regulatory requirements and the approval of one regulator. This could reduce the cost and increase the speed of product introduction and modification, which in turn, should enhance competition and lower prices for consumers. Other aspects of the market regulation of life insurers could be unified under one regulator with additional beneficial effects on competition and efficiency.

The states would be expected to offer counter-arguments to these propositions. First, they might argue that the states have done a great deal to harmonize and coordinate their financial regulation of insurers. The primary financial regulatory responsibilities have been essentially delegated to an insurer's domiciliary state and financial requirements have been largely standardized among the states. While each state still retains the authority to license the insurers allowed to do business in its jurisdiction, the states could note their efforts to streamline and coordinate the licensing process for insurers. They also might argue that the regulatory authority of the non-domiciliary states exerts pressure on the domiciliary state to fulfill its financial regulatory responsibilities with respect to its companies. Additionally, the states have consolidated a number of regulatory tasks, e.g., data collection, early warning systems, etc. to the National Association of Insurance Commissioners (NAIC). As noted above, insurers advocating an OFC do not believe that these state efforts have been sufficient.

With respect to market regulation, the states still tend to insist on the prerogative of each state to regulate the market practices of insurers within its jurisdiction. They argue that state differences call for different state regulatory requirements in some instances. The states also argue that their regulators are closer to their consumers and insurers' activities in their states than a federal could be and, hence, can be more

responsive and effective than a federal regulator. To the extent that this argument has merit, it implies that the overall efficiency of insurance markets within the states' jurisdictions is improved and that this outweighs any additional costs to insurers. Additionally, the states might point out that they have established an interstate compact and system that will allow life insurers to submit products for approval to one entity.

We do not seek to resolve these arguments in this report but it is helpful to make several observations. First, to the extent that changes in the regulatory framework are intertwined with regulatory policies, the efficiency gains offered by a federal regulator will depend on the specific policies and methods that it adopts. Second, while the states have taken a number of steps to coordinate their regulatory activities, each state still retains the choice as to how much it will harmonize its regulation with that of other states. Third, the states' efforts to develop a more uniform system could be viewed as undermining the benefits from the state-specific regulation that they defend. In other words, if uniformity is desirable, then would federal regulation be a more decisive and less costly way to achieve this uniformity?

There is another set of questions associated with how an OFC would affect market concentration and the relative competitiveness of single-state and regional insurers. As we discuss further in Section IV, an OFC would likely increase concentration in many life insurance markets at a state and national level. If multi-state insurers can increase their efficiency and lower their prices under an OFC, they are likely to increase their market share relative to smaller, state-oriented insurers. However, increased concentration does not necessarily imply diminished competition if it reflects the fact that more insurers have increased their economies of scale and they are passing

the savings to consumers in the form of lower prices and/or higher benefits. Further, the reduction in entry barriers could increase competitive pressures on all insurers.

It is not obvious that if some single state-oriented insurers lost market share that this would hurt competition or consumers. If consumers elect a national insurer over a state insurer, presumably they would do so because the national insurer offered a lower price or better coverage terms to their benefit. To retain customers, state insurers would need to offer something of value that national insurers could or did not offer, such as closer proximity or products or services better attuned to the needs of the consumers in a given state.

3. Regulation as a Barrier to Entry

Above, we have discussed how regulation can increase entry barriers and raise the cost of multi-state insurer operations. To a certain degree, these negative effects can be unintended and outweighed by regulation's positive effects. However, regulation can be used as an intentional entry barrier to protect domestic insurers and agents or achieve some other goal. The most extreme of example of government entry barriers is the establishment of monopolistic government insurers such as those found in several states for workers' compensation. To our knowledge, there is no such corollary in the US for life insurance. Of course, one can find many examples of government monopolistic insurers and trade barriers for various forms of insurance at the international level, understanding that recent trade agreements were intended to reduce these kinds of entities and barriers.

In the US, it is possible that state requirements can be used explicitly or implicitly to thwart competition. Domestic insurers and agents can wield considerable political

power and use this power to protect their economic interests to the detriment of consumers. Clearly, this would be a misuse of governmental authority and would not serve the public interest. There may be no obvious instances of such behavior in life insurance but there may still be state regulations that fall into a gray area in terms of whether their principal intention or effect is consumer protection or the inhibition of competition.

We have previously discussed several state regulatory barriers and constraints that create problems for life insurers. One constraint that we did not discuss was state barriers and other requirements that affect agents or intermediaries. The ACLI has found that, despite similar curriculums and testing service requirements in many states, there is a great deal of variation in agent licensing standards among states. Inconsistent standards for insurance agents can serve as a barrier to entry by making it more difficult for agents to operate in multiple states or even become licensed in one state. Hence, the current OFC proposal contains provisions that are intended to allow agents to also opt for federal regulation and licensing in order to conduct their activities more efficiently.

III. Overview of Life Insurance Markets and Previous Research

In this section, we provide an overview of life insurance markets and their regulation to establish a context for our specific analysis of competition in the industry and the effects of an OFC on competition. Our analysis will reflect facts, observations and assumptions presented in this section. We also use this section to review previous studies on the life insurance industry that contribute to our analysis. It is helpful to make these things clear to readers here so they better understand the context that underlies our assessment of competition and how it might be affected by an OFC.

The literature on the industrial organization and regulation of the life insurance industry is sparse relative to the property-casualty literature (see e.g., Dionne and Harrington, 1992). While a number of articles examine certain aspects of life insurance markets, there is no foundation literature that establishes a set of critical springboard findings regarding the organization and regulation of the US life industry. Hence, while the existing literature is useful, to achieve our objectives in this report we must necessarily add information and analysis to provide a more thorough and current picture of the industrial organization of the industry.

A. Life Insurance and Annuities Markets: The Basics

There are a number of ways to slice and dice life insurance and annuities markets because of the variety of products and the ways that they are distributed. There is probably no ideal scheme for market delineation because the distinction between two

markets lies primarily in the eye of the buyer and buyers' perspectives can vary.[3] For example, one might view the market for term insurance products to be significantly different than the market for permanent insurance products. However, while some consumers may be firmly fixed on buying either term or permanent insurance, others may consider the relative attributes of both types of products in determining what kind of insurance they will buy. Figure III.1 provides a schematic diagram of the principal types of life insurance that gives the reader some sense of the major categories of products. Our analysis and market definitions tend to follow industry convention as well as how available data are structured with the understanding that our definitions are somewhat arbitrary.

We should also note that insurers' ability to sell various products tends to lower entry barriers, which has a significant effect on competition in these markets. For example, if it is relatively easy for an insurer offering universal life products to enter markets for variable life, this can increase competitive pressures on insurers selling variable life, even if these were treated as two different markets.

One way of distinguishing life insurance and annuity markets is by the basic form of distribution: 1) products sold to individuals; and 2) group plans. We might expect that market characteristics can vary significantly between these two basic forms of distribution. Regulatory attention tends to be more focused on individual life insurance markets because of the view that individuals need greater regulatory protection than group buyers. In group markets, buyers can vary significantly in terms of their size, but

[3] Economists often use the "cross-elasticity" of demand to distinguish markets, i.e., a lower cross-elasticity of demand between two products implies that the markets for these products are more distinct. However, the data and effort required to estimate these cross elasticities are beyond the scope of this study.

the purchases of larger groups tend to receive less regulatory attention in terms of insurer-buyer transactions. Group buyers are viewed as being better able to protect their own interests and have less of a need for regulatory protection. Insurance regulators may focus on certain aspects of group contracts, e.g., the delivery of benefits to the individuals covered or "certificate-holders". Further, the Internal Revenue Service (IRS) and Department of Labor (DOL) also oversee group plans to some extent because of their special tax treatment and the predominance of employer-based group plans.

Table III.1 shows the distribution of policies and amounts of insurance for various life insurance products divided by the basic form of distribution and Table III.2 does the same for annuities. Readers may refer to Black and Skipper (1999) for a detailed description of life insurance and annuity products.

As can be seen from Table III.1, term insurance represents almost 60 percent of the amount of insurance in force for all individual life insurance products sold. Most of the individual term insurance sold is "level term." The difference is even more striking for group products, where term insurance represents 95 percent of the amount of insurance in force. The amount of insurance sold is divided evenly between individual products and group products.

These data suggest that many households rely heavily on life insurance provided by or through employers as a principal source of death protection. Studies of the amount of life insurance owned by households suggest that many probably have an insufficient amount of life insurance according to basic rules of thumb concerning how much insurance a household should have relative to the incomes of the "bread-winners."[4] This

[4] A basic rule of thumb is that a household should have a face amount of life insurance equal to six years of its annual income.

implies that there is a need to expand life insurance sales to households to raise their death protection to more adequate levels. Of course, household circumstances and budgets also are factors affecting their life insurance purchases. To the extent that greater competition and efficiency could effectively lower the price of life insurance, it could help to increase the amount of insurance purchased and the death protection levels of households.

Of course, death protection is not the only use of life insurance. The consumer base for the life insurance industry consists of individuals who desire to provide their beneficiaries income replacement due to premature death (Yarri, 1965; and Pissarides, 1980), individuals who desire to insure for bequest related reasons (Lewis, 1989), and individuals who might use life insurance for its tax-related benefits (Black and Skipper, 1999; and IRC § 101(a)1). Higher income households may be more likely to purchase permanent insurance products, especially universal life and variable life, which combine death protection and cash accumulation in ways that may be attractive to consumers who might otherwise use other investment vehicles for savings purposes. Finally, even some middle and lower income households might purchase whole life insurance as a means to engage in "forced savings."[5]

Recent statistics show that the average amount of individual life insurance coverage per insured household was $158,000 (ACLI, 2006). Given that the annual average household wage income was approximately $40,000 in 2006, it appears that on

[5] To a certain degree, the holding of whole life insurance policies may be concentrated among older consumers. As these policies are triggered or expired, we may see a continuing decline in terms of their relative proportion of the amount of insurance in force. Also, as baby boomers age and no longer have dependent children, we may see a shift of funds from term insurance to universal/variable life and annuity products.

the whole, households do not meet conventional standards for adequate life insurance (although the insurance figure does not reflect group coverage).

Table III.3 shows the distribution of individual life insurance purchases by gender, age and income for 1989 and 1999 (the latest year for which this information is available). Gainfully-employed insureds with incomes between $10,000 and $40,000 purchased 55 percent of the policies sold but only 32 percent of the face amount of insurance purchased. Insureds with incomes between $40,000 and $100,000 purchased 39 percent of the policies sold and 34 percent of the face amount of insurance sold. Insureds with incomes above $100,000 purchased only 9 percent of the policies but 28 percent of the face amount of insurance sold. These statistics are not surprising as higher income households would be expected to purchase policies with larger face amounts. This likely reflects how the insurance budgets and the income protection needs of households vary with their income levels.

In terms of gender, males purchased 65 percent of the face amount of insurance purchased but only 45 percent of the policies sold. From 1989 to 1999, females did increase in terms of their relative share of the number of policies bought as well as the face amount of insurance purchased. This probably reflects the growing role of females as the primary or a major source of income for a household. With respect to age, individuals between 25 and 54 purchased most of the insurance policies (65 percent) and the respective face amounts (83 percent) of insurance sold. These data also are not surprising as wage earners in the 25-54 age group are most likely to have dependents for which income protection (against the premature death of wage earners) is very important.

Consumers do appear to be changing their preferences towards term insurance. In 1986, 20 percent of the policies consumers purchased were term products and this amounted to 30 percent of the face value of polices sold that year. By 2005, 58.6 percent of the polices sold in the US (representing 68.7 percent of the amount of insurance in force) were term polices (ACLI, 2006). These trends reflect, in part, a growing preference among households to use life insurance for death protection only and other vehicles for investment purposes. The life insurance industry developed universal life and variable life products as an alternative to this consumer strategy but these products still represent only about 10 percent of the individual life insurance sold.

As the demographics of the population change and more baby boomers find themselves with greater savings needs, the demand for universal life and variable life products may increase and insurers will be motivated to continue to develop innovative products that meet the needs of this growing segment of the population. This includes the development of hybrid products that might combine several different forms of protection, including funding for long-term care. Here again, the ability to introduce new products into the marketplace could have significant benefits for certain consumers.[6]

Table III.2 shows the distribution of annuity products with reserves and "considerations" (funds paid in by annuity holders) as the primary measures of volume. There is little doubt that annuities represent a large and growing market given the demographic changes noted above. In 2005, individual annuities represented approximately 65 percent of the amount of reserves for all annuities. The size of the group annuities market is likely to grow as more employers move from defined-benefit to

[6] A full discussion of innovation in life insurance products is beyond the scope of this report, but we should note that insurers are experimenting with products that combine death protection, cash accumulation and things like long-term care coverage that better meet the needs and risks that households face.

defined-contribution plans. Also, the evidence suggests that many employees do not maximize their use of deferred compensation and 401(k) plans. Additional education and a growing recognition of retirement income needs may aid the growth of this segment of the annuities market.

Among individual annuities, "non-qualified" plans represent a significant portion of individual annuities owned. This probably reflects annuities purchased by retirees as well as workers who are seeking to augment their employer retirement plans. Individual annuities qualifying for special tax treatment (e.g., 403(b) plans and IRAs) are likely purchased by lower income households and buyers who do not have an employer plan. Again, we are likely to see considerable growth in the purchase of individual annuities as more workers approach retirement and look to an annuity as an efficient device to provide a steady stream of income and transfer the "longevity risk" associated with retirement.

One interesting thing about this industry is the extent to which the products overlap in theory but not in practice. For example, one could purchase traditional term life insurance or credit life insurance to cover future mortgage payments in case of an early death. The traditional term policy is allegedly cheaper than a similarly valued credit life policy. Consumers, however, do not think of these products as substitutes and, therefore, behave quite differently than if the products were viewed as substitutes.

Another interesting observation is that there have been few true estimations of the demand for life insurance (see Babbel (1985) for an exception). We know the basic rationales for the demand for life insurance - income protection, tax avoidance, savings, and bequest. However, we have no estimates of the sensitivity of changes in the motives

for purchasing insurance to the various insurance products, nor do we have any estimates of the substitutability of one type of life insurance for another. Finally, we have no estimates of the substitutability of life insurance with other types of financial services. Thus, defining markets is necessarily imperfect given our current tools.

B. Market Trends

Above, we comment on the relative size of different life insurance and annuity markets or at least the categories of products sold. We also comment on the importance of certain trends that could be significant in terms of how the life insurance industry evolves and the implications of alternative regulatory frameworks and policies. Below we discuss historical market trends in greater detail.

Table III.4 shows the major life insurance industry product lines on a real basis (i.e., constant dollars that remove the effect of inflation) over the last 35 years; Figure III.2 plots this same information graphically. We should note that the categories of product lines differ somewhat from earlier tables and are determined by the source of the data. We see individual life insurance growing steadily (approximately at the same rate as the Gross Domestic Product (GDP)), group insurance growing steadily, credit insurance following a cyclical pattern (which probably follows the credit market), and industrial life decreasing dramatically (figures on industrial life are no longer reported because of its small volume). Table III.4 shows that the level and mix of products of the life industry have changed over time. Within broad lines of coverage, we see that since 1970, the "real" (i.e., adjusted for inflation) output of the insurance industry (as measured by the amount of insurance in force adjusted for inflation) grew about 160 percent over the period 1970 to 2005.

While total output increased, the mix of output changed over this period. In 1970 credit insurance represented about 5.5 percent of business written, but by 2005 it had fallen to 0.9 percent. Industrial life has also fallen dramatically and represents a negligible amount of the industry's sales. Individual life insurance increased in relative terms over the period until 1997, after which it fell in relative terms. Group life insurance grew faster in relative terms from 1997 to 2005.

While it is difficult, if not impossible, to estimate price elasticities for life insurance, we estimated a simple "national income elasticity" in a manner similar to that used by Outreville (1990) by regressing the log of premiums for a given line against the log of GDP. Our estimations, summarized in Table III.5, indicate that total life insurance has a positive elasticity of about 0.42. This reflects the fact that ordinary insurance is viewed by consumers as a "normal good".[7] This result is similar for individual and group life insurance.

However, the income elasticities for industrial life and for credit life insurance are negative. This suggests that these are "inferior goods" as defined by economists - as income increases, the quantity demanded decreases. This also evident in Figure III.2 that plots these products over time and shows that industrial life is decreasing and that credit insurance appears cyclical. Credit insurance increases in lower income periods and decreases in higher income periods. This evidence is understandable – it is reasonable to expect that as a households' income increases, it can and will purchase more term and whole life insurance products as being preferred over more limited industrial life and credit insurance products.

[7] Economists define a "normal good" as one for which consumers' demand increases as their income increases. "Inferior goods" are defined as those for which consumers' demand decreases as their incomes increase.

It appears that ordinary and group life insurance still have relative value in the marketplace while industrial and credit life insurance are declining in their importance. This also is an understandable development, as implied above, as many consumers recognize that "higher-value" insurance products better serve their needs. These trends could also reflect a more intensive effort on the part of insurers to market term insurance and permanent life insurance products suited for consumers' needs.[8]

C. Conditions Affecting the Supply of Life Insurance Products

In Section IV, we engage in a detailed analysis of life insurance markets using a variety of measures of market structure and performance. Here, we offer several observations with respect to the conditions that affect the supply of life insurance and the number, size and behavior of firms in life insurance markets. One such factor we have noted is the information available to insurers entering a market. Information can be a barrier to entry because new entrants may have to conduct expensive marketing studies to determine the demand for their products. In addition, other barriers may exist that reduce the ease of entry into a market.

As discussed in Section II, one of the major determinants of the competitiveness of a market is the ease at which new firms can enter or exit. Bain (1956) discussed the types of barriers and he makes three major classifications: absolute cost advantages, product differentiation advantages, and economies of scale. An absolute cost advantage means that a firm can produce a given level of output less expensively than another. There is no obvious evidence of absolute cost advantages in life insurance. In the "pure"

[8] It should be noted that the industry has made a very strong effort to increase its service to what has been labeled as the "middle-market" – households below higher income groups but with sufficient income to purchase life insurance products properly designed to meet their needs and budgets.

life insurance industry it is hard to empirically measure a price for a given age and health status based on a common set of actuarial calculations employed by many firms that could be used to identify cost advantages. Price differences among life insurers would likely reflect differences in underwriting stringency, administrative expenses and financial strength.

Product differentiation advantages would arise if one firm is able to produce a product preferred over the products of other firms and the other firms are not able to replicate the first firm's offering. A number of facts peculiar to the life insurance industry mitigate against the likelihood of significant product differentiation advantages. "Conventional" life insurance products are fairly easy to replicate by different firms.[9] Black and Skipper (1999) describe the origins of universal life insurance as predominantly "academic" and thus readily accessible by any existing or potential life insurers. Further, universal life was introduced in 1979 and by 1985 had a 38 percent market share. An insurer faces few impediments in mimicking the essential features of the contracts of other insurers.

Finally, economies of scale are a barrier to entry as a larger firm may be able to produce at a lower per unit cost than a smaller firm. A number of studies have examined economies of scale in the insurance industry. The first studies such as Harrington (1982) were based upon expense ratio analysis - the expense ratio was regressed against other explanatory variables including total premiums. Kellner and Mathewson (1983) for

[9] Life insurers have sought to protect "intellectual property rights" for new and innovative products they develop. This is an economically logical perspective because of the need to recoup investments in the design and development of new products and it is common to many other industries faced with similar situations. At the same time, there is a limit to how much an insurer can prevent the replication of its insurance products by other firms in terms of their basic provisions. In our review of various sources of information, we have not been able to find any evidence that "product differentiation" is a significant entry barrier in life insurance.

Canadian life insurance industry and Grace and Timme (1992) for the US life insurance industry were among the first to employ multi-product and neoclassical cost function estimation for the life insurance industry.

Using 1987 data, Grace and Timme found that the largest 100 life insurers had constant returns to scale while the next three hundred largest companies experienced various degrees of increasing returns to scale. Yuengert (1993) employed a stochastic frontier method and found increasing returns to scale for all except the largest companies and Cummins and Zi (1998) and Pottier (2007) found similar results. Thus, it appears that there is a range of production over which returns to scale increase and all but the largest firms are operating at a level below the minimum efficient scale (MES) for life insurers.

An interesting and important question is why so many firms are operating at less than a minimum efficient scale. Over time one would expect a majority of the industry to move toward a level of output that would achieve the MES or constant returns to scale. Indeed, the merger and acquisition trends in life insurance reflect, at least in part, the desire to consolidate to obtain greater economies of scale. Still, the most recent evidence indicates that many life insurers are still operating at output levels below the MES. Multi-state licensing requirements may inhibit insurers' efforts to grow and achieve greater economies of scale. Also, it can be difficult for an insurer to quickly and significantly increase its sales in highly competitive markets – a factor that may help to explain growth through merger and acquisitions. However they are achieved, increases in life insurers' output levels and economies of scale may take considerable time to achieve. Hence, what we are observing is a process that will require a number of years to reach a new equilibrium where most insurers are operating at the most efficient output levels.

Figure III.3 shows the percent of 1997 total assets of companies that started in a given year. The figure covers the period 1843-1997. If we look at certain milestones, based on the accumulation of assets by companies starting in a given year, we see that 50 percent of current assets are owned by companies that were in place in 1908. To go further, 75 percent of current assets are owned by companies in place in 1959, and 90 percent of current assets are owned by firms in place in 1978. Firms with start-up dates within the last ten year period in the data (1987-1997) account for only 1.6 percent of the assets in the industry. This suggests that there are more than enough established insurers to meet current and even future consumer demand and that further market entry and growth is likely to be accomplished by these insurers rather than new companies.

One possible problem with Bain's approach is that two barriers that he identifies - absolute cost differences and economies of scale - can be rectified by changes in technology in the long run. Over time, technology will allow new entrants to copy the best practice firms and achieve constant returns to scale by producing at the minimum of the long run average cost curve. In other words, the minimum efficient scale levels indicated by previous research could fall as new technology allows insurers to achieve maximum efficiency at lower levels of output than what have been required historically.

D. Distribution Systems

Life insurance is sold though a number of distribution channels. Statistics gathered by the Life Insurance Marketing Research Association (LIMRA) identifies seven categories of distribution systems:

- Agency Building
- Brokerage

- Personal-Producing General Agent (PPGA)
- Multiple Line Exclusive Agent (MLEA)
- Worksite
- Direct
- Home Service

The choice of a distribution system depends in part on the insurer and in part on the nature of the product and its consumers. For example, simple term insurance is most suitable for direct response channels, whereas more complex products might typically require the greater involvement of an agent/broker. Table III.6 shows, for the four major life insurance product categories, the relative proportions of sales for each type of distribution system. As we might expect, MLEAs and direct response account for the majority of the sales of term insurance.

In an earlier study, we estimated the distributions systems apportioned for a more detailed list of products (Grace and Klein, 1999). As shown in Table III.7, in 1997, a majority of total life premiums were written though agents (67.2 percent) and brokers (15.2 percent). The percentage of total assets allocated through the distribution mechanisms follows the breakdown in total life premiums. Direct marketers, those that bypass agents and market directly to consumers or business, seem to be relatively strong in individual annuities, credit life insurance, and credit accident and health. Mass marketers, which include Mutual of Omaha and others that might advertise on television for fixed and smaller life insurance policies, do not have large market shares.

E. Competition with Other Financial Products

Permanent life insurance and many annuities have a significant cash accumulation or savings component. If we think of these products as being primarily savings vehicles, then there are a number of potential substitutes ranging from bank accounts to individual stock portfolios. Table III.8 examines data from the Federal Reserve's Flow of Fund Accounts which compares the significance of life insurance relative to other forms of assets held by households. The table shows the amounts of various assets held by households (and non-profit organizations) at the end of 1991 and 1998. Total financial assets increased approximately 82 percent over this period. Mutual funds increased 326 percent and individual holdings of corporate securities increased 147 percent. In contrast, life insurance reserves increased by only 72 percent, which did not keep pace with the average increase in total assets.

It is common knowledge that the mutual fund industry has taken in tremendous amounts of individual contributions. It is likely that some of this has come from funds previously allocated to the life insurance industry. Thus, mutual funds and other investment vehicles are competing with life insurance for consumers' savings and have made substantial inroads in these areas. The inroads of these other institutions could be aided by the different regulatory frameworks that govern life insurers and other financial institutions.

The death protection aspect of life insurance is least subject to competition from other financial products. A cursory look at the data suggest that consumers are switching to term life insurance to cover mortality risk, but increasing amounts of funds are flowing to mutual funds or corporate equities rather than permanent insurance for savings purposes.

The data on the life insurance industry are beginning to reflect changes in the economic and demographic characteristics of households with a growing need for various financial products to meet savings and retirement income needs. These changes will accelerate dramatically for reasons discussed above. In this context, it is important that consumers have an array of options available to them so that they can tailor their financial strategies to best meet their means, needs and preferences. To best serve consumers, it would be preferable that all entities and their products compete on an even playing field based on their intrinsic economic merits, minimizing any arbitrary cost differences caused by different regulatory frameworks.

Various permanent life insurance and annuity products can play their proper role in this competitive environment if regulatory barriers do not unnecessarily hamper or add costs to their development and distribution. Not all households may choose to purchase permanent life insurance to meet their savings needs but consumers should be able to have such products available to them under the most favorable terms that insurers can legitimately offer. The availability of alternative annuity products will be particularly important because of their ability to provide retirees a stream of income that helps them manage their longevity risk according to their needs and preferences. Also, insurers are developing other innovative "combination" products that more effectively manage multiple "old-age" risks such as the need for guaranteed income combined with the potential need to handle the high costs of custodial care. An efficient and fair regulatory framework should maximize the availability and minimize the cost of a full array of consumer-driven insurance products within reasonable regulatory boundaries.

F. Current Regulatory Structure, Developments and Costs

The extent to which state regulation impedes (or fosters) competition is a key question associated with the central topic of this study. This is a difficult question to answer because there are both direct and indirect costs (e.g., the deadweight costs of product delays or products precluded) that can be difficult to determine. In terms of existing data and previous research, we can review certain measures of regulatory activity and economists' estimates of the cost of state regulation. While these sources do not necessarily provide an exact answer to the regulatory cost question, they can give the reader some sense of the potential magnitude of regulatory costs and their impact on the industry. We also discuss industry self-regulatory activities that are important in gauging the benefits and costs of various government regulatory activities.

1. State Regulatory Structure and Activities

a. A Brief History

Insurance regulation in the US dates back to the early 1800s and its historical legacy still influences regulatory policy today. The states each retain the principal responsibility for regulating insurance – the federal government has the authority to supersede state regulation when it chooses but has only done so on a selective basis to date. An OFC would constitute a significant change to this structure but there is a historical record of a number of instances where the federal government has intervened in insurance regulation and either imposed certain requirements on the states or limited the extent to which the states can regulate certain entities or areas.

The current structure and delegation of authorities are rooted in the federal McCarran Ferguson Act (MFA) enacted in 1945. The MFA essentially overturned a 1944

US Supreme Court ruling which held that the insurance industry was subject to federal antitrust law under the Sherman Antitrust Act. In US v. Southeastern Underwriters the Supreme Court ruled that insurance was properly considered as being part of interstate commerce and subject to federal oversight. The states and the industry lobbied Congress to re-establish the states' power to regulate the industry. Congress, in turn, responded with the MFA that: 1) delegated the power to regulate and tax the "business of insurance" to the states; and 2) provided a limited antitrust exemption for the insurance industry. We discuss the industry's antitrust exemption in greater detail later in this section.

b. Current Regulatory Structure

Under the current state system, the principal responsibility for the financial regulation of an insurer is delegated to its domiciliary state but the other states still perform some financial monitoring of all insurers licensed to operate in their jurisdictions and can suspend or revoke their licenses. Each state retains the principal responsibility for regulating the market practices of all insurers operating in its jurisdiction. The states utilize the NAIC to coordinate and support their financial regulation and monitoring activities. Financial regulations, such as risk-based capital requirements, are fairly uniform among the states but each still retains the authority to diverge from the common regulations. Market regulation tends vary to a much a greater degree among the states than financial regulation.

Each state controls entry by requiring life insurers to become licensed or admitted in order to do business in its jurisdiction. Insurers must meet minimum capital requirements (fixed minimum and risk-based) and other financial requirements (e.g., reserve requirements, investment rules, etc.) to become and remain licensed. Like other

insurers, life companies are required to file annual and quarterly statutory financial statements, independently audited financial statements, and actuarial opinions, among other public and non-public reports. Regulators analyze this information and monitor insurers' financial condition, using early warning systems and other tools. Insurers are subject to periodic and targeted regulatory examinations and regulators are authorized to seize companies in hazardous financial condition.

The financial regulation of life insurance companies is most distinct in the areas of reserves, investments and asset-liability matching. The rules for life insurers' reserves tend to be more prescriptive based on standard actuarial procedures and assumptions. A company's actuaries must perform a number of tests to demonstrate that it has adequate reserves to cover its benefit obligations and that the durations of its assets and liabilities are appropriately matched. Further, life insurers are required to set aside reserves to cover potential fluctuations in the value of their assets. Investment laws also have been tightened with respect to the types of assets insurers may hold, their relative amounts, and diversification. These regulations attempt to constrain life insurers' financial risk and implicitly limit the products and contract terms they can offer. While in some respects these requirements may be appropriate and efficient, in other respects they may unnecessarily hamper insurers' financial management with adverse effects on their efficiency and competitiveness.

Unlike personal auto and home insurance, the prices or premiums for life insurance and annuities are not explicitly regulated. However, life products and policy forms must be filed and approved by regulators. Insurance policies and related materials are reviewed for proper representation, adequacy of benefits and the reasonableness of

other contract terms. For example, requirements for minimum non-forfeiture values have been strengthened in recent years. While regulators may argue that these policies benefit consumers, insurers' efforts to obtain regulatory approval can delay the introduction of new products or product changes.

2. Recent Regulatory Issues and Developments

The market conduct of life insurers has received increasing regulatory scrutiny as severe abuses were uncovered in agents' sales practices in the early 1990s. Several large life insurers received hefty fines and agreed to refund millions of dollars to policyholders who alleged that they had been victims of sales abuses. We should note that the questionable practices were employed by agents and that the legal and regulatory allegations against insurers involved the extent to which insurers properly controlled their agents and whether they explicitly or implicitly encouraged the agents' behavior. Regardless of their ultimate origin, the kinds of abuses that were uncovered are not surprising given the complex array of investment-oriented products offered by life insurers that some consumers may find difficult to fully understand.

The discussion of how to best regulate life insurance sales practices continues and is likely to continue for some time as industry practices and products continue to evolve and regulators and insurers evaluate the costs and benefits of the regulations that have been enacted. While the policies concerning these issues are not necessarily specific to a particular regulatory framework, how a federal regulator implementing an OFC would address these issues will likely be raised in legislative discussions of the OFC proposal. A federal regulator's ability to develop an effective and efficient approach to market

regulation would be critical to the overall success of an OFC and to healthy insurance markets.

The NAIC and the states have been engaged in a number of initiatives to improve the effectiveness and efficiency of the regulatory processes in an attempt to at least partially address the concerns of the insurance industry with respect to state barriers and costs. These initiatives include guidelines on expediting the licensing of insurers, a system for the electronic submission of rates and policy form filings, improved market conduct processes, and a centralized product filing system for life insurers.

This last initiative refers to the NAIC's creation of the Interstate Insurance Product Regulation Commission (IIPRC) that has recently begun operations with 30 state members. The IIPRC system is intended to allow insurers to submit product filings for review and approval that then can be introduced in states belonging to the Compact. Insurers will be allowed to use pre-approved member state forms as well as forms approved by the IIPRC under uniform standard rules. The use of the IIPRC and its efficiencies for insurers will necessarily evolve over time. Hence, it is difficult at this point to assess how well this system will work and its impact on insurers' regulatory compliance costs.

These activities presumably have reduced or will reduce some of the barriers and costs associated with state regulation and promise further efficiencies, but insurers advocating an OFC obviously do not believe that these measures are sufficient. As discussed earlier, each state ultimately retains the prerogative to determine what requirements insurers must meet within in its boundaries – this is the essential premise of a state regulatory system that the states want to protect. Many insurers, on the other hand,

want a uniform system without state variations that they believe would best be accomplished and administered through an OFC or some other federal system.

3. Industry Self-Regulatory Activities

The issues associated with life insurers' market practices naturally lead to consideration of industry self-regulatory activities that can fill an important gap between what regulators can reasonably monitor and control and the compliance with standards for fair and ethical practices on which insurers might generally agree. In theory, a "self-regulation" program can produce significant benefits and efficiencies for an industry and its consumers. Industries, such as life insurance, can be particularly well-suited for self-regulatory programs (that may or may not augment government regulation) where there are a large number of transactions of varying complexity with individual consumers. Many consumers may need to rely on sellers to ensure the fairness of transactions because the consumers do not have the expertise to do this for themselves. An industry self-regulation or certification program can provide a "signal of quality" to consumers and can increase their trust and confidence in the firms they do business with and their transactions with these firms. Even an industry subject to government regulation can still benefit from a complementary industry self-regulation program because of limits to and gaps in what regulators can do with respect to consumer protection.

Following the market problems of the late 1980s and early 1990s, many life insurers recognized the need and value of enhancing "self-regulatory" activities. Several factors likely motivated the interest in self-regulation. One factor is the large number of insurance transactions that are not feasible or efficient for regulators to closely monitor on a "real-time" basis. A second factor is the high cost of much more extensive and

intrusive regulatory market conduct activities and the problems associated with regulators prescribing detailed rules governing insurers' market activities. A third factor was the industry's recognition that it needed to restore and maintain consumer confidence in its integrity and it could not rely on regulators to achieve this objective on a timely and efficient basis. A fourth factor may have been a belief that the development of a set of industry standards could be of great assistance to insurers seeking to ensure the quality of their processes.

In March 1994, the ACLI formed a CEO Task Force to promote ethical standards within the life insurance industry and strengthen consumer confidence. The work of the Task Force, which was endorsed by ACLI's Board of Directors, led to the formation of the Insurance Marketplace Standards Association (IMSA) and the creation of IMSA's Ethical Market Conduct Program. IMSA began operations in 1996 and in 1998 the first 155 insurer members were qualified.

IMSA has focused its efforts on setting and maintaining ethical standards for the marketing, sale and service of individually sold life insurance, annuity and long-term care insurance products. IMSA-qualified companies commit to maintaining high ethical standards and to being fair, honest, and open in the way they advertise, sell and service their products. IMSA states that its certification "is tangible proof that a company adheres to specific, stringent market conduct principles." Further, IMSA-qualified companies are expected to develop and maintain policies and procedures to promote ethical business practices. One of the objectives is to foster a corporate culture of compliance that provides value for both consumers and insurers.

A detailed description of IMSA's functions and activities is beyond the scope of this report but can be found in Grace and Klein (2006) and IMSA's website at www.imsaethics.org. A principal IMSA function is the development of its principles and codes and the assessment of qualifying insurer members of IMSA. IMSA requires an insurer to go through a rigorous preparation and review process that ultimately determines whether it meets IMSA's standards and qualifies for IMSA membership. IMSA documents its standards and assessment process in various materials that also assist insurers in preparing for and undergoing the assessment process. IMSA performs other functions that complement its standards and assessment activities including consumer and producer outreach and public education.

Grace and Klein (2006) found that IMSA membership is associated with several benefits for insurers, including increased efficiency and better performance. At the same time, their research indicated that both market and regulatory recognition and valuation of IMSA membership could be significantly improved. This will be a matter of time, IMSA's education efforts, and the receptiveness of consumers, producers and regulators to the information they receive. At the same, we acknowledge the ACLI's view that better federal regulation of insurers' market practices would be preferable to reliance on SROs.

If an industry SRO exists, a key issue is the coordination of government regulation activities with the SRO's program and insurers' self-compliance activities. Ideally, government regulation and self-regulation would be coordinated in manner that achieves an optimal level of consumer protection in the most efficient way. Unfortunately, the reality is that state regulators have been slow to recognize the

contribution of industry self-regulatory activities and adjust their rules and processes accordingly. This is one of a number of issues that need to be resolved in reforming insurance regulation which may or may not involve the use of SROs.

G. Changes in the Industry and Its View of State Regulation

In the Southeastern Underwriters antitrust suit, the property-casualty insurance industry was accused of illegally setting prices under the guise of "rating bureaus." The Supreme Court ruled that insurance was properly considered as being part of interstate commerce and overturned a previous Civil War era decision, opining that the industry was subject to federal antitrust law generally and the Sherman Antitrust Act specifically.

As explained earlier, the McCarran Ferguson Act reestablished state regulatory authority over insurance and provided a limited antitrust exemption for the industry. This antitrust exemption was, to some extent, narrowly drawn and specifically did not exempt boycotts, coercion, or threats to intimidate. A number of proposals have been made over the years to strip the industry of the exemption but they have not gone very far. Danzon (1992) suggests at the time of her article that the rationale for stripping the antitrust exemption was due to the liability crisis of the 1980s. The current concern seems to be, in part, based upon the commercial brokerage scandal and the way the property-casualty industry handled Hurricane Katrina claims and its current actions in property insurance markets affected by catastrophe risk. Hence, the current motivation for some legislators to advocate modifying the insurance industry's antitrust exemptions appears to have more to do with issues in property-casualty insurance than life insurance.

It is important to note that the insurance industry which fought against the imposition of federal regulation in 1945 is much different from the insurance industry in

2007. In 1945, the life insurance industry sold a relatively simple set of products. Term, whole life, and industrial insurance comprised the typical portfolio of individual products sold by US insurers. Some insurers also sold annuities and some sold individual as well as group products. Today, in contrast, insurers sell relatively complex policies with embedded options, products linked to market returns, products that compete with other financial service products, and products designed for sophisticated estate tax planning.

In 1945, the industry was essentially the only provider of tax-preferred savings. Banks, with the small exception of Saving Bank Life Insurers, were prohibited from competing in the life insurance and annuity business, under the prevailing interpretation of bank regulatory statutes. Investing in the stock market was left to a relatively few who trusted it given its recent history at that time. The environment for insurance financial services was, with the exception of the Supreme Court's Southeastern Underwriters decision, relatively staid.

There have been a number of significant developments since 1945 including the deregulation of interest rates in the banking industry through the Depository Institutions Deregulation and Monetary Control Act of 1980, the deregulation of the brokerage industry in 1975, the deregulation of branch banking in 1994, the entrance of banks into the annuity business in the Barnet Bank case in 1996, as well as the environmental sea change that was envisioned with the GLB Act of 1999. Hence, life insurers' competitive environment has changed dramatically since 1945.

Table III.9 shows the relative size of the industry in 1945 and in 2005. We see that the industry increased dramatically in terms of life insurance in force, employment, total income, and the number of companies licensed by the states. Further, by looking at a

particular state in Table III.10 - New York - we can see that the changes are apparent at the state level as well as at the national level.

Table III.10 shows the number of insurance companies, including the number of insurers domiciled in New York (i.e., "domestics"). Between 1945 and 2005 the total number of insurers domiciled in New York grew from 20 to 86. This growth may be in part due to the effects of companies setting up separate subsidiaries to avoid the effect of New York's extra territorial regulations. However, the number of domestic companies has risen in every state (as shown in Table III.11). We also see that the amount of life insurance in force increased dramatically as did the assets of companies doing business in New York.

Table III.11 shows how the state market shares of domestic life insurers have changed over time. Two different factors influence the data. The first is that there have been a number of mergers and acquisitions over the period 1945 to 2005. This should result in a reduction in the total number of firms. However, at the same time there have been a number of new entrants which increased the number of firms in the market.

However, today many of the larger companies have separate subsidiaries operating as part of a larger group of companies. Thus, in general, the market is slightly more concentrated today than it was in the past. However, we also note that the interstate transaction of insurance is much more significant today than it was in 1945. Table III.11 shows that the average domestic company market share dropped from 11.6 percent in 1945 to 7.5 percent in 2005. The medians in the two years also indicate that the domestic company market share has decreased in the majority of states.

Another way to look how the industry has changed is to look at what is backing the insurance coverage provided by the industry. This is shown in Table III.12. In 1945 the largest percentage of assets backing the industry was in government securities. In contrast, in 2005 we see the largest asset class is corporate securities (both debt and equity). The change is quite dramatic; as the industry has changed its underlying products to be more risk sensitive and offer higher performance; the assets backing their products have to be commensurate with the promised returns. This is essentially caused by the competition with the other sectors of the financial services industry which offers competitive returns on savings. This places even greater importance on regulatory policies governing insurers' investments.

In sum, the life insurance industry is quite different today than at the time of the passage of the McCarran-Ferguson Act. The Act was designed, in part, to remedy a problem of price regulation in the property-casualty business. Life insurers did not set uniform rates and did not need rating bureaus to assist them in determining rates. The value of MFA to the life insurance industry is minimal. This is in part because mortality tables are readily available and an insurer can easily modify them for its own business.

Second, the industry is less state-focused today than it was in 1945. Currently, there are more life insurers selling different types of products across state lines than there were in 1945. In addition, there is more competition between insurers and other types of financial service companies. Most, if not all of the life insurance industry's competitors in the non-insurance financial service providers are regulated by the federal government. Thus, due to structural changes in competition and changes in the industry itself, the

notion of federal regulation makes more sense for a larger more integrated life insurance industry today than it did in 1945.

IV. The Structure, Conduct and Performance of Life Insurance Markets

As discussed in Section II, economists typically examine a market's structure, conduct, and performance to assess its competitiveness. Structure refers to the number of and size distribution of firms in the market and its level of concentration. Barriers to entry and exit are also very important in assessing market structure. As we will show below, the concentration of the market depends upon how the actual market is defined. There are few concentrated markets in the life insurance industry broadly defined.

Conduct relates to the types of activities that firms engage in to either enhance competition or diminish it. For example, firms can increase barriers to entry or engage in other behavior such as price or output agreements that diminishes competition and allows them to set prices above competitive levels. These are the types of things that economists look for in assessing whether there is any conduct that would have an anticompetitive effect. Firms in markets with an oligopolistic structure are more able to engage in such practices depending on other factors, such as the ease of entry and exit.

Finally, performance pertains to market outcomes based on notions of efficiency and/or profitability – i.e., the outcomes we would expect to see in a competitive market. Industries tending toward oligopoly tend to be less efficient than they otherwise could be. Profitability could be affected by firms' ability to manipulate prices and enforce price-output arrangements, explicitly or implicitly. Such behavior could result in "excess" profits and/or protect inefficiency. In contrast, competitive industries will earn competitive returns (i.e., a fair profit equal to the cost of capital) and tend to be more efficient in using and allocating inputs and producing outputs consistent with consumers' needs and preferences. However, we should point out that in markets that are "workably

competitive", profits may rise or fall in the short run, but "excess profits" will not be sustainable in the long run.

A. Structure

1. Factors Affecting Industry Structure

There are a number of factors which influence industry structure. These include cost conditions, e.g., the existence of economies of scale and scope, as well as demand for products and services. In the extreme, if there is no limit to economies of scale then the most efficient structure is to have only one firm in the market, i.e., a "natural monopoly." Ever-increasing returns to scale are generally driven by high levels of fixed costs like those found in public utility distribution networks, but this is not the case in life insurance.

Most analyses of the life insurance industry suggest that the largest life insurers tend to have constant returns to scale, but that smaller companies tend to have increasing returns to scale.[10] These smaller companies, according to economic theory, need to increase in size in order to stay competitive. A recent study (Pottier, 2007) shows that smaller firms are less efficient which is consistent with this conjecture.[11] Certain factors, including regulatory barriers, may allow these firms to sustain their operations at less than maximum efficiency for a period of time, but market forces will ultimately push them to reach higher levels of efficiency if allowed to do so.

[10] See also Cummins and Weiss (2000) Table IV.4 for a list of papers examining economies of scale and scope of the insurance industry. Cummins, Tennyson and Weiss (1998) and Cummins and Zi (1998), find that the majority of life insurers operate with increasing or constant returns to scale up to about $1 billion in assets and that the majority of firms with more than $1 billion in assets exhibit decreasing returns to scale.

[11] Not all studies are consistent in their finding that there are increasing returns to scale and then constant returns to scale. See, for example, Cummins and Weiss (2000) Table IV.6 which suggests that the largest firms tend to exhibit decreasing returns to scale (i.e., they are too big).

What is particularly interesting is the proposition that state regulation may have an effect on the economies of scale a firm can achieve. If regulation outside of an insurer's home state is expensive, this may dissuade firms from increasing in size (by expanding their interstate operations) to obtain maximum greater economies of scale. Further, there is a corresponding protection of a state's market if the state's regulatory structure creates barriers to outsiders.

Some of the most egregious regulatory practices to thwart competition are no longer permitted under the court ruling in *Metropolitan Life Insurance v. Ward.*[12] Prior to the ruling in this case, the states commonly discriminated against foreign insurers by taxing their premiums at significantly higher rates than those imposed on domestic companies' premiums. This protected domestic companies at the expense of foreign companies. The purpose behind the discriminatory tax law may have been related to regulatory efficiency (as foreign companies are allegedly harder to regulate as their assets are out-of-state) or outright protectionism, but the lingering effects of these previous polices may have hindered the ability of some insurers to grow and achieve greater economies of scale.

McShane and Cox (2006) note that there are numerous single-state companies and that they are profitable. Further, the authors suggest these single-state companies' survival over time might be consistent with the existence of favorable regulatory treatment which allows them to overcome the advantages of larger multi-state insurers. Another explanation could be that these insurers serve a niche that they are better positioned to fill than large, multi-state insurers. The reality could reflect some combination of both phenomena. Sorting out these competing explanations is beyond the

[12] 470 U.S. 869 (1985).

scope of this analysis and a subject for future research. That said, if there are small single-state or regional insurers that are truly reaping gains from inherent comparative advantages (i.e., not artificially created barriers), then the impact of an OFC on their market positions should be relatively small or negligible.

In addition to scale economies, there are economies of scope that will influence the structure of the market. Economies of scope are defined as cost savings resulting from the joint production of two or more goods or services. For example, insurers can share distribution networks among some of their products and achieve cost savings by doing so.[13] Consumers also may value buying multiple products from the same firm. Firms specializing in a particular type of business, say disability insurance, would have to build a distribution network and incur the associated costs without the benefit of distributing these costs across other lines of business that would utilize the same distribution network.

The evidence regarding economies of scope in life insurance is relatively scant. Grace and Timme (1992) and Yeungert (1993) find no evidence of economies of scope. Further, Yeungert (1993) and Berger, Cummins, Weiss and Zi (2000) find that when looking at joint life-health/property-casualty operations, the economies of scope between life and non-life businesses are relatively weak. Although some insurers appear to have abandoned the strategy of being "financial supermarkets", others appear to be seeking to employ this business model (e.g., Allstate). The experience of this latter group of insurers and further research may yet yield more insights into the nature of economies of scope for different types of firms and product mixes.

[13] A good example of this are the discounts typically offered to consumers who purchase both auto and home insurance from the same company. It is also reflected in the bundling of coverages in certain products, such as homeowners multi-peril insurance.

The nature of demand for a product can influence the structure of a market. For example, if consumers need to purchase goods (or services) jointly, then we have what is called "demand super-additivity". Consumers with this characteristic receive benefits from one-stop shopping. Prior to the enactment of the GLB Act, it was thought that there may be some benefits to consumers of integrating banking and insurance services.[14] In addition, there were the apparent benefits of financial services integration in Europe which suggested costs savings to the firm as well as consumer benefits. Neale and Peterson (2003) find insurer stock returns increased after GLB's enactment and that overall market risk of the industry decreased. What is interesting is that they found no change in the structure of the industry as measured by concentration after the law's enactment.

Entry barriers can also affect the structure of the industry. Minimum capital requirements are an entry barrier. While imposed by regulators and not created by insurers, they still influence who enters an industry. Licensing, market conduct, and solvency exams are also entry barriers to some extent because they raise the cost of doing business in a market and will discourage some entrants. Although there may be positive welfare effects from certain entry barriers (discouraging incompetent or potentially fraudulent entrants), the barriers influence how the industry is structured. Other entry barriers (such as discriminatory premium taxation or the prohibition on banks selling annuities) can be motivated more by protectionism or outmoded regulatory concerns.

Further, sunk costs can also influence the development of a market's structure. Sunk costs are traditionally thought to be unrecoverable costs like the steel in a train track

[14] *Gramm-Leach-Bliley Financial Services Modernization Act*, Pub. L. No. 106-102, 113 Stat. 1338 (November 29, 1999).

or a manufacturing plant designed for a specific purpose. Life insurance may have some sunk costs, but they are unlikely to reach the levels of sunk costs in industries required to make large physical capital investments. An insurer's agency system is a cost that entrants will have to duplicate in order to compete against an incumbent. The fixed and variable costs of different distribution systems vary. However, technological change can diminish the barrier caused by sunk costs. For example, improvements in technology that facilitate the distribution of insurance and policy services could reduce the value of traditional agency systems for certain products. Technological change in the form of the Internet has changed the role of the agency system and therefore has a potential to change the market structure of the industry, although its potential impact may vary by the type of product.

Finally, we should note that the size of the market can have a significant effect on the number of firms that can operate in it and its level of concentration. The smaller the market, the fewer the number of firms that can operate in it at the minimum efficient scale and the more concentrated the market will be, all other things equal. This is important to remember as we compare market structure measures between state and national markets and among state markets that vary greatly in size.

2. Countrywide and State Market Concentration

There are a number of ways to look at industry concentration in the life insurance industry. First, we look at current state concentration ratios. These are shown in Tables IV.1-IV.4 which show state-level market structure data for ordinary life insurance, ordinary annuities, group life and group annuities. We tend to define insurance firms on a group basis here (i.e., a group of affiliated companies represents one firm) because we are

interested in the firm's total market share for a particular line of insurance. In addition, the group level of aggregation makes sense because the members of the group are presumably not competing against each other for the same customers and the group is typically the decision-making unit. Finally, our market definitions are constrained by how different types of life insurance and annuities are delineated in insurers' annual statements (filed with regulators) which is the primary source of firm-level data on insurance companies.

The measures of concentration we employ are the x-firm concentration ratio and the Herfindahl-Hirschman Index (HHI). The x-firm concentration ratio is the ratio of the top x firms' premiums to the total market premiums.[15] For example, the higher the cumulative market share held by the top 4, 8, 16 or 20 firms the more concentrated the market is. The HHI index is also a measure of concentration and it is calculated as the sum of the squared market shares of all firms within a market multiplied by 10,000.[16] The HHI can range from 0 to 10,000 where 10,000 would imply there is only one firm that accounts for all of the sales in a market.

What is interesting about the HHI is that, in contrast to the concentration ratio, the HHI increases as the number of firms decreases and also increases with the disparity of the market shares in the market. It also tends to weight the market shares of the largest firms more heavily, which is consistent with the economic intuition that the relative size of "large" market leaders is particularly important. At the same time, it affected by the size distribution of all firms in the market and the potential for "non-leaders" to exert

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[15] $CR_x = \sum_{i=1}^{x} ms_i$ where x is usually 4,8,10,16 or 20.

[16] $HHI = \sum_{i=1}^{n} ms_i^2 * 10{,}000$.

competitive pressure on the leaders. Finally, the inverse of the HHI (divided by 10,000) is a measure of the "capacity" of the market for similar sized firms. Thus, if the HHI was 5,000, the capacity of the market would be two equal-sized firms. The greater the capacity, the argument goes, the more firms that can operate in the market and add to competitive pressures.

One of the major issues with concentration ratios and the HHI is the actual definition of a market, as we discussed in Section III. We look at markets from both a geographic perspective and a product perspective. First, we examine state markets. A "state market" makes sense at some level as agents and insurers are licensed by a state. Competition from agents in other states is likely to be minimal; competition among insurers across state barriers is likely to be significant even if impeded by regulatory barriers. However, if we aggregate the market to the national level, we ignore the artificial state barriers. The aggregation of state markets provides a potential view of how concentrated the market may be if there were no state regulatory barriers and insurers were free to sell in any state market.

The bottom section of Table IV.1 shows the descriptive statistics associated with the ordinary life market in each state. The average state four-firm concentration ratio is 26.7 percent while the average 16-firm concentration ratio is 62.9 percent. Thus the top four firms on average have almost 27 percent of an average state's market share and the top 16 firm have close to 63 percent of the market. The average HHI is 369 which translates to a capacity of approximately 27 equal sized firms. These are relatively low levels of concentration, especially when measured at a state level.

At the aggregated national level, we see that the ordinary life market has a four-firm concentration ratio of 35 percent, and a 16 firm concentration ratio of 76 percent. The HHI is 522 and the inverse implies that there is room for 19 firms of equal size. The US market as a whole is only slightly more concentrated than the average of the states. This is somewhat unexpected as the national market is much larger than any state market. One possible explanation for this result is that state regulation tends to decrease the market shares of larger insurers in a given state.

By comparison, in 1997, the banking industry had a local market (defined by MSA's) HHI of 1,465 for deposits and 1,491 for loans. This indicates that the ordinary life business is less concentrated than markets for the deposits and loan activities of banks (Hannan, 1997).[17]

Further, the U.S. Department of Justice (DOJ) has implemented guidelines for its analysis of a potential merger between competitors. If two companies were to merge and the HHI was below 1,000, the DOJ would undertake no review. If the HHI was between 1,000 and 1,800 the DOJ would undertake a review if the HHI would be changed by more than 100 points. If the HHI was above 1,800 and would experience an increase of 100 points there would be a presumption of antitrust concerns but not necessarily a conclusion that a market was overly concentrated or that a merger would diminish competition.

The guidelines are used here as one reference point with which to compare the current concentration of life insurance markets, with the understanding that other factors beyond the level of concentration need to be considered in assessing the structural

[17] It should be pointed out that the banking industry, after the deregulation movements in the 1980s, has become more concentrated as interstate banking became permissible and branch banking restrictions have been removed.

competitiveness of a market. Table IV.5 shows a summary distribution of state HHIs across the four lines of coverage. For example, we see that for ordinary life insurance, 49 states' HHIs fall below 1,000, 2 fall between 1,000 and 1,800, and none exceed 1,800. This suggests that state life insurance markets are generally not concentrated when judged by the DOJ guidelines.

We should also note that the DOJ guidelines are typically applied to national markets rather than state markets. The significance of market concentration in a state is partially dependent on how easily an insurer can enter that market if the insurer is already operating in other states. Absent regulatory barriers, we would expect that it would be fairly easy for an insurer operating in one state market to enter another state's market.[18] Further, in the context of considering alternative regulatory frameworks, one has to consider entry barriers that arise from state regulation versus entry barriers that arise from the "natural" conditions of the market.

We see that in the tables showing concentration measures for ordinary annuities that the market in the average state is slightly more concentrated than for the ordinary life market, but still not concentrated if one applies the DOJ HHI guidelines. For the group markets (life and annuities shown in Tables IV.3 and IV.4), we see a higher degree of concentration across the states.

This result needs to be interpreted considering differences between the buyers in individual versus group markets as we discussed in Section III. If demand has an influence on the market structure then one must consider fact the demand for group products is distinctly different than the demand for individual products. Individual

[18] The primary entry cost for existing insurers would likely stem from establishing distribution networks in the entry into an additional state.

products are sold through different marketing mechanisms to individual consumers and group products are sold to employers or other types of affinity groups. This could explain why group markets would be more concentrated if group buyers tend to favor a certain set of large, national insurers. However, while group markets are more concentrated, their buyers are also more sophisticated and can wield greater countervailing power in negotiating prices with insurers. For example, looking at Delaware and New Jersey, we see relatively high concentration in the group life markets, but this is likely due to a clientele effect as Delaware and New Jersey are home to many of the nation's largest companies. The concentration of buyers may significantly influence the structure of the market.

Similarly the group annuity market is more concentrated due to the nature of the demand for these products. In fact, the group annuity product market at the state level is characterized by higher concentration than the other markets. As shown in Table IV.5, 36 states are in the 1,000–1,800 range and nine exceed 1,800. However, the HHI for the US market as a whole is 971 which indicates that the market is relatively unconcentrated. Arguably, this level of aggregation better reflects the actual market as purchasers of group annuities are more likely to be buying products in a national market from insurers that will service group plans that have may have employee-participants in different parts of the country.

In sum, the geographic market concentration statistics suggest that, with some few exceptions (which may be explained by other factors), the geographic markets for life insurance and annuity products are not concentrated in comparison to the banking industry as well as the DOJ Horizontal Merger guidelines.

Other ways to examine product markets include examining the change in concentration over time. Table IV.6 shows the change in the concentration ratios and the HHI index for the major product lines of business over time. Over the last twenty years there have been modest increases in concentration. The difference in concentration between group and individual products (with the group products tending towards higher concentration) is still evident over time. What is worth noting is that if one examines similar statistics from the *1997 Economic Census,* we see that the life insurance industry concentration trends are in line with most US industries.[19]

The reason economists focus on concentration is due to the link between concentration and the ability to raise prices. Older research in banking has found a tentative relationship between concentration and price (see e.g. Hannan and Berger, 1991). This may be explained by the nature of spatial competition in local banking markets which is a function of consumer's willingness to travel to conduct business. However, the development of the Internet as a means of conducting one's banking has likely influenced competition in these markets. In addition to conducting their traditional banking business, consumers can obtain loans from and invest in securities with national companies. Further, the general deregulation of banks has introduced a much broader set of banks from which to do business. Thus, measuring concentration based on local geographic markets makes less sense over time. This is also likely to be true with commodity like products such as term insurance or simple annuities.

[19] U.S. Department of Commerce (2001).

3. Entry and Exit Patterns

Another aspect of the structure of a market is the ease of entry into and exit from the market – easier entry and exit promotes greater competition. As mentioned above, if there are significant barriers to entry in a relatively concentrated market, then incumbent firms will be less subject to competitive pressure from potential entrants. The potential for entry precludes incumbents from raising prices to increase profits if they otherwise possessed such power. One potential barrier to entry is a state's capital requirements. Each state has a dual set of capital requirements: 1) fixed minimum requirements that vary among states; and 2) the Risk Based Capital (RBC) requirement which is based on a common formula developed by the NAIC. Hence, as every state has adopted the NAIC formula, a given insurer's RBC requirement is the same in every state.

In application, the "binding requirement" for a given insurer in a given state is the higher of the state's fixed minimum standard or the RBC requirement. Given that state fixed minimum standards tend to be fairly low (averaging around $2 million), the RBC requirement is likely to be the relevant regulatory capital standard for most companies.[20] Even then, the data suggest that the RBC bar is relatively low – only a few companies fail to pass it and many of these companies may already be under some form of regulatory supervision.[21] The capital requirements set by rating agencies tend to be more stringent

[20] These state minimum capital requirements range from $500,000 to $6 million depending on the state., which the average or median requirement approximating $2 million. Again, these fixed requirements are not likely to be significant barriers as RBC and rating agency capital adequacy measures are more likely to be used in licensing a company or rating its financial condition. Rating agency requirements are likely to be the most binding constraint as a company's rating is an important in consumer insurance purchases and agents' recommendations.

[21] Klein (1995) has argued that risk-based capital requirements for insurers are relatively low for several reasons he discusses. Most insurers far exceed their RBC requirements and the few that do not are likely already under some form of regulatory supervision.

based on comparisons of insurers' RBC requirements with their A.M. Best Capital Adequacy Ratios (BCARs).

There is also some evidence that licensing requirements in general can act as a barrier to entry – this is likely to be a greater barrier than simply meeting fixed and RBC capital standards, noting that RBC standards are uniform across states. There are a number of other requirements that states may impose, e.g., state deposits, and these other requirements could vary significantly across states. Further, there are the transactions costs and time associated with the licensing process itself that can raise entry costs. Grace and Klein (2000) show that there is a positive relationship between insurers' costs and the number of states in which they are licensed. This is confirmed by Pottier (2007). However, while these licensing requirements may impose costs on insurers, the question is whether they discourage companies from entering a state. Removing the regulatory barriers is likely to increase entry, all other things equal.

Franks, Schaefer and Stauton (1998) undertake a comparison of compliance costs in the US, the UK and France. They find that the compliance costs for the life insurance industry are highest in the US and they believe it is due to the state based nature of regulation. Finally, Grace and Phillips (2007) look at state regulators' incentives rather than firms' incentives. They examine the market for regulation across the states and find that states with profitable domestic insurers export greater levels of regulation which can erect barriers to entry. In sum, state regulation does appear to significantly influence how firms choose to enter into a market but this reflects "government-produced" barriers, not barriers that are inherent in the economics of a market.

Figure IV.1 shows the entry and exit patterns at the state level. These patterns provide some indication of the ability to enter new markets. We have defined an insurer entry as the sale of $100,000 of insurance (in "1985 dollars") as measured by premiums written or annuity considerations in a state for a given calendar year when in the previous year the insurer had less than that amount of business within the state.[22] An exit, in contrast, is defined as when a company in a state has more than $100,000 in real premiums written in one year and less than that in the next. This $100,000 benchmark is used to define a "true" presence in the market rather than a nominal presence due to ancillary business with insureds that have moved from another state or from partial year writings. Over time the data indicate that there is significant entry and exit within the states in terms of the number of state-level entrants and exits. However, the number of exits tends to exceed the number of entrants, which may in part reflect some industry consolidation and possibly some problems associated with regulation in a given state.

Table IV.7 shows the effect of entry and exit on the amount of premiums written in the US market as a whole. To obtain a better feel for entry and exit we examine changes between 2000 and 2005. Panel A of Table IV.7 shows the ordinary life market. Between the years 2000 and 2005, 30 new companies entered the market and in 2005 they had approximately 0.2 percent of the market for ordinary life insurance. In terms of exits we see that 188 companies have exited accounting for 5.3 percent of 2000 ordinary life direct premiums.

For the ordinary annuity market we see that there have been 12 entrants since 2000 with a negligible effect on market share. However, 72 firms have left the ordinary

[22] We used a number of limits (10,000, 50,000, and 100,000) to determine entry and exit. The results for different limits are quite similar.

annuity lines since 2000 accounting for 9.3 percent of the 2000 ordinary annuity market. A similar a pattern exists for the group market for both annuities and life insurance. Entrants have a small 2005 market share while the exits have a relatively larger portion of the 2000 market. For the overall market we see 39 new entrants and 151 exits over this period. The entrants accounted for approximately 0.12 percent of the 2005 market and the exits account for 5.3 percent of the total market in 2005.

What is likely occurring is that companies are engaging in a number of activities that reduce the number of companies without shrinking their market sales. The two most likely candidates are merger or acquisition activities as well as the redeployment and or retirement of companies. Table IV.8 shows that there has been significant merger and acquisition activity over the last five years with a total 178 mergers or acquisitions. Cummins, Tennyson and Weiss (1999b) tabulated M&A activity from 1989-1997 and found 393 transactions.

Companies purchased may be folded into the acquiring company and the empty company is retired. In addition, companies within groups may have there business transferred to another company within the group and the empty company is retired. As we noted in the discussion of the concentration of the industry, the life industry is becoming more concentrated over time. What we are observing is that many smaller companies and some mid-size companies are leaving the market which increases concentration slightly. This is consistent with the proposition that insurers are seeking to increase their size to obtain greater economies of scale and increase their competitiveness. This is probably easier to achieve at this time through mergers and

acquisitions than seeking to expand sales in markets where it is difficult to convince consumers to purchase more life insurance or take business away from other insurers.

4. Analysis of Trends and Market Differences

The above data suggest that if an OFC (or some other type of regulatory reform) is not enacted, then the industry will likely evolve slowly. The trends suggest that without regulatory changes we would see gradual increases in concentration as firms merge or acquire other insurers. This trend has been continuing for some time and would likely continue, albeit at a somewhat slower rate if there are no significant changes in the regulatory framework.

Secondly, we would likely see only modest product innovation as the pressure for innovation comes from the larger insurers and other financial service providers. State regulatory approval of new products will likely be slower than under a single federal regulator as each state would have to consider a product prior to its sale within the state. According to the National Conference of State Legislators (NCSL), bank regulators take up to 30 days to allow a new product to be sold by banks, the SEC requires 60 days to license a new mutual fund, but it takes much longer to obtain approval from the state insurance regulators for new insurance products.[23] According to the Congressional Research Service (2003), it may take up to two years for life insurance products to obtain approval in every state.

The NAIC's IIPRC is intended to provide a single point of regulatory review for life insurance products which may mitigate the delay caused by a fifty state review process. However, the compact will still allow individual state regulator objections to be

[23] Frequently Asked Questions on the Insurance Interstate Product Regulation Compact found at www.ncsl.org/programs/insur/compactfaq.pdf.

an important part of the review/approval process. Further, as of June 2, 2007, only 30 states had joined the compact and a member state can opt out of certain provisions at will thus undermining the benefits of a uniformity agreement.

Another important expected trend is that insurers' efficiency will likely increase over time as merger and acquisition activity occurs. This is just a continuation of the current trends. It will occur slowly without regulatory changes rather than more rapidly if aided by regulatory changes, similar to what occurred as the result of banking deregulation in the 1980s and 1990s. Without regulatory change, any increase in efficiency will likely be due to economies of scale rather than economies of scope. The gain in efficiency due to mergers and acquisitions for the industry as a whole is potentially quite large under an OFC, but without it, any efficiency increase is likely to be modest. Thus, regulatory barriers do not allow the industry to fully achieve potential efficiency gains as the costs to licensing new products and operating in the states is still likely to be expensive (in terms of the time and effort needed for regulatory approval) relative to operating under a federal charter. This regulatory cost reduces the value of mergers and acquisitions as a way of increasing industry efficiency.

If there is no change in the regulatory environment, state level barriers to entry and exit will not likely change much over time. The current state system is slow to evolve and while explicit domestic company preferences appear to have been eliminated, subtle preferences by state regulators still exist that could still hamper interstate entry and operations.

Finally, another area of interest which is not discussed above concerns the resolution of insolvent companies. The resolution of insolvent insurers is quite costly at

the state level. There are conflicts among the states and there is little expertise acquired in many states for complex insurer estate resolution. This is not likely to become much better over time. Willenborg (2000) and Grace, Klein and Phillips (2002) point to the high cost of resolution of insurance insolvencies as compared to bank insolvencies. This may be, in part, due to the differences in bank assets and liabilities and the insurers' assets and liabilities, but it is also likely to be due to diseconomies of scale and lack of experience. Thus, over time, insurance resolution costs are not likely to decrease under the current state based system of insolvency resolution.[24]

In sum, the trends that would occur under the current regulatory system are likely to be consistent with the recent past. There will be some merger and acquisition activity which increases profitability and efficiency, but it will not likely occur at the pace observed in the banking industry. Product innovation is likely to occur but at a slower rate relative to what would be expected to occur under a more uniform and efficient framework. The larger companies and some smaller well-run companies will still be profitable, but industry-wide gains in efficiency will be relatively low as state product licensing restrictions hamper competition.

5. Extension to Financial Services Markets

The traditional banking markets (commercial banks, national banks, savings and loans) have experienced state and federal deregulation over the last thirty-years. Interest rates were deregulated in the early 1980s and branch and interstate banking came to full

[24] The NAIC has been involved in an intensive and contentious process to reform the "receivership system" for troubled and insolvent insurers. Some stakeholders in the current system have been resistant to changes they argue are not warranted or beneficial. Hence, while the states may achieve some reforms in this area they are likely to fall short of what some experts believe is warranted.

fruition in the 1980s and 1990s. Research suggests that the change in the regulatory environment had significant beneficial effects on the banking industry and consumers.

Berger, Demsetz and Strahan (1999) examined banks' and other financial institutions' performance during the 1990s. According to their study, banks were more dynamic during the 1990s, experiencing higher profits, increased efficiency, large numbers of national M&As, and relatively large amounts of international M&A activity. In contrast, the insurance industry during this period (both life and non-life) was relatively staid. At this same time, bigger banks got bigger, but there was no real appreciation in concentration as the bigger banks became competitive with each other at the regional and national level.

Since deregulation, there has been a tremendous growth in technological advancement (e.g., ATMs and electronic banking) and there has been an increased array of products and services. The growth in products linked to an individual's actual credit record shows how innovations in technology and techniques lead to a revolution in the credit card industry and mortgage lending industry, almost overnight (Berger, 2003).

Further, because banks and insurers now may have common ownership, incentives to sell products in banks or insurers may change. For example, there are currently some 650 Financial Holding Companies (FHCs).[25] This common ownership has the possibility of dramatically changing the industries' dynamics.

Insurance and banking are often though of as two separate industries. This is a narrow view of their relationship. They are both financial intermediaries—that is, they receive money from consumers and invest in assets throughout the economy. Insurers and banks take fees for this financial intermediation. However, if one set of organizations can get

[25] According to the Federal Reserve Board (April 2007) http://www.federalreserve.gov/generalinfo/fhc/ .

new products on line quicker and at lower costs—this set will have a comparative advantage all other things constant (i.e. some people want pure insurance and some people want a liquid savings account). However, if the product has a truly intermediation value (anything to do with investment or savings), then the set of organization with the lower costs will win.

FHCs are authorized under the GLB Act to engage in activities that cut across the spectrum of traditional financial service industries. Citigroup, for example, was one of the first FHCs that had its roots in the banking industry and was among the first to purchase an insurer. The holding company structure allows banks to purchase insurers or vice versa. Arguably, these FHCs, if holding both banks and insurers, see the benefits of a national regulator for the banks and the costs of state regulators for insurers. If an FHC wanted to sell a new financial service product and, for strategic reasons thought it was conceivably best fitted to its insurance company, the FHC might not sell the new financial service product through the insurance company due to regulatory delay at the state level, but would sell it through a bank after receiving permission from the federal regulator.[26] Thus, we see the possibility of how regulatory change may provide incentives to bypass certain aspects of state insurance regulation even without the explicit passage of legislation authorizing federal regulation of insurance. This can be also seen in a more direct way, as a bank which is unaffiliated with an insurer could also potentially offer a

[26] Under the functional regulation proposed by the GLB, insurance products can only be sold through insurance companies. The definition of insurance products under the Act are those that have been defined as insurance as of January 1, 1999. New products which are not insurance under the GLB may be sold and marketed by either an insurer or a bank with regulatory permission. A perfect example would be Fidelity's Growth and Guaranteed Income Annuity. This is something that could potentially be offered by a bank or an insurer as it has aspects of a mutual fund and an annuity.

product which competes against products produced by insurers. Bank deregulation including GLB is imposing significant competitive pressures on insurers.

Because banks are already regulated under a dual chartering system, we can look to it for possible trends. The evidence points to increased competition, product innovation, and technological change. Further, bank efficiency has increased due to merger and acquisition activity. We would anticipate a similar experience if an insurance OFC was established. However, if an OFC (or other type of significant regulatory change) does not occur, there is still potential competition from banks, especially in the long-term savings area (e.g., universal and variable life insurance and annuities) where competition between insurers and other financial institutions is greatest. This potential competition will have an effect on large nationwide insurers putting them at a possible long-run competitive disadvantage under the current state regulatory framework.

B. Conduct

1. Independence among Firms

Our discussion of the ability to enter the market influences the discussion of market conduct. One normally thinks market conduct relates to practices which enhance the status of certain incumbent firms or the market leader to the detriment of other firms and potential entrants. Based on our analysis of the life insurance industry's economic conditions and market data, it appears that inherent entry barriers in the industry are not significant. Further, it is important to note that there are over 1,000 separate independent life insurers operating in the US. The tables on concentration focus on the group level for a purpose as these groups account for approximately 753 of the 1,020 companies operating in 2005 and write approximately 85 percent of the total life and annuity

business in the US. Thus, in 2005 there were 290 separate group entities and 267 unaffiliated single companies. Even with this apparent "concentration" of economic activity within groups, we still see state and national markets with relatively low levels of geographic and product market concentration. There are still a relatively large number of insurer groups (including non-affiliated stand-alone companies) competing at both the state and national level.

The lack of concentration would make it difficult for life insurers to "coordinate" their market activities, either explicitly or tacitly. Hence, it not surprising that we were unable to find any evidence of concerted activity within the life insurance industry and we were not able to find any substantive allegations of concerted activities. Indeed, the anecdotal evidence based on articles in the business and trade press reveal many instances of insurers seeking to find new ways to gain an edge on competitors. This suggests highly independent and competitive conduct among life insurers fighting for highly contested markets as best they can under the current regulatory framework.

2. Product Development and Innovation

One of the challenging problems in analyzing the life insurance industry is the fact that regulatory data do not provide the granular detail regarding the types of products sold by life insurers and annuity companies that would be desirable. Further, because these products are contracts, they can be developed by entrepreneurs and copied immediately by competitors. However, the readily available data on life insurance sales at a company level do not distinguish between term life insurance premiums, whole life premiums, universal life premiums, or more exotic products. Hence, we have no hard empirical data which we can use to develop quantitative measures of product innovation

in the industry and how it may be affected by state regulation. At the same time, anecdotal evidence provided by different sources suggests that life insurers are still engaging in considerable innovation in crafting permanent life insurance and annuity products that will be attractive in a competitive market that encompasses insurance as well as non-insurance products with investment characteristics.

However, the insurance efficiency literature suggests that while the average efficiency level of the typical company is approximately 50 percent (i.e. the firm could cut its costs in half without decreasing output), insurers tend to become more efficient over time (Cummins, Tennyson, and Weiss, 1999a). This is sign of a competitive market. However, it may be that without state regulation there would be greater ability to increase efficiency and efficiency gains would occur at a faster pace. After the banking industry was deregulated, the market structure changed dramatically. Efficiency increased as smaller banks were purchased. Akhaven, Berger and Humphrey (1997) found that merged banks experience a 16 percent increase in profit efficiency relative to other large banks.

One indication of the technological change in the insurance industry has to do with how the Internet influences search and the how it reduces the cost of searching for commodity like products. Regardless of its other motives and ability to innovate, the life insurance industry responds to competitive pressures caused by technological changes and new business models. Brown and Goolsbee (1998) found that the Internet price searches for term life products had a significant effect in bringing down term-life prices. The effects were quite dramatic - a 27 percent decrease in five years.

C. Performance

1. Pricing

The insurance industry as a whole is well known for its price dispersion. For certain types of products, information intermediaries have evolved to help match consumers with producers of insurance. The intermediaries invest in understanding what types of customers each insurer desires and matches clients with these customers. As mentioned above, Internet searches and sales portals such as SelectQuote and Accuquote have increased the ability (lowered the costs) of searching for insurance products. For the most part, however, it is still difficult to compare the relative prices of products other than simple term life insurance among different companies. This is because more complex products constitute a bundle of options that have different imbedded values.

In fact, a great deal of literature comments about the dispersion of the prices in the market.[27] The Federal Trade Commission attempted to come up with an index that would function like the standard annual percentage yield calculation that allows consumers to compare interest rates. However, that FTC insurance index has not been adopted widely. In addition to the various options that are bundled into a product, there is also the insurer's default risk. Hopefully, consumers are becoming more aware of the value of claims-paying ability ratings and it is well known that intermediaries pay close attention to these ratings, but putting all of these factors together without a regression analysis makes comparing prices difficult.[28]

Our overall opinion, based on the evidence available, is that life insurance and annuity prices are "competitive" based on insurers' current cost structures and the current

[27] See Winter (1981) for a summary.

[28] Winter used regression analysis to find that prices, when taking into account various policy and firm information, did not vary that much.

regulatory framework. However, evidence on many insurers' efficiency levels (discussed above and below), suggests that many insurers might be able to lower their relative prices (balanced with enhancement of policy benefits, quality of service, etc.) if they were able to achieve greater levels of efficiency. Using the strictest definition of "competitive prices" which contemplates insurers operating at maximum efficiency, many life insurers could charge prices that are more competitive than the prices they are able to charge under current conditions.

2. Regulatory Costs and Efficiency

A number of studies exist measuring the efficiency of the US life insurance industry (see Cummins and Weiss, 2000). Most studies suggest that the average firm is inefficient. Some have suggested that the largest firms are more efficient (Grace and Timme, 1992) and a recent analysis of insurer productivity at the group and unaffiliated company level suggests that larger groups (or separate insurers) are more cost efficient than smaller groups (Pottier, 2007).[29] Cost efficiency is measured by the ratio of a firm's costs to the costs of the most efficient firm. The complement to the efficiency score (1- the cost efficiency score) can be thought of as the percent of costs which could decrease to produce the same level of output. While Pottier found that the average firm in his sample had a score of 0.57 (which means that the average firm could reduces its costs 43 percent without reducing its output), the smallest quartile had a cost efficiency score of 0.364 (a potential 63 percent reduction in costs) and the largest quartile had a cost

[29] It should be noted that some studies suggest that not all big life insurers are more efficient than smaller ones. Cummins and Weiss (2000) note a number of studies which suggest that the largest firms have decreasing returns to scale which suggest that they should reduce their size.

efficiency score of 0.719 (a potential 28 percent reduction in costs). Much of the industry appears to be cost inefficient and has room for significant improvement.

Pottier also estimated revenue efficiency at the group level. Revenue efficiency is defined as the ratio of the revenues of a given firm to the revenues of a fully efficient firm producing the same output vector with the same output prices. The revenue efficiency for the 25 percentile, the median, and the 75 percentile was 0.153, 0.281, and 0.468 respectively. This implies that there is substantially more revenue inefficiency than cost inefficiency.

These statistics (along with a myriad of others in previous studies) imply there are significant inefficiencies in the life insurance industry. Making the market more amenable to competition would be one way to increase efficiency. However, based on our analysis, it does not appear that this inefficiency arises from high concentration or other "natural" entry/exit barriers. It appears that lowering artificial barriers to entry and inter-state competition would provide a stronger boost to efficiency improvements. Merger and acquisition activity also increases efficiency by removing inefficient layers of cost. Cummins, Tennyson and Weiss (1999a) found that acquired firms, for example, have significant increases in efficiency over similarly situated non-acquired firms.

2. Profitability

The life insurance industry needs to obtain competitive level returns to attract capital. The industry is now mostly stock companies who rely upon their shareholders for capital. Figure IV.2 shows a set of stock indices for the financial services industry, life insurers, and for thrifts for publicly traded life insurers compared to other financial service firms. Figure IV.3 shows the stock index return over the same time period. What

is illustrative about these charts is that the financial service sector is correlated quite strongly with the performance of the life insurance sector. It appears that life insurers' returns as measured by this stock price index have been substantially lower than that of other financial institutions, which would be consistent with the assessment of the life insurance industry's efficiency.

3. Quality of Products and Service

As a result of numerous lawsuits (in the early 1990s) against leading life insurers regarding their market practices, IMSA was formed. Grace and Klein (2006) tested whether membership in IMSA was related to higher levels of product quality (lower lapse rates and complaint rates), profitability (based on accounting measures of return on equity and return on surplus), economic efficiency, and A.M. Best Ratings. In each of the categories, after controlling for the likelihood that a life insurer was a member of IMSA, they found that IMSA membership was associated with higher levels of product quality, A.M. Best ratings, profitability, and efficiency. This research, along with consumer surveys, suggests that life insurers are making progress in improving their quality of service and consumers' perception of their quality.

D. Summary

There are four primary conclusions from the analysis in this section and our review of other studies. The first is that the life insurance and annuity industry is not concentrated at the state or national level. The second conclusion is that, while the industry is not concentrated, it is inefficient in terms of both costs (too expensive relative to the optimal firm) and revenues (it is under producing relative to the optimal firm). It

appears that market forces are driving the industry to achieve greater efficiency which could be further aided by regulatory changes. There have been numerous mergers and acquisitions over the last two decades that we believe are primarily motivated by the desire to improve economies of scale. Further, there have been numerous company retirements as insurer groups reallocate resources.

The extent to which state regulation reduces these incentives to compete by creating barriers to entry is still an empirical question, but there is some evidence that state regulation protects single state companies and increases costs to multi-state competitors. A reduction in the cost of life insurance regulation (which appears to be high by international standards) could promote even greater competition and efficiency gains.

Third, while the industry is relatively inefficient, it has still responded quickly to technological change. The Internet, for example, provided both the ability and the incentives for insurers to drop prices dramatically and in a short period of time. Technology in the form of information services has also positively influenced the development of the industry.

One of the major problems with insurance is informational asymmetries. Consumers and investors face difficulty in fully assessing the quality of insurers. High quality companies face challenges in distinguishing themselves from other companies in a credible way. SROs are one way to help fill this informational gap. One can think also of rating agencies as one example of an informational intermediary that provides information to consumers about the claims paying ability of an insurer. Other organizations could conceivably provide assessments of insurer products, quality and practices (beyond claims-paying ability ratings) that are broader in terms of their

coverage of the industry than the quality ratings currently provided by organizations like Consumer Reports and J.D. Power.

The insurance industry's market structure, conduct, and performance suggests that there is room for improvement. While its market structure supports a high level of competition and there is no conduct consistent with oligopoly behavior, the industry does need to increase its level of efficiency. A low level of efficiency is consistent with oligopolies, but it is also consistent with inefficient or overly burdensome regulation. Given the relative ease of entry (excluding the effects of regulatory barriers), the low levels of concentration and the evidence obtained from other sources of information, it is clear that the industry is not engaging in any concerted action to protect inefficiency or diminish competition.

Finally, evidence from the banking industry suggests two things. One, if significant regulatory reform is created by an OFC, there are likely to be increased benefits due to efficiency gains, technological change, mergers and acquisition activity, and profitability gains. Consumers will also benefit from new products and services. Alternatively, if no regulatory reform occurs, the industry will likely move more slowly to increase its efficiency (i.e., through merger and acquisition activity). In addition, there may be some competition from the banking sector which could force the life insurance industry to react in a competitive manner to new bank product offerings. However, the life insurance industry will likely be at a regulatory cost disadvantage as well as from an economies of scale and scope disadvantage if it is still subject to state licensing and product restrictions. Removing these disadvantages would enhance life insurers' relative

efficiency and competitiveness that, in turn, would increase competition in the overall market for financial services.

V. The Effects of an OFC on Competition

In this section we discuss the potential effects of an OFC on competition in US life insurance and annuities markets and the carryover to the broader market for financial services and international markets. By necessity, this discussion must be somewhat speculative as well as general, as there are many factors that would influence the consequences of an OFC and it is not possible to divine how all of the dynamics would play out. What we can do is discuss the effects that we think are most likely based on our analysis and consider possible scenarios that could occur depending on certain assumptions about how insurers would respond to an OFC and the policies that would be implemented by the OFC regulator.[30]

A. Optional Federal Charter System

To discuss the possible effects of an OFC on competition it is necessary to have some sense of how it would be structured and implemented. This includes not only the legislation that would be enacted but also the policies adopted by the federal regulator and how those policies would be enforced. It is not possible in this report to identify and make assumptions about all the relevant aspects of an OFC, but we can make some assumptions and discuss certain policy/implementation issues that would have implications for the effects of an OFC.

For our discussion of an optional federal chartering system we use the National Insurance Act (NIA) introduced as S.40 on May 24, 2007 by Senators Sununu and

[30] A maintained assumption, for example, is that the compliance costs under a federal insurance regulator will not be greater than the compliance costs of state regulation.

Johnson as the legislative vehicle that would be used to create an OFC system.[31] While there are many subtle details that may or may not be in a final bill enacted by Congress, there are a number of important provisions that are likely to be present in any legislation that is enacted.

The NIA would set up the Office of National Insurance (ONI) regulator within the Department of the Treasury. This regulator would look very much like the Office of the Comptroller of the Currency (OCC), the agency that regulates national banks operating in the US. In fact, the entire proposed federal insurance regulatory system is modeled on the OCC. Like the OCC, the ONI's functions would be funded by an assessment on the insurers it regulates.

The NIA permits both life and non-life companies to apply to the ONI for a charter and license to sell particular products in all states. It further permits the ONI to regulate the solvency and market conduct of insurers within its jurisdiction. Additionally, it authorizes the Commissioner of National Insurance to establish a comprehensive insolvency resolution scheme which includes the state guaranty associations (funds) which meet minimum qualifications. Thus, the ONI would oversee solvency oversight, policy forms, other aspects of market conduct, and insurer insolvencies. It would not regulate prices (except that prices and reserves have to be based upon sound actuarial principals) or underwriting standards.[32] Further, assuming that the states' solvency guarantee system is adequate, a national insurer would participate in the state solvency

[31] SB 2106 109th Congress.

[32] Note that states also do not regulated life insurance prices per se. The states only regulate prices indirectly in their review and approval of life policy forms which includes consideration of the relationship between the premiums that would be charged and the benefits that would be paid.

guaranty plans.[33] If a state plan does not qualify, there would be a federal plan that would cover these insolvent OFC insurers' obligations in the state.

States would not be able to discriminate against National Insurers (those companies receiving a national charter) or National Insurance Agencies (those agencies with a national license). States would still be permitted to tax insurers under current tax law - again with the qualification that no national insurer or national agency would be taxed differently than insurers domiciled in a state. This would preserve both state premium taxes and the special aspects of their retaliatory taxes.

National insurers or agencies would also be allowed, under the NIA, to choose their state of domicile which could be different than the state where the company has its headquarters if the company so desires. In addition, the NIA would permit insurers to choose the law under which their insurance contracts are to be interpreted. Finally, the NIA would subject the insurance industry to the antitrust provisions specifically exempted under the McCarran-Ferguson Act. The major exception to the antitrust exemption repeal would be that insurers would still be able to share information about losses or claim payments.[34] Finally, the NIA allows lawsuits in a federal court if a state attempted to interfere with the operation of a national insurer or agency.

[33] We presume that, under this arrangement, the state guaranty association would function essentially as it does under the current state system. An insolvent insurer's claims obligations in a given state would be covered by that state's guaranty association. Assessments to cover the guaranty association's claim payments would be allocated to insurers in the state according to the amount of life insurance premiums they write in the state.

[34] This is more pertinent to non-life insurance than life insurers. Life insurers do not use statistical agents to compile industry data on the amount of benefits they pay, although this information is reported in their public financial statements filed with regulators and others. Life insurers use mortality tables published by the NAIC as a reference to assist them in pricing life insurance policies and annuities.

B. Potential Effects on US Life Insurance Markets

1. Regulatory Effects

The major regulatory consequence of the NIA would be to reduce any potential effect of state regulation which may act like a barrier to entry for out-of-state companies. The law would effectively prohibit any other type of discrimination which puts national insurers or agencies at a competitive disadvantage relative to domestically-chartered companies. For example, the NIA's provisions governing a company's domiciliary state would make it easier for insurers to relocate for business reasons and insurers would not be subject to potential subtle discrimination by the home state's regulator. To be fair, this issue is not likely to be an important problem for life insurers, as it more of a potential concern for non-life insurers and especially for those operating in lines that face strong political pressures (like home or auto insurance). However, it would be potentially easier (or at least just as easy) for companies to change organizational form or to form a mutual holding company under the proposed legislation. State legislators and regulators would no longer be involved in approving these changes.

Secondly, the proposed law permits state premium tax laws to be applied just as they are now. This would likely have little or no effect on life insurers or property-liability insurers as long as states treat the national insurers the same as state-chartered insurers. Under the proposed law, even the insurance retaliatory tax would still be permitted.[35] This would allow the states to use premiums taxes to support their insurance regulatory agencies. However, some insurance departments currently rely more heavily on special fees and assessments on the insurers they regulate to support their operations

[35] The retaliatory tax is employed by almost every state and it taxes a foreign company at the higher of its home state's rate or it host's state rate. Thus using a simple example, a company "domesticated" in Georgia selling insurance in Florida would pay to Florida the higher of the tax due in Florida using the Georgia tax rate or the tax due in Florida using the Florida tax rate.

(a greater portion of premium taxes are used for general fund appropriations in these states). This source of funding could diminish considerably if a large number of insurers with a substantial volume of business would opt for federal regulation. But it is important to note that as more insurers opt for the federal charter, insurance departments will require fewer resources, so the revenues received through fees may continue to match their resources.

Thirdly, resolution of troubled or insolvent companies would be put into professional hands under the NIA. Under the current state system, receivers operate under a number of different laws and often without transparency (see Grace, Klein and Phillips, 2002). Receivers may be judges, a judge's appointee, an appointee of the insurance commissioner or an employee of the state insurance department. It is a relatively ad hoc system in most states. By placing the resolution in the hands of a federal receiver the likely result would lower assessments against guarantee funds as the ONI can develop a knowledge base and economies of scale for overseeing national insolvencies.

Fourth, regulatory compliance costs would likely be reduced using the NIA. Companies would avoid duplicative and unnecessary expenses caused by the duty to comply with every state's market conduct and licensing laws. Both explicit and implicit costs (e.g., the cost of delaying a product's introduction) should be lower under an OFC. Using one standard also would likely have competitive market effects as we discuss below, but the NIA should reduce redundant compliance costs.

Fifth, the adoption of an OFC would promote regulatory competition between the federal and state governments to provide better regulation. By permitting insurers to

signal their preference by choosing a regulatory environment, competition would be encouraged among the states.

One of the major concerns involving regulatory competition is that it would promote a race to the bottom. The argument goes as follows. If a state wants to attract a company to its jurisdiction it would reduce the stringency of its regulation in order to keep the company under its regulatory framework. However, if another jurisdiction looks attractive, it is possible to play one off against the other to obtain a better regulatory environment. The pessimist sees the end game as one with no meaningful regulation.

However, there is a counter-argument to this view. The US has had a long history of regulatory competition especially in corporate charters (Romano, 1993). Because corporations, the argument goes, operate in a number of markets - employment, capital, and product - they have incentives to seek regulatory jurisdictions that provide adequate and efficient oversight. Choosing a lax regulatory jurisdiction would reduce the value of the firm because its investors/stockholders, employees and customers would have less confidence that the firm was subject to adequate regulation. Thus, firms will seek to be chartered in jurisdictions that provide "regulatory value" to their shareholders and customers. Consequently, there is not a race to the bottom, but a race to find a regulatory framework that helps to maximize firm value. Too little or too much regulation has the potential for diminishing firm value. We believe that this argument would also be highly relevant to life insurance where consumers' confidence in the reliability of an insurer and the adequacy of its regulation are important considerations in their purchase decisions.

There is modest regulatory competition among the states for insurance charters. However, it is not as robust as it is for corporate charters or for banking charters. This is

because a state must approve a change in domicile for an insurer. A non-financial corporation only needs the permission of its shareholders to change domiciles. Thus, the current system in insurance acts as a barrier to exit. Barriers to exit diminish regulatory competition. Further, according to the Rosen (2005), the switching of banks charters is evidence of competition between state and federal regulators. However, we do not see post-switch bank failures which would be consistent with a race to the bottom. Hence, competition in bank chartering provides evidence of beneficial competition among federal and state regulators.

Sixth, there is a major innovation in the NIA. Currently, an insurance contract might be subject to potentially different interpretations in every state. This NIA innovation allows an insurer to choose which law is used to interpret a contract. Thus, insurers can choose to have their contracts interpreted in the federal court system. States currently do not permit insurers to choose the law under which their contracts are written and interpreted. For example, California companies operating in New York must use New York law for their New York contracts. California law is then immaterial to interpreting a New York contract. This contributes to contract uncertainty and the transactions costs involved with litigating disputes involving similar contracts under different court systems and laws.

The NIA would promote contract certainty and potentially reduce transaction costs by allowing the insurer selling a product to fix the venue for resolving contract disputes. Insurers' concerns would diminish in terms of how a court might interpret a contract that has been interpreted in one state but not another. No state has previously permitted this innovation, but under an NIA we might see states relaxing their

restrictions. Every other consumer good or service has choice of law clauses in their contracts or warranties, but the state system of insurance regulation has not permitted this practice.

Thus, the fact that regulatory competition between the states is impeded probably contributes to less efficient and more costly regulation. Barriers to entry and exit also hinder companies from leaving to seek a better regulatory environment as the insurer can still be subject to the states' interpretation of contract law and the imposition of idiosyncratic market conduct and licensing rules.

2. Market Competition

In addition to the benefits of regulatory competition, the reduction of state regulatory restrictions would likely increase direct competition among insurers and between insurers and other financial service providers. After the banking industry's deregulatory legislation was passed there were major changes in banking - new products, new firms, more competition, and innovation. In fact, it appears that competitive benefits arose from a number of financial services regulatory reforms over the last three decades.

First, by reducing barriers to entry, insurers could sell products anywhere in the US. While industry and market concentration is low (which promotes competition), we see evidence of an industry that is not dynamic as it could be. Just like banks after deregulation, there is room for dramatic efficiency-enhancing changes in the industry. Competition would likely increase between traditional insurers as well as between insurers and other providers of long-term savings products. We have previously discussed how the effect of technological change (the Internet) reduced the search costs for life

insurance products which in turn lowered prices. New competition resulting from the enactment of an OFC would likely have a similar effect.

Second, the technological change introduced by the Internet was a change that prompted industry adaptation as a result of external pressures. By allowing for quicker product licensing and uniform product regulation, the industry could take advantage of significant internal innovations which would increase product diversity.

Third, increased competition would lead to the increased economic efficiency of the industry. This can be the result of normal pressures to reduce costs to remain competitive, but it can also arise from the ability for companies to expand their operations in more states or merge/acquire other insurers. One of the major reasons to merge or acquire another firm is to obtain the firm's access to markets to which the acquiring insurer does not have access. If an OFC law is passed, the potential acquiring insurer has two options: 1) build new operations from scratch in these states; or 2) buy a company currently operating in these states.

By reducing barriers among companies, the acquirer would have the choice of buying or building. If buying is less expensive, then the insurer can acquire other insurers or certain blocks of their business. However, without an OFC we might not ever see this type of merger or we would see a much lower pace of acquisition. This is because the cost of acquisition and regulatory compliance might discourage a merger (all affected states must approve a merger under the current system). This drag on mergers and industry restructuring leads to a less efficient industry.

Fourth, if the adoption of the NIA would lead to higher levels of efficiency resulting from increased returns due to mergers, we would likely see an increase in

concentration among insurers. Some might be concerned that increased concentration would lead to less competition, but the full context of the industry's market structure and its effects on competition must be considered. Two points are worth remembering. First, is that the life insurance industry is not concentrated today. Second, if the experience is like that of the banking industry, the changes in concentration prompted by an OFC would not be substantial enough to adversely effect competition and would be based on meaningful improvements in efficiency. Further, the greater ease of entry would provide a further check on more concentrated life insurance markets. Finally, the greater concentration would be spurred by desire to increase efficiency and competitiveness, not to acquire a level of market power that would insurers to limit competition.

Fifth, competition would likely yield lower prices. For example, we can examine the competition in credit cards rates, terms, and conditions which has evolved over the last decade. Competition greatly expanded the availability of credit especially for those who, previously would not qualify. Ausubel (1991) describes a market that was ripe for competition, but did not seem to be competitive as all consumers paid high interest rates on credit card balances routinely. Over the next decade innovations in credit underwriting and risk taking by banks changed how credit was issued and how much consumers paid for their cards (Schmalensee and Evans, 2005). Thus banking competition reduced credit card rates (accounting for credit risk) and expanded amount of credit available to the economy.

C. Potential Effects on Financial Services and International Markets

By allowing insurers to operate under the same regulatory framework as other financial service companies, we would expect to see increased competition between

service providers operating in the same product space. For life insurers this is in the area of long-term savings. Thus annuity providers, traditional life insurers, tax deferred (or preferred) mutual funds, providers of ordinary mutual funds, and banks would all be competing for households' savings. Each current product offers different benefits as well as costs. However, as competition between insurer and other financial service companies increase the products would evolve more effectively to provide the best value for consumers. This would be an especially important development as the demand for retirement products will expand with more "baby boomers" entering retirement and the continued movement to employee-directed defined contribution retirement plans.

In the year 2000, the US insurance industry (life and non-life) sold 29 cents of reinsurance premiums to foreign citizens for each dollar it bought from foreign owned reinsurers. Similarly, the US insurance industry sold 57 cents of premiums to foreigners for each dollar of primary insurance purchased from foreign companies. In 2005, the US sold 25 cents of reinsurance to foreign companies per dollar of reinsurance purchased from foreign companies, but it sold $106.74 in primary insurance to foreigners relative to what it purchased. Overall, primary premiums written by US companies outside the United States increased 218 percent while reinsurance premiums written outside the US by US companies increased 105 percent during this time period.[36]

Today, the U.S and Western Europe are the world's largest insurance markets. However, of the top 10 life insurers in the world, only one of them is a US company (Met Life).[37] Further, only 0.22 percent of the premiums and annuity considerations written by

[36] U.S. Department of Commerce, 2006
[37] III (2007) citing data from Fortune.

US life insurance companies were written outside the US and its territories in 2005.[38] Thus, while there has been some growth in cross-border trade in life insurance, the industry has substantial additional potential for international growth.

One concern with respect to international trade in insurance is that the state system is a barrier to entry for international companies. The same problems that make it difficult for an established US insurer to operate nationwide make it difficult for international companies to establish de novo entrants or expand their operations in the US. This problem has been discussed for almost 20 years and has been the subject of numerous meetings with various national and international groups including the NAIC, the OECD, and the European Commission (Skipper, 1998). By removing US internal trade barriers we also potentially make it easier for US domestic companies to expand outside the US. In addition, it increases the value of US domestic companies for potential mergers or acquisition by domestic financial institutions as well as by foreign insurers or banks.

International companies can enter markets as de novo entrants as well as through mergers or acquisitions. US consumers would benefit from new products and new ways of doing business that would results from these entries. Similarly, international regulators would have to ease the access of US insurers into their markets as insurers from their own countries would have easier access to US markets. Foreign regulators could no longer use the US state regulatory system as a justification for limiting the entry of US insurers.

The current structure of regulation in the US acts as a potential drag on the industry. Insurers from outside the US are growing larger and becoming more aggressive internationally. Continued "Balkanization" of insurance regulation in the US puts US

[38] This figure is from the 2005 NAIC Schedule T summaries.

insurers at a significant disadvantage. A simple illustration can make this point. During the 1980s and 1990s, certain states allowed greater interstate banking opportunities. These early movers, most notably North Carolina, allowed their domestic banks to merge and acquire other banks in states which also allowed interstate banking.[39] By the time the remaining states deregulated the interstate ownership of banks, North Carolina banks had become among the most dominant in the nation. Thus, by delaying deregulation, the states reduced the ability of their domestic industry to compete against the larger banks. This is a possible trajectory for the US domestic life insurance industry if it is curtailed by state regulation.

The international market also adds a different dimension to the potential competition from international insurers which could conceivably benefit the domestic market. Mergers and acquisitions often bring new technology and new ways of thinking to the acquired company in addition to new products and new ways of doing business. Thus, under a proposed OFC, foreign companies can provide significant substantial competitive benefits to US markets while at the same time allowing US insurers to grow and compete internationally.

D. Potential Beneficiaries of an OFC

One would assume that the potential beneficiaries of an OFC would be those companies which would bear the highest burden of regulatory and compliance costs due to overlapping state regulations. For example, the ACLI has gone on record supporting

[39] North Carolina is the only state with more than one of the top ten banks in the U.S. (Bank of America and Wachovia).

the enactment of an OFC law.[40] Thus, by examining the membership of the ACLI in terms of total premiums and annuity considerations (Table V.1) it is possible to get some sense of the types of insurers that might choose an OFC and the volume of business they represent, with the qualification that not all ACLI insurers endorse an OFC or have signaled that they would use it. Readers should note that the number of insurers we were able to identify from the ACLI membership list (posted on its website) is lower than the ACLI's count of its members and their relative share of total industry sales and assets.[41] Based on the list we used, ACLI members represent about 80 percent of industry premiums and annuity considerations and about 87 percent of its assets. Based on the ACLI's own statistics, it has 373 member companies operating in the US, of which 364 are legal reserve life insurance companies and nine are fraternal benefit societies. These 373 member companies account for 93 percent of the industry's total assets, 91 percent of its insurance premiums, and 95 percent of its annuity considerations in the US. Table V.1 also shows that members tend to be the larger companies operating (or having licenses) in an average of just under 40 states. In contrast, non-members tend to be smaller and have licenses to operate in approximately 16 states. Arguably, these ACLI member companies are more likely to be those that can take advantage of the benefits of a single regulator.

Another way to look at the data is to look at what the NAIC terms Nationally Significant Companies (NSCs) for the purposes of NAIC solvency monitoring activities. NSCs are those companies with operations in 17 or more states and have more than

[40] It is important to note that not all ACLI members support the proposed Act, but we can still speak in terms of broad generalizations to discuss the general magnitude of the potential firms which may benefit from an optional federal charter.

[41] Our census of ACLI members is taken from the ACLI website. However, we could not tell whether other members of an insurance group were also ACLI members. In addition, we had statutory data only for those companies which are required to file a life insurance annual statement. As a result our membership numbers are more conservative than those supplied by the ACLI.

$50,000,000 in premiums. These are shown in Table V.2. We see a similar pattern to that of the ACLI members. Larger companies tend to be the NSCs and they operate in an average of 46.7 states. These are truly nationwide companies. In previous work, Grace and Klein (2000) found that there was a significant relationship between expense ratios (the ratio of expenses to premiums) and the number of state licenses a company had. They found that a 10 percent increase in the number of state licenses held by an insurer was associated with a 1.8 percent increase the in the insurer's expense ratio. For the larger companies this increase in expenses arguably due to regulatory costs starts could become significant — especially if most of the expense is related to compliance with similar or overlapping regulations. These regulatory costs act like a tax and are eventually passed on to policyholders and owners.

The group of potential beneficiaries is quite large. Most premiums written and assets held by the industry are in companies that write business across the US. It is important to note that while not all large companies may opt for an OFC, not all regional companies would necessarily be content with a state charter. It is conceivable that these regional companies might find it easier to expand and undertake opportunities for growth if allowed to expand as contemplated under an OFC style of regulation. Larger companies may have lower unit costs of expansion (due to economies of scale) than relatively smaller regional companies. Thus, the smaller regional company can still obtain substantial benefits by reducing its regulatory and compliance costs through the choice of a single regulator. In contrast to the regional carriers, the smallest niche companies (those writing in three or fewer sates) account for only 6.6 percent of the national premium and annuity volume in 2005 according to the NAIC Annual Statement

Schedule T summaries. These 228 companies have an average of one state license and are likely be the strongest candidates for a state rather than a federal charter.

E. Summary

In this section we discussed the framework for an optional federal charter based on the most recent legislative proposal. We discussed the benefits of the proposal on regulation and its promotion of regulatory competition which will enhance the value of the insurance industry to consumers as well as insurance company owners. We also note that the use of an OFC has the effect of enhancing competition between insurers, increasing efficiency, promoting technological change, and encouraging product innovations. There is also the potential to increase competition between insurers and other financial service providers and in international insurance markets. Finally, we conclude that all companies, except for the very smallest, are likely to benefit from the option of writing business on national basis under a uniform regulatory framework. These benefits would come from reducing the potentially non-trivial compliance costs associated with the current state regulatory frameworks.

VI. Summary and Conclusions

The current state-based system of insurance regulation has its roots in the early 1800s and its preeminence was reasserted with enactment of the McCarran-Ferguson Act in 1945. Both the states and the insurance industry strongly supported state regulation at that time. However, since then the industry and insurance markets have substantially evolved. Most insurance is sold by national and regional companies operating in multiple states. Insurers are also increasingly competing in a broader financial services market at a national and international level. As the industry and its markets have evolved, an increasing number of insurers advocate some form of federal regulation to facilitate their interstate and international operation and even the playing field relative to other financial institutions and international insurers.

The principle vehicle proposed for a new structure is the creation of an Optional Federal Charter which would allow insurers to choose to be federally regulated or remain state regulated. Understandably, the OFC proposal has sparked a fierce debate between proponents and opponents of the concept and its implementation. This debate involves a number of issues warranting careful consideration. This report addresses one important issue – the likely effects of an OFC on competition in life insurance and annuities markets and the broader national and international markets for financial services.

Our report begins with a theoretical discussion of the underlying principles of competition and the relationship between a market's structure and the conduct of firms and their performance. We then review the nature of life insurance/annuities markets and their regulation, focusing on important trends with significant implications for the primary topic of this report. Based on this foundation, we analyze the current structure,

conduct and performance of life insurance/annuities markets and bring this analysis forward to discuss the likely effects of an OFC on regulation and market competition.

Based on our analysis, we conclude that the life insurance industry is structurally competitive based on its inherent characteristics, but that it has not fully achieved its potential efficiency due, at least in part, to the barriers and costs caused by state regulation. Our analysis further leads us to the opinion that the creation of an OFC, properly structured and implemented, would likely increase efficiency and competition in the US life insurance industry, the broader market for financial services, and international insurance markets. This would be expected to generate benefits to consumers in terms of lower prices and/or enhanced products that would best meet consumer needs and preferences, presuming that an OFC would be properly administered by a federal regulator and important consumer protections preserved.

While an OFC is likely to promote further consolidation within the life insurance industry, we believe that this consolidation would be aimed at increasing efficiency. We do not believe that it would result in levels of concentration which would allow insurers to achieve any degree of market power that could be used to the detriment of consumers. Further, an OFC need not result in the complete demise of state or regional (or even national) insurers which may opt to remain state-regulated. Insurers opting for state regulation would presumably do so because they would believe the state system is best suited for them and their business focus. If these insurers offer real value to consumers, they should be able to compete with OFC-regulated insurers and remain economically viable. We would also expect that the states individually and collectively would continue to reform their regulation to offer an attractive, consumer-oriented alternative to federal

regulation. The preservation of state premium and retaliatory taxes under current OFC proposals should provide adequate resources for the states to maintain adequate and effective insurance regulatory agencies.

It is important to stress that our opinions and conclusions only pertain to the effects of an OFC on market competition and does not necessarily extend to a blanket endorsement of an OFC which involves other issues beyond the scope of this report. That said, the likely competitive effects of an OFC are an important consideration that should play a prominent role in a thorough and informed debate on its relative merits.

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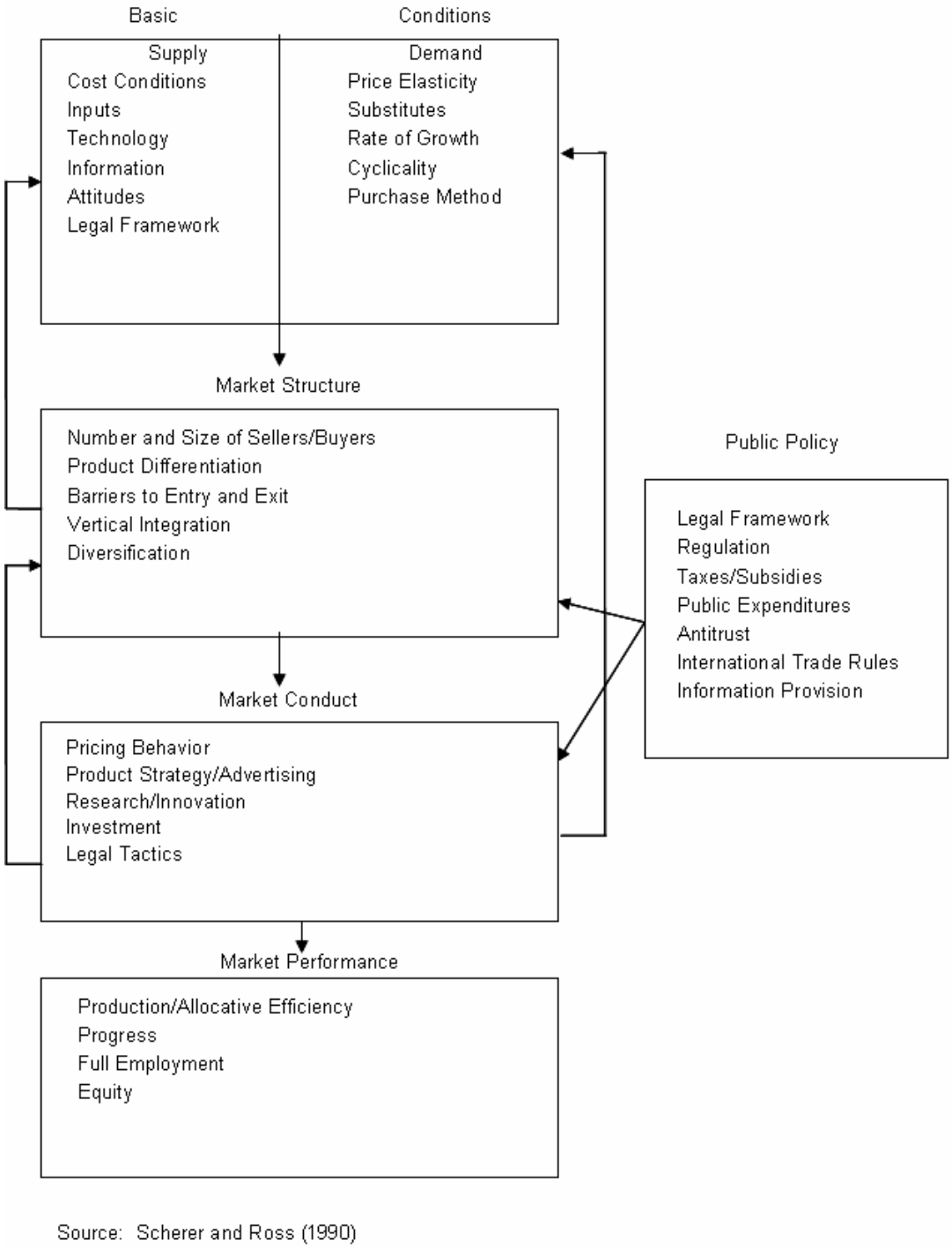
Figure II.1

Structure-Conduct-Performance Framework



Source: Scherer and Ross (1990)

Figure III.1
Types of Life Insurance

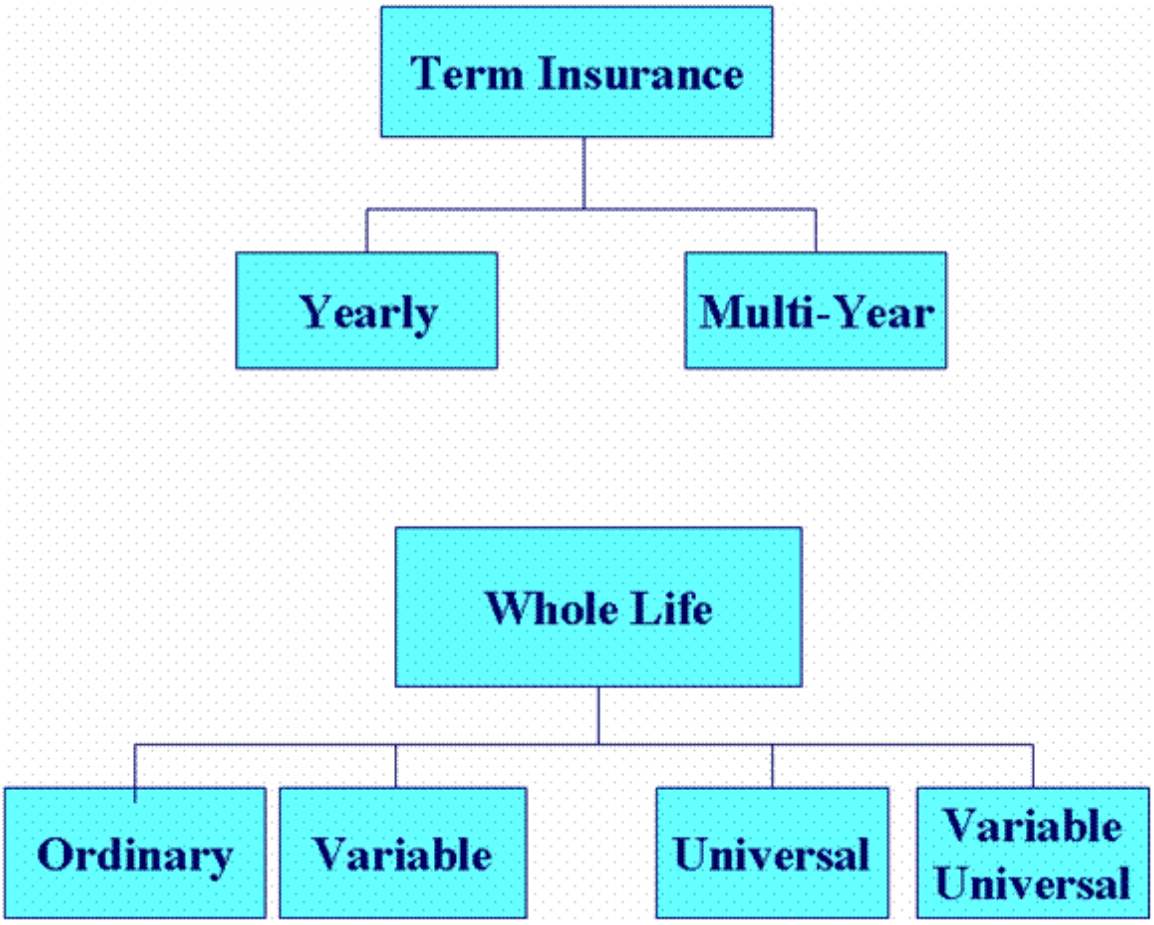


Table III.1
Estimated Life Insurance In Force in 2005

Type	Policies(000's)		Face Amount($M)	
	Amount	Percent	Amount	Percent
Individual				
Permanent Insurance				
Whole Life	49,099	29.6%	1,208,269	12.1%
Universal Life	14,137	8.5%	1,008,285	10.1%
Variable-Universal Life	5,018	3.0%	833,483	8.4%
Variable Life	556	0.3%	71,064	0.7%
Total Permanent	68,810	41.4%	3,121,101	31.3%
Term Insurance				
Decreasing	24,385	14.7%	1,042,424	10.5%
Decreasing Other Term			47,877	0.5%
Level	69,320	41.7%	5,362,009	53.8%
Level Other Term			333,004	3.3%
Term Additions			20,455	0.2%
Extended Term	3,693	2.2%	43,029	0.4%
Total Term	97,306	58.6%	6,848,798	68.7%
Total Individual	166,118	100.0%	9,969,899	100.0%
Group*				
Permanent Insurance	8,579	5.1%	373,877	4.5%
Term Insurance	158,567	94.9%	7,889,142	95.5%
Total Group	167,146	100.0%	8,263,019	100.0%

* For Group Insurance, number of certificates shown instead of policies.
Source: ACLI Product Line Report: Life Insurance, November 2006

Table III.2
Annuities Held by Life Insurers, by Type, 2005

Type	Reserves($M)				Considerations($M)	
	General Account	Separate Account	Combined Accounts	Percent Distribution	Combined Accounts	Percent Distribution
Individual Annuities						
Qualified Plans						
403(b) Plans	193,572	51,488	245,059	10.8%	19,551	6.1%
IRAs	140,830	249,959	390,789	17.3%	55,146	17.3%
Other Qualified Plans	86,134	38,190	125,044	5.5%	20,512	6.4%
Non-Qualified Plans	372,523	290,280	662,803	29.3%	100,523	31.5%
Structured Settlements	49,983	0	49,983	2.2%	3,852	1.2%
Total Individual	843,042	630,636	1,473,678	65.1%	199,584	62.5%
Group Annuities						
Qualified Plans						
403(b) Plans	66,354	34,104	101,458	4.5%	14,048	4.4%
401(k) Plans	39,604	125,414	165,018	7.3%	46,520	14.6%
Group IRAs	18,819	81,089	99,908	4.4%	2,592	0.8%
Terminal Funded Group Plans	56,048	9,264	65,312	2.9%	3,844	1.2%
Individual Policy Pension Trusts	22,557	64,248	86,804	3.8%	578	0.2%
Deferred Comp (457) Plans	11,967	16,203	28,171	1.2%	3,205	1.0%
Other Qualified Plans	48,289	60,119	108,408	4.8%	24,768	7.7%
Non-Qualified Plans	62,555	70,906	133,461	5.9%	24,133	7.6%
Total Group	326,336	462,347	788,683	34.9%	119,690	37.5%
Aggregate Total	1,169,378	1,092,983	2,262,361	100.0%	319,274	100.0%

Source: ACLI Product Line Report: Annuity Insurance, December 2006

Table III.3
Life Insurance Purchases by Gender, Age and Income

Category	Policies (%)		Face Amount (%)	
	1989	1999	1989	1999
Gender				
Juveniles	17	15	6	4
Male Adults	46	45	68	65
Female Adults	37	40	27	31
Total	100	100	100	100
Age				
Under 18	17	15	6	4
18-24	12	10	7	5
25-34	28	26	34	29
35-44	21	24	32	35
45-54	11	15	14	19
55+	11	10	7	8
Total	100	100	100	100
Income				
< $10,000	5	2	1	1
$10,000-$19,999	26	16	11	6
$20,000-$29,999	24	21	17	11
$30,000-$39,999	17	18	17	15
$40,000-$49,999	8	12	9	10
$50,000-$74,999	10	16	17	19
$75,000-$99,999	4	6	8	10
$100,000 +	6	9	20	28
Total	100	100	100	100

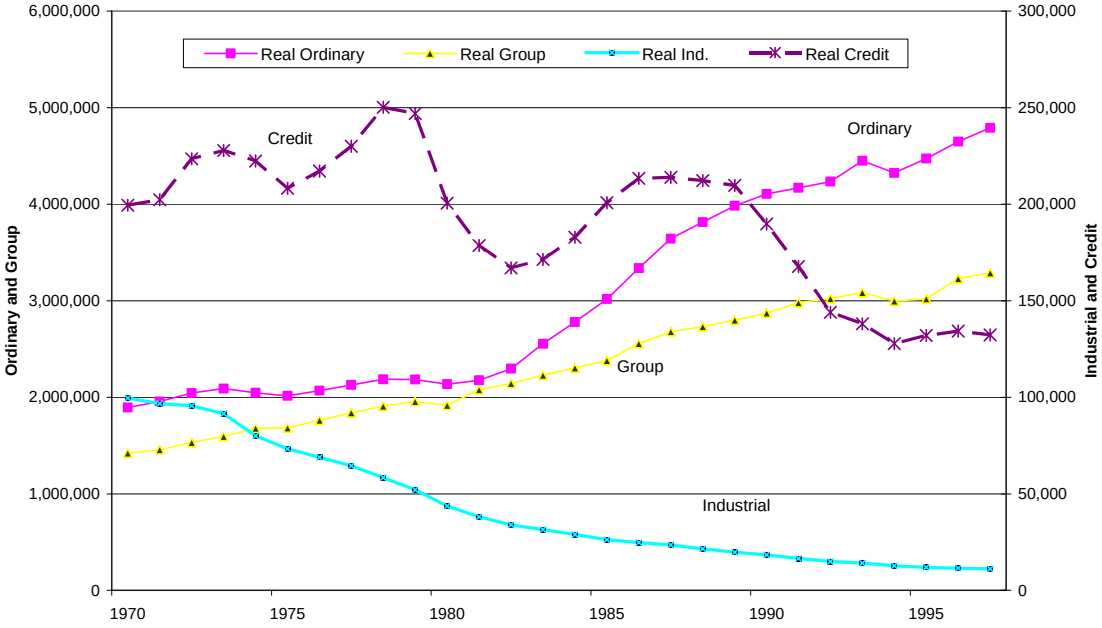
Source: ACLI (2001)

Table III.4
Life Insurance In Force and Mix of Insurance In Force

Amount in Force (in 1984 dollars, $000s)					
Year	**Individual**	**Group**	**Industrial**	**Credit**	**Total**
1970	1,893,634	1,421,023	99,598	199,464	3,613,719
1980	2,136,498	1,916,693	43,682	200,504	4,297,376
1990	4,106,337	2,871,849	18,417	189,777	7,186,379
1997	4,790,617	3,287,715	11,209	132,246	8,221,787
2005	5,104,915	4,230,937	NA	84,795	9,420,647
Percent of Business					
Year	**Individual**	**Group**	**Industrial**	**Credit**	**Total**
1970	52.4%	39.3%	2.8%	5.5%	100.0%
1980	49.7%	44.6%	1.0%	4.7%	100.0%
1990	57.1%	40.0%	0.3%	2.6%	100.0%
1997	58.3%	40.0%	0.1%	1.6%	100.0%
2005	54.2%	44.9%	NA	0.9%	100.0%

Source: ACLI, Life Insurance Factbook, 2006

Figure III.2
Life Insurance in Force over Time (in 1984 dollars)
(figures in $000s)



Source: ACLI

Table III.5
Income Elasticity, 1970-1997

Simple National Income Elasticities for Lines of Insurance	
Real Ord. Life in Force	0.495
Real Industrial In Force	-1.141
Real Group In Force	0.413
Real Credit In Force	-0.222
Real Total In Force	0.422

Source: NAIC Data and Authors' Calculations

Regression estimated was:

Log(Yit)=a+b*log(GDPt)+eit

Log(Yit) is the log of real premiums for a given line.

Log(GDPt)=log of real gdp.

Figure III.3
Percent and Cumulative Percent of Assets (in 1997) by Year of Start-up

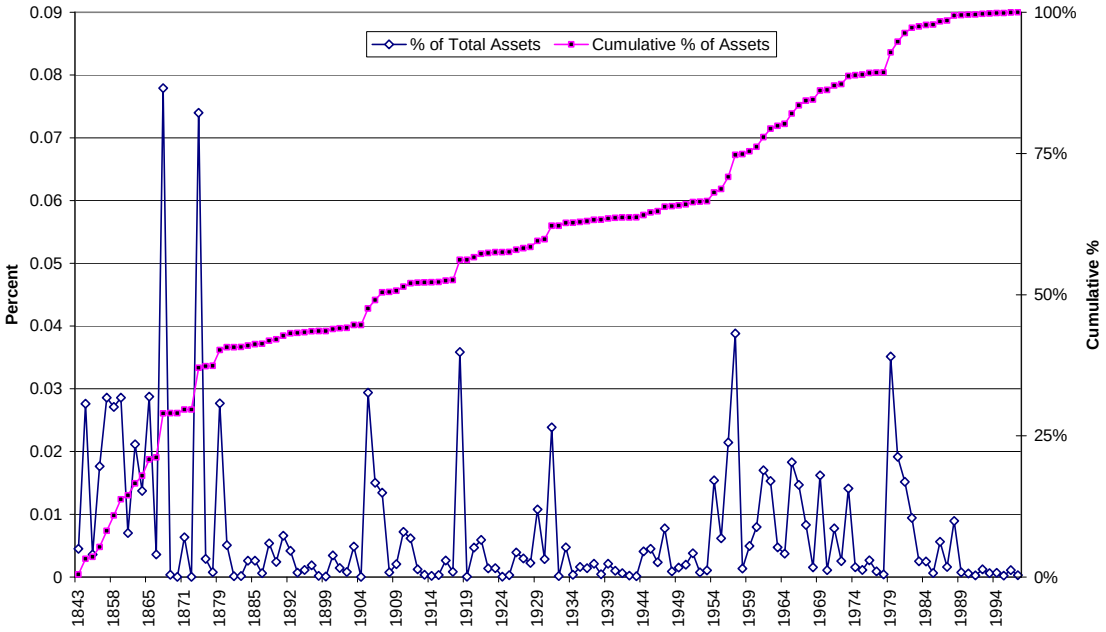


Table III.6
Product Shares by Distribution Channel

Distribution Channel	Universal Life	Variable Life	Term Life	Whole Life
Agency-Building	22.0%	23.0%	16.0%	39.0%
Brokerage	65.0%	18.0%	23.0%	3.0%
PPGA	61.0%	17.0%	16.0%	6.0%
MLEA	27.0%	8.0%	47.0%	18.0%
Worksite	27.0%	0.0%	9.0%	64.0%
Direct	4.0%	1.0%	27.0%	68.0%
Home Service	4.0%	0.0%	21.0%	75.0%

Source: LIMRA, 2006

Table III.7
Life Distribution Systems and Premiums Written, 1997

Distribution System	No. of Insurers	Total Life	Industrial Life	Ordinary Life	Individual Annuities	Credit Life	Group Life
None Listed	6	0.54%	0.00%	0.89%	0.01%	0.15%	0.66%
Agency	588	67.17%	93.76%	82.09%	51.15%	52.88%	78.43%
Broker	186	15.23%	1.19%	5.35%	22.43%	2.55%	8.71%
Direct	111	7.68%	0.77%	5.11%	15.06%	25.71%	8.66%
Inactive	86	0.46%	0.01%	0.74%	0.25%	0.04%	0.16%
Mass Mkt	22	0.68%	0.00%	0.33%	0.44%	1.10%	0.65%
NA	460	5.07%	4.15%	1.88%	5.81%	6.98%	2.31%
Other	112	3.17%	0.11%	3.61%	4.84%	10.59%	0.43%

Distribution System	No. of Insurers	Group Annuities	Group AH	Credit AH	Other AH	Total Assets
None Listed	6	0.13%	1.86%	0.12%	0.37%	0.41%
Agency	588	73.67%	53.91%	53.21%	72.35%	71.75%
Broker	186	17.31%	18.08%	1.44%	14.11%	13.43%
Direct	111	4.96%	3.83%	20.68%	3.00%	9.10%
Inactive	86	0.23%	0.45%	0.06%	0.62%	0.90%
Mass Mkt	22	0.93%	0.90%	1.28%	2.09%	0.61%
NA	460	0.73%	19.56%	5.56%	5.42%	2.51%
Other	112	2.04%	1.41%	17.65%	2.04%	1.30%

Source: NAIC Annual Tapes and A.M. Best Key Rating Guide, 1998

Table III.8
Levels of Assets ($B) by Category form Flow of Fund Accounts, 1971-1998

Panel A.

Year	Total Financial Assets	Mutual Fund Shares	Corp Equities	Life Insurance Reserves	Deposits	Pension Fund Reserves	US Govt Securities
1971	2,842	48	651	137	609	294	80
1980	6,585	46	894	221	1,517	971	165
%change	132%	-5%	37%	61%	149%	231%	107%

Panel B.

Year	Total Financial Assets	Mutual Fund Shares	Corp Equities	Life Insurance Reserves	Deposits	Pension Fund Reserves	US Govt Securities
1981	7,001	47	801	230	1,709	1,065	154
1990	14,983	468	1,778	392	3,265	3,497	529
%change	114%	904%	122%	70%	91%	228%	244%

Panel C.

Year	Total Financial Assets	Mutual Fund Shares	Corp Equities	Life Insurance Reserves	Deposits	Pension Fund Reserves	US Govt Securities
1991	16,586	587	2,554	419	3,267	4,010	515
1998	30,247	2,498	6,300	718	4,155	8,724	659
%change	82%	326%	147%	72%	27%	118%	28%

Source: Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the U.S.*

Table III.9
Comparison of the U.S. Life Insurance Industry 1945 and 2005.

Year	Life Insurance in Force ($B)	Life Insurance in Force ($2006B)	Total Employment	Total Income ($B)	Total Income ($2006B)	Number of Licensed Companies
1945	$22.7	$251.8	229,300	$7.7	$85.2	463
2005	$1,750.3	$1,750.3	2,225,400	$779.0	$779.0	1,103

Source: ACLI, Life Insurance Fact Book, 1945 and 2005.

Table III.10
A Comparison of New York's Insurance Market 1945 & 2005

	Number of Licensed Life Insurers				Life Insurance in Force ($B)		Total Assets ($B)		Domestic Market Share
Year	Total	Domestic	Foreign	Alien	Total	Domestic	NY Total	Domestic	
1945	62	20	38	4	22.6	NA	35.0	NA	46.6%
2005	143	86	57	0	11,138.7	4.582.2	2,080.6	772.8	53.4%

Source: New York Department of Insurance Annual Reports, 1946 & 2005.

Table III.11
Domestic Company Market Share 1945 and 2005

State	1945		2005	
	Market Share Ordinary Life	Number of Domestics	Market Share Ordinary Life	Number of Domestics
Alaska	0.0%	0	0.0%	0
Alabama	13.1%	8	20.0%	11
Arkansas	9.4%	1	4.3%	35
Arizona	0.0%	1	3.3%	60
California	11.9%	11	0.3%	30
Colorado	8.0%	5	3.8%	11
Connecticut	21.0%	5	8.6%	31
District of Columbia	5.7%	10	0.2%	4
Delaware	9.6%	5	2.5%	36
Florida	9.4%	11	1.0%	16
Georgia	2.6%	8	2.0%	15
Hawaii	0.0%	0	3.1%	4
Iowa	18.5%	12	25.7%	24
Idaho	0.0%	1	1.1%	2
Illinois	6.7%	24	14.0%	81
Indiana	13.4%	11	13.0%	39
Kansas	14.2%	9	1.1%	11
Kentucky	6.2%	8	1.1%	9
Louisiana	5.4%	8	9.4%	37
Massachusetts	30.6%	12	19.7%	19
Maryland	6.6%	12	4.5%	7
Maine	3.0%	1	0.4%	2
Michigan	0.6%	4	10.2%	27
Minnesota	7.2%	5	10.8%	15
Missouri	6.9%	13	8.7%	34
Mississippi	14.3%	8	5.9%	17
Montana	9.2%	2	0.0%	2
North Carolina	29.3%	10	3.7%	4

Table III.11 (continued)
Domestic Company Market Share 1945 and 2005

State	1945 Market Share Ordinary Life	1945 Number of Domestics	2005 Market Share Ordinary Life	2005 Number of Domestics
North Dakota	18.1%	2	2.0%	3
Nebraska	20.8%	13	12.7%	29
New Hampshire	1.1%	1	0.4%	3
New Jersey	30.6%	4	7.6%	7
New Mexico	0.0%	1	0.0%	1
Nevada	0.0%	1	0.0%	1
New York	46.6%	20	53.4%	94
Ohio	11.2%	10	13.4%	44
Oklahoma	10.9%	11	3.7%	26
Oregon	7.1%	1	2.0%	2
Pennsylvania	13.6%	20	3.7%	51
Rhode Island	1.1%	1	1.2%	3
South Carolina	9.6%	14	5.8%	14
South Dakota	9.9%	4	0.4%	1
Tennessee	9.8%	10	12.8%	14
Texas	46.8%	55	11.3%	154
Utah	16.1%	3	5.9%	14
Virginia	12.4%	13	3.7%	12
Vermont	9.9%	1	6.0%	2
Washington	10.8%	11	3.5%	10
Wisconsin	28.3%	9	24.3%	31
West Virginia	2.1%	2	0.1%	1
Wyoming	0.0%	0	0.0%	0
Sum		412		1,100
Average	3825.1%	8.2	3938.3%	22.0
Median	9.6%	8	3.7%	14
Min	0.0%	0	0.0%	0
Max	194500.0%	55	200500.0%	154
Std. Dev.	267.101	56.150	275.348	150.615

Sources: NAIC Annual Statement Data (2005), The Sepctator, Life Insurance Year Book (1945), ACLI, Life Insurance Fact Book (1946, 2006)

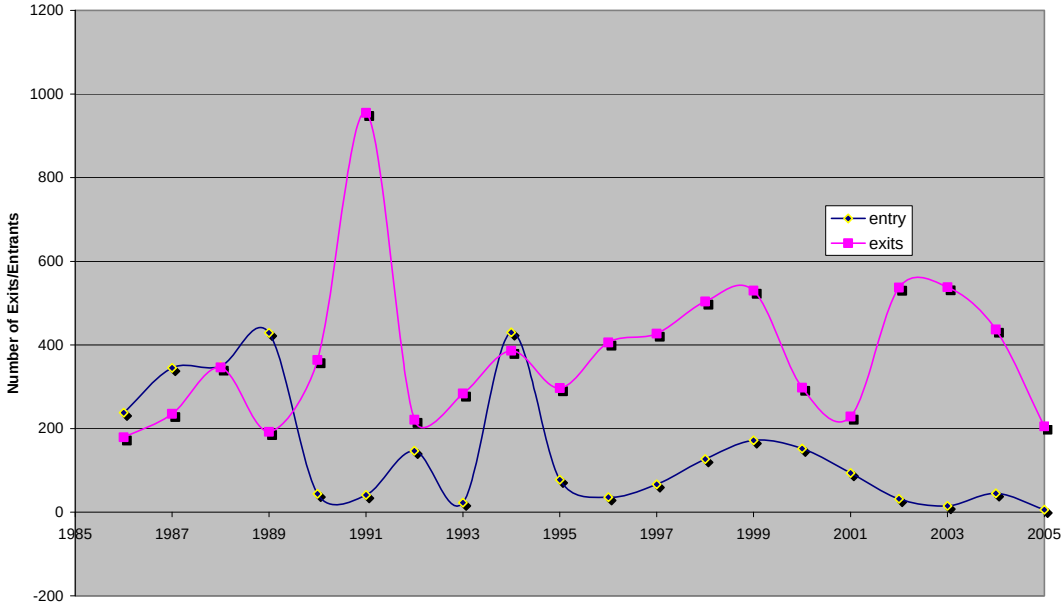
Table III.12
Distribution of Assets by Class, 1945 and 2005

Year	Government Securities	Corporate Securities	Mortgages	Policy Loans	Real Esate	Misc.*
1945	46%	25%	15%	4%	2%	8%
2005	13%	70%	7%	2%	1%	7%

Source: ACLI Life Insurance Fact Book, 1945 and 2005.

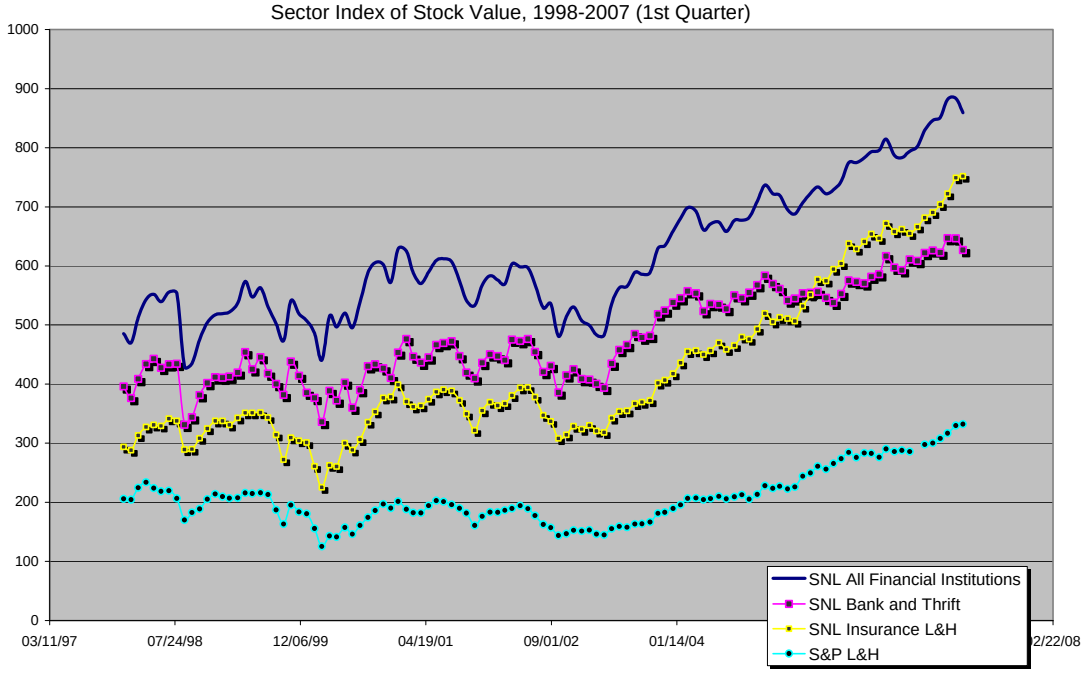
* Includes Cash, other invested, and other non-invested assets.

Figure IV.1
Total Number of State Entry and Exits, 1985-2005



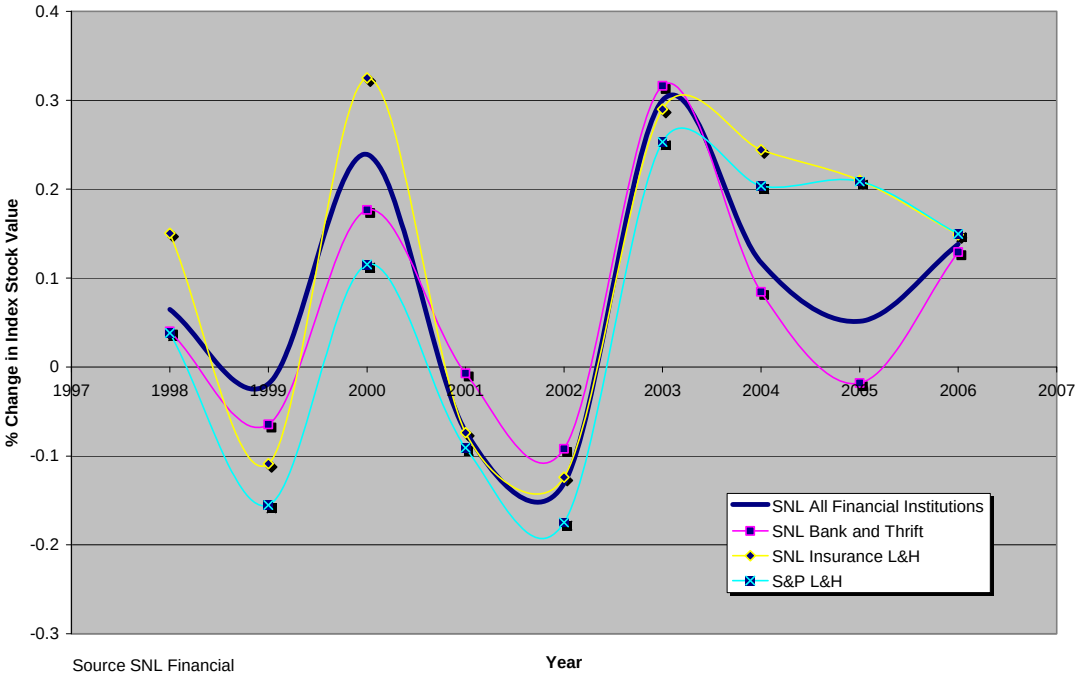
Source: NAIC Annual Statements, State Page, 1985-2005.
An Entrant is defined as a state level firm entry with at least $100,000 (real 1985 $) in premiums or considerations. An Exit is a firm with $100,000 (real 1985$) in the previous year and less than $100,000 in premiums in teh current year.

Figure IV.2
Sector Index of Stock Value, 1998-2007 (1st Quarter)



Source: SNL Financial

Figure IV.3
Percentage Change in Stock Price Index Value 1998-2006



Source SNL Financial

Table IV.1
Ordinary Life Concentration Statistics By State, 2005 (Group Basis)

State	Number of Groups and Nonaffiliated Single Companies	4 Firm/Group Concentration Ratio	8 Firm/Group Concentration Ratio	16 Firm/Group Concentration Ratio	HHI
Alaska	192	0.617	0.726	0.858	1203
Alabama	237	0.305	0.502	0.690	414
Arkansas	259	0.205	0.361	0.546	256
Arizona	235	0.195	0.358	0.591	273
California	228	0.241	0.415	0.647	329
Colorado	229	0.241	0.396	0.588	313
Connecticut	191	0.324	0.475	0.689	470
District of Columbia	195	0.341	0.507	0.697	483
Delaware	197	0.524	0.672	0.830	1358
Florida	246	0.232	0.393	0.625	308
Georgia	240	0.214	0.365	0.596	291
Hawaii	196	0.303	0.458	0.675	421
Iowa	217	0.315	0.464	0.652	406
Idaho	205	0.287	0.440	0.619	412
Illinois	235	0.261	0.414	0.638	357
Indiana	239	0.266	0.405	0.598	328
Kansas	229	0.236	0.364	0.566	280
Kentucky	228	0.284	0.430	0.610	356
Louisiana	262	0.268	0.421	0.615	331
Massachusetts	201	0.323	0.511	0.701	433
Maryland	226	0.246	0.401	0.620	324
Maine	184	0.321	0.451	0.636	391
Michigan	225	0.215	0.361	0.573	285
Minnesota	211	0.228	0.369	0.586	317
Missouri	244	0.242	0.378	0.577	296
Mississippi	237	0.221	0.381	0.609	288
Montana	200	0.313	0.461	0.637	411
North Carolina	229	0.202	0.343	0.573	268
North Dakota	193	0.264	0.414	0.631	352
Nebraska	220	0.212	0.347	0.541	265
New Hampshire	193	0.317	0.485	0.681	408
New Jersey	206	0.340	0.529	0.725	469
New Mexico	220	0.263	0.404	0.627	328
Nevada	218	0.235	0.379	0.599	302
New York	205	0.333	0.559	0.753	505
Ohio	240	0.214	0.383	0.591	286
Oklahoma	255	0.205	0.362	0.561	257
Oregon	217	0.274	0.420	0.604	333
Pennsylvania	229	0.259	0.419	0.639	343
Rhode Island	181	0.282	0.473	0.690	391
South Carolina	233	0.190	0.344	0.577	263
South Dakota	198	0.311	0.463	0.672	414
Tennessee	242	0.229	0.385	0.592	290
Texas	284	0.200	0.351	0.567	261
Utah	214	0.234	0.393	0.623	316
Virginia	226	0.234	0.398	0.619	309
Vermont	185	0.299	0.487	0.648	387
Washington	219	0.252	0.388	0.594	321
Wisconsin	218	0.315	0.441	0.616	529
West Virginia	210	0.271	0.449	0.640	352
Wyoming	200	0.281	0.445	0.659	365
United States	409	0.296	0.455	0.644	410
Average		0.267	0.424	0.629	369
Std dev		0.057	0.064	0.055	159
Min		0.190	0.343	0.541	256
Max		0.524	0.672	0.830	1,358

Note: Summary Statistics do not include US total figures. Number of entities in state include those with postive premiums or annuity consideration.

Table IV.2
Ordinary Annuity Concentration Statistics By State, 2005 (Group Basis)

State	Number of Groups and Nonaffiliated Single Companies	4 Firm/Group Concentration Ratio	8 Firm/Group Concentration Ratio	16 Firm/Group Concentration Ratio	HHI
Alaska	95	0.5022	0.6748	0.8469	856
Alabama	134	0.4617	0.6961	0.8434	738
Arkansas	147	0.3686	0.6038	0.8067	557
Arizona	157	0.3500	0.5286	0.7769	539
California	165	0.3960	0.5947	0.7996	569
Colorado	153	0.3582	0.5554	0.7554	532
Connecticut	117	0.4298	0.6570	0.8441	676
District of Columbia	101	0.5722	0.7457	0.9027	1294
Delaware	103	0.6190	0.7827	0.9070	1339
Florida	172	0.3609	0.5585	0.7957	536
Georgia	155	0.4322	0.5873	0.7960	624
Hawaii	104	0.5354	0.6977	0.8331	1062
Iowa	137	0.3044	0.5178	0.7572	449
Idaho	116	0.3365	0.5448	0.7455	506
Illinois	169	0.3555	0.5376	0.7515	500
Indiana	156	0.3197	0.5247	0.7250	446
Kansas	150	0.3102	0.5390	0.7759	472
Kentucky	137	0.3410	0.5870	0.8013	527
Louisiana	150	0.3521	0.5602	0.7862	547
Massachusetts	125	0.3259	0.5579	0.8060	504
Maryland	129	0.3475	0.5535	0.8026	520
Maine	100	0.3840	0.5886	0.7883	560
Michigan	152	0.3193	0.5360	0.7653	471
Minnesota	140	0.4470	0.6576	0.8378	694
Missouri	158	0.3385	0.5335	0.7498	489
Mississippi	135	0.4728	0.6477	0.8083	760
Montana	111	0.5099	0.6775	0.8378	1051
North Carolina	153	0.3483	0.5289	0.7557	480
North Dakota	108	0.3949	0.5722	0.7860	571
Nebraska	133	0.4222	0.6002	0.7910	672
New Hampshire	105	0.2826	0.4925	0.7520	440
New Jersey	122	0.4287	0.6646	0.8778	707
New Mexico	132	0.4156	0.6025	0.8118	676
Nevada	128	0.3383	0.5473	0.7694	491
New York	132	0.4437	0.6465	0.8700	706
Ohio	157	0.3428	0.5659	0.7705	501
Oklahoma	157	0.3189	0.5151	0.7356	465
Oregon	127	0.3646	0.5662	0.7522	504
Pennsylvania	149	0.3323	0.5565	0.7715	489
Rhode Island	97	0.3993	0.5961	0.7981	578
South Carolina	147	0.3432	0.5325	0.7639	490
South Dakota	114	0.3626	0.5643	0.8131	541
Tennessee	147	0.3704	0.5926	0.7871	545
Texas	183	0.3870	0.5405	0.7409	587
Utah	119	0.3378	0.5461	0.7993	500
Virginia	150	0.3610	0.5864	0.8020	544
Vermont	92	0.3608	0.5851	0.8379	570
Washington	138	0.3114	0.5136	0.7780	476
Wisconsin	139	0.3339	0.5229	0.7322	479
West Virginia	123	0.3218	0.5186	0.7479	460
Wyoming	110	0.3446	0.5426	0.7773	503
United States	268	0.3501	0.5355	0.7623	522
Average		0.380	0.581	0.792	599
Std dev		0.069	0.063	0.042	196
Min		0.283	0.493	0.725	440
Max		0.619	0.783	0.907	1,339

Note: Summary Statistics do not include US total figures. Number of entities in state include those with postive premiums or annuity consideration.

Table IV.3					
	Group Life Concentration Statistics By State, 2005 (Group Basis)				
State	Number of Groups and Nonaffiliated Single Companies	4 Firm/Group Concentration Ratio	8 Firm/Group Concentration Ratio	16 Firm/Group Concentration Ratio	HHI
Alaska	89	0.488	0.699	0.891	823
Alabama	137	0.725	0.795	0.887	2708
Arkansas	135	0.549	0.682	0.823	874
Arizona	143	0.464	0.640	0.819	694
California	139	0.503	0.632	0.806	860
Colorado	125	0.428	0.621	0.798	645
Connecticut	101	0.656	0.800	0.908	1435
District of Columbia	91	0.554	0.745	0.902	1236
Delaware	107	0.923	0.955	0.985	6333
Florida	137	0.446	0.614	0.805	776
Georgia	142	0.407	0.605	0.794	632
Hawaii	94	0.413	0.638	0.866	694
Iowa	123	0.410	0.609	0.803	609
Idaho	103	0.624	0.779	0.913	1198
Illinois	154	0.447	0.596	0.776	892
Indiana	149	0.452	0.626	0.797	744
Kansas	129	0.385	0.610	0.812	572
Kentucky	123	0.412	0.573	0.802	684
Louisiana	128	0.486	0.640	0.816	895
Massachusetts	115	0.400	0.581	0.791	630
Maryland	121	0.496	0.688	0.860	813
Maine	97	0.543	0.735	0.901	1034
Michigan	135	0.560	0.710	0.868	1421
Minnesota	113	0.717	0.857	0.935	2844
Missouri	146	0.413	0.595	0.779	648
Mississippi	130	0.404	0.606	0.780	578
Montana	99	0.415	0.635	0.862	650
North Carolina	127	0.354	0.563	0.778	525
North Dakota	94	0.500	0.733	0.883	854
Nebraska	119	0.420	0.632	0.805	685
New Hampshire	96	0.470	0.626	0.792	892
New Jersey	121	0.801	0.860	0.927	4690
New Mexico	117	0.577	0.728	0.872	1533
Nevada	118	0.472	0.641	0.804	759
New York	104	0.571	0.729	0.883	1510
Ohio	151	0.380	0.573	0.773	636
Oklahoma	127	0.427	0.580	0.764	713
Oregon	111	0.583	0.785	0.913	1061
Pennsylvania	145	0.406	0.586	0.761	615
Rhode Island	97	0.569	0.689	0.837	1233
South Carolina	133	0.483	0.675	0.837	874
South Dakota	102	0.493	0.669	0.859	814
Tennessee	146	0.401	0.582	0.779	582
Texas	162	0.490	0.660	0.839	997
Utah	107	0.456	0.685	0.881	743
Virginia	138	0.499	0.667	0.823	846
Vermont	83	0.577	0.766	0.880	1066
Washington	112	0.703	0.860	0.943	2578
Wisconsin	132	0.421	0.576	0.769	635
West Virginia	117	0.506	0.660	0.840	930
Wyoming	99	0.408	0.584	0.784	649
United States	250	0.455	0.612	0.781	777
Average		0.504	0.673	0.838	1,150
Std dev		0.117	0.090	0.055	1,048
Min		0.354	0.563	0.761	525
Max		0.923	0.955	0.985	6,333
Note: Summary Statistics do not include US total figures. Number of entities in state include those with postive premiums or annuity consideration.					

Table IV.4

Group Annuity Concentration Statistics by State, 2005

State	Number of Groups and Nonaffiliated Single Companies	4 Firm/Group Concentration Ratio	8 Firm/Group Concentration Ratio	16 Firm/Group Concentration Ratio	HHI
Alaska	41	0.690	0.885	0.981	1623
Alabama	53	0.646	0.829	0.958	1234
Arkansas	52	0.698	0.875	0.964	1510
Arizona	63	0.610	0.755	0.939	1047
California	70	0.535	0.763	0.911	986
Colorado	57	0.671	0.888	0.981	1610
Connecticut	51	0.687	0.836	0.959	1615
District of Columbia	44	0.685	0.894	0.979	1737
Delaware	49	0.734	0.914	0.983	1633
Florida	63	0.605	0.786	0.930	1297
Georgia	58	0.647	0.807	0.949	1185
Hawaii	45	0.672	0.845	0.959	1381
Iowa	53	0.656	0.834	0.955	1290
Idaho	52	0.721	0.864	0.973	1903
Illinois	63	0.624	0.794	0.936	1178
Indiana	63	0.600	0.840	0.952	1108
Kansas	54	0.647	0.837	0.968	1453
Kentucky	55	0.634	0.809	0.956	1273
Louisiana	55	0.685	0.864	0.956	1297
Massachusetts	55	0.519	0.724	0.925	1004
Maryland	55	0.719	0.908	0.975	2080
Maine	42	0.731	0.881	0.977	1849
Michigan	62	0.585	0.762	0.938	1247
Minnesota	53	0.757	0.893	0.972	1794
Missouri	64	0.527	0.751	0.965	905
Mississippi	48	0.784	0.892	0.955	1867
Montana	43	0.751	0.866	0.971	1561
North Carolina	61	0.549	0.794	0.945	1037
North Dakota	37	0.741	0.890	0.982	2074
Nebraska	52	0.555	0.776	0.944	1126
New Hampshire	45	0.720	0.874	0.973	2480
New Jersey	61	0.604	0.807	0.942	1281
New Mexico	49	0.522	0.723	0.919	874
Nevada	52	0.610	0.813	0.957	1182
New York	54	0.724	0.893	0.971	1672
Ohio	66	0.553	0.765	0.935	958
Oklahoma	55	0.707	0.845	0.950	1500
Oregon	53	0.716	0.869	0.977	1919
Pennsylvania	67	0.498	0.719	0.923	919
Rhode Island	44	0.557	0.720	0.919	1261
South Carolina	50	0.801	0.905	0.977	1725
South Dakota	43	0.729	0.883	0.990	1880
Tennessee	62	0.674	0.852	0.953	1299
Texas	72	0.663	0.807	0.944	1408
Utah	46	0.454	0.693	0.906	801
Virginia	63	0.677	0.844	0.958	1584
Vermont	36	0.711	0.881	0.969	1385
Washington	54	0.660	0.874	0.948	1348
Wisconsin	57	0.638	0.826	0.962	1497
West Virginia	52	0.736	0.908	0.980	1446
Wyoming	41	0.669	0.877	0.973	1839
United States	100	0.552	0.720	0.891	971
Average		0.653	0.832	0.956	1435
Std dev		0.079	0.059	0.020	359.7
Min		0.454	0.693	0.891	801
Max		0.801	0.914	0.990	2480

Note: Summary Statistics do not include US total figures. Number of entities in state include those with postive premiums or annuity consideration.

Table IV.5
Number of States with HHI's by Each DOJ Category, 2005 (Group Basis)

Panel A. HHI Below 1000.	
Line of Business	N of States
Ordinary Life	49
Ord Annuity	47
Group Life	36
Group Annuity	6
Panel B. HHI Between 1000 and 1800.	
Line of Business	N of States
Ordinary Life	2
Ord Annuity	4
Group Life	10
Group Annuity	36
Panel C. HHI Above 1800.	
Line of Business	N of States
Ordinary Life	0
Ord Annuity	0
Group Life	5
Group Annuity	9

Table IV.6

US Concentration Statistics By Line of Business Measured at the Group and Non Affiliated Single Firm Level, 1985-2005

Four Firm Concentration Ratio

	Ord Life	Ord Annuity	Group Life	Group Annuity
1985	0.224	0.278	0.371	0.496
1990	0.338	0.472	0.499	0.586
1995	0.212	0.252	0.425	0.403
2000	0.227	0.372	0.360	0.516
2005	0.296	0.350	0.455	0.552

Eight Firm Concentration Ratio

	Ord Life	Ord Annuity	Group Life	Group Annuity
1985	0.329	0.388	0.517	0.634
1990	0.494	0.630	0.655	0.761
1995	0.379	0.401	0.557	0.596
2000	0.369	0.539	0.543	0.698
2005	0.455	0.536	0.612	0.720

Sixteen Firm Concentration Ratio

	Ord Life	Ord Annuity	Group Life	Group Annuity
1985	0.452	0.544	0.646	0.789
1990	0.653	0.793	0.782	0.913
1995	0.531	0.582	0.683	0.769
2000	0.563	0.701	0.727	0.875
2005	0.644	0.76228	0.781	0.891

Herfindahl Hirschman Index

	Ord Life	Ord Annuity	Group Life	Group Annuity
1985	207	319	461	896
1990	425	753	825	1065
1995	247	288	561	646
2000	266	489	525	1161
2005	410	522	777	971

Note: Statistics are for US Market as whole.

Table IV.7
Entrants, and Exits By Line, 2000 and 2005, US Market

Panel A. Ordinary Life Market	No.	$ Premiums	Market Share*
Entrants between 2000 and 2005			
New Companies	30	236,256,655	0.21%
Established Companies Doing business in 2000	724		
Exits from Line of Business Between 2000 and 2005 (and 2000 volume of Business)	118	4,775,525,917	5.27%
Panel B. Ordinary Annuity Market	No.	$ Premiums	Market Share*
Entrants between 2000 and 2005			
New Companies	12	288,594,468	0.20%
Established Companies Doing business in 2000	594		
Exits from Line of Business Between 2000 and 2005 (and 2000 volume of Business)	72	4,573,038,153	9.33%
Panel C. Group Life Market	No.	$ Premiums	Market Share*
Entrants between 2000 and 2005			
New Companies	8	$ 16,235,715	0.06%
Established Companies Doing business in 2000	505		
Exits from Line of Business Between 2000 and 2005 (and 2000 volume of Business)	62	310,509,552	1.37%
Panel D. Group Annuity Market	No.	$ Premiums	Market Share*
Entrants between 2000 and 2005			
New Companies	1	246,314	0.00%
Established Companies Doing business in 2000	594		
Exits from Line of Business Between 2000 and 2005 (and 2000 volume of Business)	15	1,767,496,119	12.41%
*Panel E. Total Insurance***	No.	$ Premiums	Market Share*
Entrants between 2000 and 2005			
New Companies	39	585,423,356	0.12%
Established Companies Doing business in 2000 (positive premiums or considerations)	960		
Exits from Line of Business Between 2000 and 2005 (and 2000 volume of Business)	151	22,208,059,547	5.27%

* For entrants numerator is premiums written by line by class of companies and denominator is total premiums written by line in 2005. For exits the denominator is the same except premiums are for 2000. The denominator of exits is total premiums written in 2000 by line.

**Total Insurance includes all products in the above table plus group and credit accident and health, and all other accident and health.

Source: NAIC Annual Statement Tapes

Table IV.8
Number and Value of M&A Deals, 200-2005

	2000	2001	2002	2003	2004	2005
Number of Deals	43	40	20	28	24	23
Value of Deals ($ Million)	12,394.20	58,554.07	2,731.51	14,128.25	3,455.50	21,823.13

Source: SNL Financial

Table V.1
Summary Statistics of ACLI Members

Members	N	Average	Sum
Total Premiums and Annuities	332	$ 1,280,497,143	$ 425,125,051,476
Total Admitted Assets	332	$ 11,541,659,127	$ 3,831,830,830,164
Sum of Licenses	332	39.8	$ 13,229
Non Members	N	Average	Sum
Total Premiums and Annuities	573	175,360,182	$ 100,481,384,114
Total Admitted Assets	573	985,669,927	$ 564,788,868,322
Sum of Licenses	573	16.2	$ 9,279
Percentage of US Market Held By Members			
Total Premiums and Annuities		80.88%	
Total Admitted Assets		87.15%	
Sum of Licenses		58.77%	

Members include ACLI members current as of May 21, 2007. Fraternals are not included.
Membership numbers may be undercounted as some holding companies were listed separately from operating companies and some operating company premiums and assets may not be included.
Number of licenses includes in the US States and the District of Columbia.

Table V.2
Summary Statistics of Nationally Significant and Regional Companies

Nationally Significant Companies	N		Average		Sum
Total Premiums and Annuities	306	$	1,567,300,468	$	479,593,943,184
Total Admitted Assets	306	$	13,192,906,374	$	4,037,029,400,000
Sum of Licenses	306		46.7	$	14,294

Regionally Signifincat Companies			Average		Sum
Total Premiums and Annuities	599	$	76,815,513	$	46,012,492,409
Total Admitted Assets	599	$	600,317,777	$	359,590,348,147
Sum of Licenses	599		13.7	$	8,214

Percentage of US Market Held By Nationally Significant Companies	
Total Premiums and Annuities	91.25%
Total Admitted Assets	91.82%
Sum of Licenses	63.51%

National Significant Companies are those with 17 or more licenses and $50 million or more in premiums and annuity considerations.