



National Association of
Insurance Commissioners

& The CENTER
for INSURANCE
POLICY
and RESEARCH

CIPR Study

State of the Life Insurance Industry: Implications of Industry Trends

by

Anne Obersteadt

and

Larry Bruning, Brenda Cude
Kris DeFrain, Brian Fachtel
Shanique Hall, Dimitris Karapiperis
Andrew Melnyk, Reggie Mazyck
Greg Niehaus, Eric Nordman
Bruce Ramage, Guenther Ruch
Karen Schutter, Daniel Schwarcz
Jeremy Wilkinson

August 2013

State of the Life Insurance Industry: Implications of Industry Trends

By

Anne Obersteadt

And

Larry Bruning

Brenda Cude

Kris DeFrain

Brian Fechtel

Shanique Hall

Dimitris Karapiperis

Andrew Melnyk

Reggie Mazyck

Greg Niehaus

Eric Nordman

Bruce Ramge

Guenther Ruch

Karen Schutter

Daniel Schwarcz

Jeremy Wilkinson

This CIPR Study presents research whose purpose is to inform and disseminate ideas to regulators, academics and financial service professionals.

The mission for the CIPR is to serve federal and state lawmakers, federal and state regulatory agencies, international regulatory agencies, and insurance consumers, by enhancing intergovernmental cooperation and awareness, improving consumer protection and promoting appropriate marketplace competition.

Disclaimer: This study represents the opinions of the author(s), and is the product of professional research. It is not meant to represent the position or opinions of the NAIC or its members, nor is it the official position of any staff members. Any errors are the fault of the author(s).

NOTE TO READERS

This is the final release of the study in its entirety as one document. This study is organized in six sections, each of which consist of distinct essays by contributing authors, both internal and external to the NAIC (NAIC/CIPR staff, state regulators, academics, and industry representatives), covering a broad range of issues having profound and transformative implications for the life insurance industry. The sections explore how the industry has evolved over time, the nature of regulatory responses, the changes in product offerings and technology, and the challenges of the economic environment.

The first section, the *Evolution of Life Insurance*, traces the history of life insurance from the 18th century to the present time. The second section, *Current and Emerging Product Trends in Retirement and Long-Term Care Markets*, discusses how insurers are meeting the increased need for retirement products. The third section, *The Impact of Technology on the Life Insurance Industry*, discusses the impact of emerging technologies on the life insurance industry. The fourth section, *Life Insurer Balance Sheets*, looks at financial performance of the life insurance industry over the last decade and provides an in-depth look at the 2011 numbers to give a snapshot of the industry's sound financial position today. The fifth section, *Implications of Economic and Market Changes on Life Insurers*, highlights the important role life insurers play in the economy and covers the impact of the recent global financial crisis on the industry with a special focus on the low interest rate environment. The sixth section, *Meeting the Risks of the New Environment*, explores risk management in the context of the changing and complex environment.

Authors:

Larry Bruning, International Life Actuary, Financial Regulatory Affairs—International, NAIC

Brenda J. Cude, Professor of Housing and Consumer Economics, University of Georgia

Kris DeFrain, Director, Research and Actuarial Services, NAIC

Brian Fechtel, CFA, Agent and Founder, Breadwinners' Insurance

Shanique Hall, Manager, CIPR, NAIC

Dimitris Karapiperis, Researcher, CIPR, NAIC

Andrew Melnyk, Vice President, American Council of Life Insurers

Reggie Mazyck, Life Actuary, Research and Actuarial Services, NAIC

Greg Niehaus, Professor of Finance and Insurance, University of South Carolina

Eric Nordman, Director, Regulatory Services and CIPR, NAIC

Anne Obersteadt, Senior Researcher, CIPR, NAIC

Bruce Ramge, Director, Nebraska Department of Insurance

Guenther Ruch, Principal, GHR Consulting, LLC.

Karen Schutter, Executive Director, Interstate Insurance Product Regulation Commission

Daniel Schwarcz, Associate Professor, University of Minnesota Law School

Jeremy Wilkinson, Senior Manager, Communications, NAIC

Acknowledgements: The authors are grateful to those that reviewed and contributed to the study and helped improve it with their insightful comments. Special thanks to former NAIC CEO Terri Vaughan, from whom the concept of this study originated. Additional thanks goes to other NAIC staff, particularly NAIC COO and CLO Andy Beal; Jennifer Cook, Jolie Mathews, and Ethan Sonnichsen, Government Relations Office; Dan Daveline, Dave Fleming, Bruce Jensen, Jane Koeningsman, Robin Marcotte, and Todd Sells, NAIC Financial Regulatory Services Department; Randy Helder and Craig Leonard, NAIC Market Regulation Department; Dave Keleher, NAIC Research and Actuarial Services Department; Ed Toy, NAIC Capital Markets Bureau; and Pamela Simpson, NAIC Regulatory Services for her editorial help. The authors also thank NAIC Members Jim Mumford (IA) and Steve Caughill (WI), as well as James W. Schacht (The Schacht Group) for their invaluable comments on the draft released at the CIPR Life Insurance Symposium October 25, 2012.

Contents

Executive Summary..... 1

Historical Evolution of Life Insurance 5

 Life Insurance Industry in its Infancy 6

 Economic Turbulence of the 19th Century 6

 State Regulation is Born..... 7

 Life Insurers Dominate the Financial Markets 8

 The Armstrong Investigations Restrict Insurers’ Role as Financial Institutions 8

 Growth and Confidence Restored Through Regulation and Legislation..... 9

 Life Insurance Sales Soar with the Roaring 1920s..... 10

 The Great Depression Pressures Life Insurers 10

 Commercial Banks Repeat Life Insurers’ Mistakes 11

 Federal Regulatory Investigations..... 12

 Federal Regulations Reform the Economy..... 12

 Banking Reforms 13

 Insurance Reforms 14

 Consumer Demand Shifts to Long-Term Security in the Golden Age 14

 Consumer Protections..... 16

 Insurers Innovate into Investment-Oriented Products to Keep Pace with High Interest Rates 16

 Birth of Universal Insurance and Variable Insurance..... 17

 Variable Annuities 18

 High Insurance Lapse Rates Lead to Stronger Insurance Regulations 21

 High Interest Rates Spark Deregulation of Financial Institutions 22

 The Financial Services Modernization Act 24

 Consolidation of the Life Insurance Industry 25

 Demutualization..... 26

 Insurance Regulators Respond to the Financial Services Modernization Act..... 28

 The Rise of Derivatives and the Commodity Futures Modernization Act (CFMA) of 2000 29

 Insurers Enter the Twenty-First Century..... 30

 Recession of 2001 31

 Insurers Return to Growth and Core Competencies..... 32

 Insurers Turn to Alternative Funding Mechanisms for Statutory Relief..... 32

 Suitability and Disclosure of Annuities..... 33

 Contingent Commission Practices Investigation..... 34

 Global Financial Crisis..... 35

Systemic Risk Intervention	36
Lessons Learned from the Financial Crisis	37
Dodd-Frank Wall Street Reform and Consumer Protection Act	38
Solvency Modernization Initiative	39
Current and Emerging Product Trends in Retirement and Long-Term Care Markets	41
Introduction	42
Longevity Risk and Insurance	44
The Growing Need for Retirement Products Provided by Life Insurers	45
Annuities in Pensions	55
Pension Risk Transfer	58
Contingent Deferred Annuities	61
Regulatory Implications of the Risks Inherent in Longevity Products and Transfer Mechanisms.....	62
The Growing Need for Long-Term Care Insurance	67
Insurance Regulatory Perspectives on Long-Term Care Insurance.....	76
The Impact of Technology on the Life Insurance Industry.....	86
Internet and Mobile Technology and the Life Insurance Industry.....	87
Barriers to Insurers’ Use of the Internet for Product Distribution.....	91
Implications of Emerging Technology on Insurance Regulation	94
Life Insurer Balance Sheets: Description and Issues of the Past Decade.....	99
Introduction	100
Framework, Terminology and Data	102
The Life and Health Insurance Industry in 2011	104
Capital-to-Asset Ratios Vary with Company Size and Line of Business	110
Medium Size Accident and Health Capital-to-Asset Ratios Trend Lower	113
NAIC RBC Ratios: 2001-2011	116
Changes in Capital During and After the Financial Crisis	118
Conclusions on Life Insurer Balance Sheets.....	121
Implications of Economic and Market Changes on Life Insurers.....	125
Insurers’ Place and Key Role in the Economy	126
Impact of Financial Crisis.....	127
Current Economic and Market Environment	132
The Challenges of the Low Interest Rate Environment	135
How Do Life Insurers Counter Low Interest Rates	139
The Risk of a Spike in Interest Rates	141
NAIC Low Interest Rate Study and Methodology	142

Meeting the Risks of the New Environment.....	147
Introduction	148
The Importance of Group Supervision	150
The Need for Stronger Corporate Governance.....	155
The Significance of Enterprise Risk Management.....	160
Ensuring Capital Adequacy in the New Environment	163
Implications of the Interstate Insurance Product Regulation Commission	172
Opportunities for Better Collaboration between State and Federal Regulators.....	173
Market Conduct–Better Analytical Tools.....	175
The Legal Entity Identifier (LEI) Improves Financial Transparency	181
Enhancing Transparency	182
Conclusion.....	195
References	199
Appendices.....	205

Executive Summary



Forward

Insurance regulation is a dynamic, ever-evolving exercise to achieve an appropriate balance between providing adequate consumer protection and allowing the free market to operate unconstrained. Since insurers and the products they offer change over time, it is imperative for the regulatory framework to keep pace with industry dynamics. This study explores areas where the life insurance industry has changed over time through different product offerings, globalization, evolving technology, and changes in the economic environment. Additionally, the study examines the regulatory responses to the growing complexity brought about by these changes. The study provides a framework to assist regulators in assessing which changes have been successful, which need improvement, and what needs to be addressed in the future.

Executive Summary

The study begins with the *Evolution of Life Insurance*, an examination of how the life insurance industry in the United States has evolved over time. The rise of the mutual insurer model is covered along with early efforts to regulate the industry, including the creation of the National Association of Insurance Commissioners (NAIC). In the late 19th century large insurers dominated the marketplace and controlled large amounts of money not backed by reserves. They used these funds to purchase controlling shares of banks and other businesses. These excesses led to the 1905 Armstrong investigations in New York. The Armstrong investigations caused the pendulum to swing toward heavy regulation, with life insurers prohibited from owning common stock, underwriting securities and paying excessive commissions to agents. Deferred dividend plans also went by the wayside. The pendulum moved back slightly in the early part of the 20th century, leading to a growth cycle for the life insurance industry. Group annuities were introduced in the 1920s along with other product innovations. A major competitor in the form of the federal government also found its way into life insurance markets with the offering of War Risk Insurance to members of the armed forces. Life insurance sales grew in the 1920s and as a result of the regulatory restrictions stemming from the Armstrong investigations, life insurers did not suffer to the extent banks did during the stock market crash of 1929.

Congress was interested in addressing the causes of the Great Depression. The result was the Banking Act of 1933 (commonly known as Glass-Steagall) that separated commercial banks and investment banks from each other and from insurance and investment firms. Insurance reform occurred in the early 1940s when a U.S. Supreme Court case (*U.S. v. Southeastern Underwriters*) overturned the long-held opinion (*Paul v. Virginia*) insurance was not a form of interstate commerce. Congress enacted the McCarran-Ferguson Act to allow states to continue to regulate and tax the business of insurance despite its new status as a form of interstate

commerce. The prosperity following World War II, along with the certainty of government programs such as Social Security, led to a shift in insurance product demand toward products offering more long-term investment opportunities. The 1980s saw the introduction of universal life insurance and variable life insurance products. Consolidation and demutualization were the buzzwords of the day and as a result of the Gramm-Leach-Bliley Act of 1999, banks, insurers and securities firms were once again allowed to affiliate and cross-sell products, and the concept of functional regulation was introduced. The 1990s through the early 21st century were characterized by strong sales and profitability. The Commodities Futures Modernization Act of 2000 was adopted. It deregulated over-the-counter-derivatives and allowed financial services firms to invest in a wide variety of derivatives, some of which turned out to be very risky. In particular, the introduction of the credit default swap proved to be hazardous to the financial markets generally. When combined with the bursting of the housing bubble, the result was the global financial crisis of 2007-2008.

The study looks at the impact of life insurance product trends in the *Current and Emerging Product Trends in Retirement and Long-Term Care Markets* section. There are two key factors driving life insurance product development—mortality risk and longevity risk. Traditional life insurance products like term and whole life were intended to address mortality risk—more specifically, the risk one dies prematurely. Their primary purpose was to provide a safety net for families when one of the primary breadwinners passed away. In recent years, the focus has shifted to address longevity risk as the baby boomers reach retirement age in a time when the defined benefit pension plan has become a relic of the past. As the general health of the population improves over time, people are living longer. The blessing of a longer life is accompanied by the need to generate sufficient income in retirement to be able to enjoy the extra years and pay for long-term care when health status declines. Life insurers are increasingly targeting product development to meet this need.

The *Impact of Technology on the Life Insurance Industry* section explores how technological advances and consumer preferences are shaping product design and sales. The Internet was initially used by insurers to promote their brand and provide some general communications. Increasingly, it is used to recruit insurance producers and actually conduct the business of insurance. Access to the Internet using mobile devices is rapidly changing the environment again. Insurers are beginning to explore how to use social media such as Facebook and Twitter. Monitoring insurer activity in this emerging area is becoming a challenge for insurance regulators. The individualization of the social media experience presents many compliance conundrums for insurers and regulators.

The *Life Insurer Balance Sheets* section looks at the financial performance of the life insurance industry over the last decade. As a decade with significant upheaval and economic turmoil, it is a credit to the conservative nature of the life insurance industry and the diligence of insurance regulators that the life insurance industry significantly outperformed the banking industry during the decade. The conservative regulatory framework was a major contributing factor to the success of the industry during the period. An in-depth look at the 2011 numbers is provided to give a snapshot of the industry's sound financial position today.

The *Implications of Economic and Market Changes on Life Insurers* section discusses how life insurers have responded to the current economic and market volatility. The role life insurers play with respect to the overall economy is discussed, as is the industry's role as institutional investors. The section also covers the impact of the recent global financial crisis on the industry and the impact of the low interest rate environment on life insurers.

The *Meeting the Risks of the New Environment* section addresses risk management in the new environment. It covers the importance of Enterprise Risk Management (ERM) and the role of the new Own Risk Solvency Assessment (ORSA) tool required of many insurers starting in 2015. The influence of the international community is discussed with respect to group supervision. The section also covers market conduct activities of regulators, with an emphasis on new market analysis tools being used to target regulatory resources. Regulators use a number of tools to ensure capital adequacy for life insurers. The chapter evaluates the evolution from a rules-based to a principle-based regulatory system. The appropriateness of both capital and reserves are covered. Reserving requirements are evaluated to determine whether the rules lead insurers to establish appropriate reserves for the products being sold. Suggestions for improvement are included along with a discussion of the role of regulators to improve transparency through consumer disclosures.

Historical Evolution of Life Insurance



Historical Evolution of Life Insurance

By NAIC Staff

Life Insurance Industry in its Infancy

The life insurance industry has gone through several periods of transformation, instigated by key historical events and changes in consumer needs. The Presbyterian Ministers' Fund, established in 1759, was the first life insurance entity in the United States.¹ Although its purpose was to provide life insurance to the widows and orphans of deceased ministers, negative perceptions surrounding assigning a monetary value to one's life during this time period stifled growth.²

Legal restrictions also presented a barrier to life insurance sales during this time. Many states barred women from entering contracts, including insurance policies, or legally inheriting an estate. As such, a wife would not be able to collect proceeds from her husband's policy. Furthermore, spousal or dependent relationships alone did not meet the monetary insurability interest requirements insurers of this time period required. In addition to limiting who could take out an insurance policy, insurers also placed stringent requirements on the activities of policyholders. These requirements usually limited travel to healthier regions of the country, required regular health and character checks and prohibited the consumption of alcohol.³

Economic Turbulence of the 19th Century

Complicating things further was a five-year depression brought on by the Panic of 1837. Land speculation (driven mostly by western territory sales) fueled by loose credit from state banks had created a real estate bubble and high inflation.⁴ In response, President Andrew Jackson issued the Specie Circular in 1836, limiting payment of land to gold and silver.⁵ The state banks had overextended their lending abilities by printing money beyond their reserves, resulting in bank and business failures, real estate losses, and record high unemployment levels.⁶ These and similar sequences of events would play out several times throughout history, including three more times in the latter part of the 19th century.

¹ Murphy, Sharon. "Life Insurance in the United States through World War I". EH.Net Encyclopedia.

² [1798-1899], Presbyterian Ministers' Fund records (Collection 3101), The Historical Society of Pennsylvania. From http://hsp.org/sites/default/files/legacy_files/migrated/findingaid3101presbyministers.pdf.

³ Murphy, Sharon. "Life Insurance in the United States through World War I". EH.Net Encyclopedia, edited by Robert Whaples. August 14, 2002. URL <http://eh.net/encyclopedia/article/murphy.life.insurance.us>.

⁴ McNamara, R. (n.d.). Financial panics of the 19th century. Retrieved from <http://history1800s.about.com/od/thegildedage/a/financialpanics.htm>

⁵ "Panic of 1837," Ohio History Central, July 1, 2005, <http://www.ohiohistorycentral.org/entry.php?rec=536>.

⁶ Ibid.

State Regulation is Born

Insurers, unable to raise sufficient capital to form as a stock company following the Panic of 1837, mutualized instead.⁷ A mutual company is owned by its policyholders as opposed to stockholders. Mutual insurers have less stringent capital requirements and higher reliance on premiums from policyholders (also owners) for cash flow. To increase premiums, mutual insurers launched a very successful marketing campaign promoting ownership benefits, essentially policyholders as owners of the company would share in the company's profits through dividends or reduced premiums.⁸

The ease of starting up a mutual insurance company, combined with the appeal of policyholder dividends, produced a plethora of new entrants into the marketplace. Eventually the market became saturated and insurers began using fraudulent activities to increase market share. New York responded to this fraudulent activity by instituting capital stock (1849) and depository (1851) regulatory requirements.⁹ New Hampshire appointed an insurance commissioner in 1850.¹⁰ Massachusetts implemented legal reserve principles, and formed a state insurance department to oversee these new laws (1858).¹¹ Soon other states were following suit, with most states implementing regulatory oversight of insurers by the early 1870s.¹²

In 1868, the Supreme Court decision in *Paul v. Virginia* securely placed insurance under the supervision of states. Soon after, in 1871, the National Insurance Convention (later known as the National Association of Insurance Commissioners (NAIC)) was formed to address the need to coordinate regulation of multistate insurers. Although the new state regulations slowed industry growth for the next decade, they also restored consumer confidence. Additionally, legislative changes during this time allowed women access to insurance and instituted consumer-friendly nonforfeiture laws.¹³ Stability returned the growth to the United States economy, which was growing more industrial and prosperous. The resulting rise in demand, coupled with the changes in legislation, insurer structure, and marketing practices, set the stage for future industry expansion.

⁷ Murphy, Sharon. "Life Insurance in the United States through World War I". EH.Net Encyclopedia, edited by Robert Whaples. August 14, 2002. URL <http://eh.net/encyclopedia/article/murphy.life.insurance.us>.

⁸ Ibid

⁹ Ibid

¹⁰ Ibid

¹¹ Insurance & the U.S. Economy. Best Insurance Education Company. Retrieved from <http://www.bested.com/studyguides/NMIL-IUS/NMIL-IUS.pdf>.

¹² Poterba, James M., The History of Annuities in the United States (April 1997). NBER Working Paper No. w6001.

¹³ Ibid

Life Insurers Dominate the Financial Markets

In the late 19th century, competition was fierce and dominated by the large insurers capable of offering higher policyholder dividends. Unable to compete with the large policyholder dividend levels of large insurers, EquiLife Assurance Society resurrected an old life insurance concept in 1868—the tontine.¹⁴ Under tontine policies, premiums were split between ordinary insurance that paid a death benefit and a limited group investment fund that deferred dividend payments for a term of usually 10-20 years. At the end of the term agreement, only the surviving participants received the deferred dividend proceeds as either a lump sum or an annuity.¹⁵

Tontines revolutionized the industry. Their popularity with the emerging middle-class, which was seeking investment options, helped to propel demand. Through tontine deposits, insurers began to amass large amounts of money not backed by reserves, which they used to purchase controlling shares in banks and other corporations. Insurers' close ties to banks also allowed them to participate in investment syndicates to buy bonds at cheaper prices. The largest life insurers served as intermediaries, underwrote securities, sat on the board of banks, and influenced politics.¹⁶ By the turn of the 20th century, life insurers had become the largest and most powerful financial institutions in America.¹⁷

The Armstrong Investigations Restrict Insurers' Role as Financial Institutions

The growth of power in the insurance industry eventually led to accusations of mismanagement, fraud, and corruption, the outcome of which was the 1905 Armstrong Investigations held in New York.¹⁸ These investigations revealed multiple abuses in the state, including twisting, rebating, exaggerated returns, exorbitant premiums, inability to pay claims due to lack of reserving, political coercion, and embezzlement.¹⁹ The Armstrong Investigation was also concerned insurers had grown to such proportions their failure would wreak havoc on

¹⁴ Axa Equitable History . (2012) *Axa-Equitable.com*. Retrieved from www.axa-equitable.com/axa/history.html

¹⁵ Baker, T., & Siegelman, P. (2010-2011). Tontines for the young invincibles. In T. Baker. SIEGELMAN (Ed.), *Regulation* (Vol. 32). CATO Institute. doi:www.cato.org/pubs/regulation/regv32n4/v32n4-4.pdf

¹⁶ Roe, M. (1993). *Foundations of Corporate Finance: The 1906 Pacification of the Insurance Industry* (3 ed., Vol. 93). Columbia Law Review Association Inc. doi:www.jstor.org/stable/1123112

¹⁷ Ibid.

¹⁸ Northwest mutual life insurance company- company profile, information, business description, history, and background information In *Reference for Business: Encyclopedia of Businesses*. Advameg, Inc. doi:www.referenceforbusiness.com/history2/69/Northwestern-Mutual-Life-Insurance-Company

¹⁹ Murphy, Sharon. "Life Insurance in the United States through World War I". EH.Net Encyclopedia, edited by Robert Whaples. August 14, 2002. URL <http://eh.net/encyclopedia/article/murphy.life.insurance.us>.

the New York mortgage market.²⁰ After the findings came to light, similar investigations were opened in many other states.

As a result of the Armstrong Investigations, insurers were prohibited from owning common stock, underwriting securities, and paying excessive agent commissions. The amount insurers could spend on new sales was limited and they were required to pay dividends annually, ending the sale of deferred dividend plans. Although some of these restrictions were relaxed later in the decade, it wouldn't be until the 1980s when financial reform would substantially open the door for insurers to reengage in many of these financial activities.²¹

Growth and Confidence Restored Through Regulation and Legislation

The Armstrong Investigation's impact on the life insurance industry was profound. Although sales plummeted for a time in response to the new regulations, investor confidence was once again restored, eventually leading insurers back into a growth cycle in the early 20th century. Since insurers were restricted from investment-type activities, they concentrated on expanding through multiple product offerings, which included such innovations as group insurance, disability and double indemnity clauses, and key personnel insurance.²² The first group annuity plans were issued by Metropolitan Life Insurance Company in the 1920s as they entered the corporate pension business. The most popular of these were fixed deferred group annuities, which secure a contractually set payout amount in exchange for periodic payments during the employee's active tenure.²³

It also was during this time the federal government entered the insurance business, initially by offering life insurance (termed War Risk Insurance) to World War I soldiers and their dependents. Shortly thereafter, insurers established retirement and disability benefits for federal employees.²⁴ The advent of government sponsored insurance served to slow the growth of private group insurance for a time.²⁵ It should be noted the life insurance industry's main adversity prior to the Great Depression was not World War I, but the Spanish influenza

²⁰ Northwest mutual life insurance company- company profile, information, business description, history, and background information In *Reference for Business: Encyclopedia of Businesses*. Advameg, Inc. doi:www.referenceforbusiness.com/history2/69/Northwestern-Mutual-Life-Insurance-Company

²¹ Roe, M. (1993). *Foundations of Corporate Finance: The 1906 Pacification of the Insurance Industry* (3 ed., Vol. 93). Columbia Law Review Association Inc. doi:www.jstor.org/stable/1123112

²² Northwest mutual life insurance company- company profile, information, business description, history, and background information In *Reference for Business: Encyclopedia of Businesses*. Advameg, Inc. doi:www.referenceforbusiness.com/history2/69/Northwestern-Mutual-Life-Insurance-Company

²³ Poterba, James M., The History of Annuities in the United States (April 1997). NBER Working Paper No. w6001. Available at SSRN: <http://ssrn.com/abstract=226412>

²⁴ *SIC 6311 Life Insurance* (2nd ed.). Reference for Business: Encyclopedia for Business.

²⁵ Poterba, James M., The History of Annuities in the United States (April 1997). NBER Working Paper No. w6001. Available at SSRN: <http://ssrn.com/abstract=226412>

pandemic of 1918, which resulted in about \$110 million in life insurance claims.²⁶ The Spanish influenza claimed 20-40 million lives, of which approximately 650 thousand were American.²⁷

Life Insurance Sales Soar with the Roaring 1920s

Shortly before the Great Depression, insurers had once again reached their peak, with new sales reaching a record \$20 billion.²⁸ It was the roaring 1920s and personal consumption, income, and production were all rapidly rising. Demographics were changing, reflecting our nation's growing urbanization, increasing life expectancy, and decreasing reliance on the extended family as a source of income and support. As service members returned to civilian life after World War I, they replaced their War Risk policies with whole life policies sold by insurers.²⁹ Banks were rolling out new financial products, such as mutual funds and compound-interest savings accounts.³⁰

In a scenario reminiscent of the time period leading up to the Panic of 1837, stock market and land speculation were rampant, aided by loose credit. In 1927, the McFadden Act allowed national banks to branch within their home state and buy and sell marketable debt obligations, further increasing competition between financial institutions (until its repeal in 1994).³¹ Then, in 1929, the stock market crashed, leaving insurers to face another cycle of adversity.

The Great Depression Pressures Life Insurers

State regulation (put in place after the Armstrong Investigations) still prohibited insurers from investing in the stock market. As such, the stock market crash did not have the same devastating impact on life insurers as it did other institutions. Only 20 out of 350 insurers (5.7 percent) went into receivership during the Great Depression. Of those that failed, virtually all of the policyholder claims were still honored from solvent reinsurers.³² This compares to more than 4,000 bank failures out of approximately 25,733 state and national banks (15.5 percent) at

²⁶ New York Life Insurance Company- company profile, information, business description, history, and background information In *Reference for Business: Encyclopedia of Businesses*. Advameg, Inc. doi: <http://www.referenceforbusiness.com/history2/64/New-York-Life-Insurance-Company.html>

²⁷ Billings, Molly. "The Influenza Pandemic of 1918". Stanford.edu. Retrieved from virus.stanford.edu/uda/

²⁸ Insurance & the U.S. Economy. Best Insurance Education Company. Retrieved from <http://www.bested.com/studyguides/NMIL-IUS/NMIL-IUS.pdf>

²⁹ Murphy, Sharon. "Life Insurance in the United States through World War I". EH.Net Encyclopedia, edited by Robert Whaples. August 14, 2002. URL <http://eh.net/encyclopedia/article/murphy.life.insurance.us>

³⁰ Social Security Online. (2012). Historical Background and Development of Social Security. Retrieved from <http://www.ssa.gov/history/briefhistory3.html>

³¹ Federal Deposit Insurance Corporation. (2006). FDIC Learning Bank. Retrieved from <http://www.fdic.gov/about/learn/learning/when/1920s.html>

³² Insurance & the U.S. Economy. Best Insurance Education Company. Retrieved from <http://www.bested.com/studyguides/NMIL-IUS/NMIL-IUS.pdf>

the height of the Great Depression in 1933. In stark contrast to insurers, bank failures resulted in losses to depositors of about \$1.3 billion from 1929 to 1933.³³

However, the life insurance industry did not escape unscathed. Life insurers were primarily invested in conservative long-term bonds, real estate, and mortgage loans. As the Great Depression wore on, mortgage defaults and low interest rates hurt both asset valuations and investment earnings. Low interest rates also hurt insurers' ability to support crediting rates on annuity policies priced before the economic fallout. Compounding this problem was insurers' use of overly optimistic mortality tables.³⁴

At the same time, policyholders could no longer afford their policies or they cashed them in for needed liquidity. The result was lapsed policies and high surrenders that drained cash flows. Higher mortality losses and rising disability claims further increased cash outflows.³⁵ Accounting for the changes in the economic environment, insurers shifted their investments toward government securities, commercial real estate mortgages and public utility bonds.³⁶ Despite the challenges of the time, it is important to note life insurers provided a substantial amount of liquidity at a time when such sources were very limited.³⁷

Commercial Banks Repeat Life Insurers' Mistakes

Although regulations stemming from the Armstrong Investigations in the early 20th century had restricted life insurers from underwriting securities and investing heavily in the equities market, no such restrictions were placed on commercial banks. As a result, history was free to repeat itself. Commercial banks lent money to speculators on thin margins (as insurers had before the Panic of 1837). They used their liquidity from demand deposits to invest in the rapidly expanding stock market and expand heavily into securities underwriting (just as insurers had done with tontine deposits).³⁸ When the speculative frenzy culminated with the stock market crash of 1929, commercial banks were unable to meet the cash demands of withdrawing depositors, resulting in numerous failures.

³³ Federal Deposit Insurance Corporation. (2006). FDIC Learning Bank. Retrieved from <http://www.fdic.gov/about/learn/learning/when/1920s.html>

³⁴ Poterba, James M., *The History of Annuities in the United States* (April 1997). NBER Working Paper No. w6001. Available at SSRN: <http://ssrn.com/abstract=226412>

³⁵ *Insurance & the U.S. Economy*. Best Insurance Education Company. Retrieved from <http://www.bested.com/studyguides/NMIL-IUS/NMIL-IUS.pdf>

³⁶ Metlife Profile: Supporting Country and Community. *MetLife.com*. Retrieved from <https://www.metlife.com/about/corporate-profile/metlife-history/supporting-country-and-community/index.html>

³⁷ New York Life Insurance Company- company profile, information, business description, history, and background information In *Reference for Business: Encyclopedia of Businesses*. Advameg, Inc. doi: <http://www.referenceforbusiness.com/history2/64/New-York-Life-Insurance-Company.html>

³⁸ What Was The Glass-Steagall Act? (2003). *Investopedia.com*. Retrieved from <http://www.investopedia.com/articles/03/071603.asp#axzz1yH8LT64u>

Federal Regulatory Investigations

In 1932, the Senate Banking Committee began a two-year investigation into the causes of the Great Depression. As part of this investigation, the relationship between investment and commercial banking activities was examined. The Pecora Investigations (named after Chief Counsel Ferdinand Pecora, who led the investigations) purported commercial banks had recklessly used deposit funds to support stock market and real estate speculation.³⁹ It also found evidence of fraud, accounting manipulation, and insider trading.

In 1938, amid growing anti-trust sentiments, the Temporary National Economic Committee was formed to look into the business practices of certain industries, including investment banking and life insurance. Although the focus was initially in regard to the identification of monopolies impacting economic recovery, the examinations frequently covered all aspects of industry operations. Many of the Committee's accusations of the life insurance industry paralleled those made under the Armstrong Investigations.⁴⁰ The Committee accused the insurance industry of insider trading in respect to collateral and mortgage loans, mismanagement or inappropriate use of funds, and misuse of holding company structures to consolidate. The Committee also expressed concern over policy and financial reporting transparency, size and concentration, and the comparative cost of insurance. At the time, the public expressed outrage on the alleged abuses by the insurance industry, resulting in passage of several new legislative acts.⁴¹

Federal Regulations Reform the Economy

Alphabet Agencies

In an effort to stem the tide of the Depression, President Franklin Roosevelt outlined his plans in the first New Deal in 1932-1933 and again upon reelection in the more comprehensive second New Deal 1935-1938, which aimed at economic and banking reform and unemployment assistance.⁴² More than 100 agencies (often referred to as the alphabet agencies) were created during this time.⁴³ Agencies such as the Agricultural Adjustment Administration, the Civilian Conservation Corps, the Farm Credit Administration, the Federal Emergency Relief

³⁹ Subcommittee on Senate Resolutions 84 and 239 (The Pecora Committee), Notable Senate Investigations, U.S. Senate Historical Office, Washington, D.C.

⁴⁰ Northwest mutual life insurance company- company profile, information, business description, history, and background information In *Reference for Business: Encyclopedia of Businesses*. Advameg, Inc. doi:www.referenceforbusiness.com/history2/69/Northwestern-Mutual-Life-Insurance-Company

⁴¹ United States Temporary National Economic Committee. U.S. Congress, Temporary National Economic Committee. (1939). *Investigation of concentration of economic power*. (investigationofconc15aunit). Washington D.C.: US Gov. Print Office.

⁴² Federal Deposit Insurance Corporation. (2006). FDIC Learning Bank. Retrieved from <http://www.fdic.gov/about/learn/learning/when/1930s.html>

⁴³ Alphabet Agencies. (2012). In *Wikipedia*. Retrieved from http://en.wikipedia.org/wiki/Alphabet_agencies

Administration, the National Recovery Administration, the Works Progress Administration, and the Public Works Administration helped put people back to work and stabilize the country's farming system, infrastructure, and general economy. Agencies such as the Federal Communications Commission, Tennessee Valley Authority, Federal Deposit Insurance Corporation, and the Securities and Exchange Commission (SEC) served to strengthen federal regulatory oversight.⁴⁴ The Social Security Administration served to expand the provision of social insurance by offering certain disability, medical, life, unemployment and retirement benefits to qualifying citizens countrywide.

Much of the legislation occurring during this time served to form the backbone of our current socio-economic system. Moreover, it is the legislation leading to banking and insurance reforms during this time period that would play a critical role in the development of the insurance industry over the next three quarters of a century.

Banking Reforms

The Securities Act of 1933 brought transparency to shareholders by requiring public companies to disclose information regarding the securities they sell. The Securities and Exchange Act of 1934 further increased transparency in the market by requiring publicly traded companies to file registration applications and annual financial filings with the SEC. The Federal Home Loan Bank Act of 1932 established Federal Home Loan Banks, and gave them authority to lend to Savings and Loan Banks to finance home mortgages.⁴⁵

The Banking Act of 1933 (also known as the Glass-Steagall Act) formed the Federal Deposit Insurance Corporation, giving it the authority to regulate state nonmember banks and provide deposit insurance to banks.⁴⁶ This Act also prohibits commercial and investment banks from engaging in each other's activities. Commercial banks were restricted to deposit and lending functions and could no longer sell, trade, or underwrite securities nor offer an interest rate on deposits (later repealed in the 1980s). Investment banks were restricted to securities activities and could not accept deposits. To prevent excessive interest rates, the Act (under a provision named Regulation Q) places interest rate ceilings on depository institutions.⁴⁷

The Banking Act was expanded upon in the Bank Holding Company Act of 1956, which left holding company acquisitions at the discretion of state laws and barred bank holding

⁴⁴ Federal Deposit Insurance Corporation. (2006). FDIC Learning Bank. Retrieved from <http://www.fdic.gov/about/learn/learning/when/1930s.html>

⁴⁵ Ibid

⁴⁶ Ibid

⁴⁷ Sherman, Matthew. "A Short History of Financial Deregulation in the United States." Center for Economic and Policy Research, July 2009. Retrieved from www.openthegovernment.org/sites/default/files/otg/dereg-timeline-2009-07.pdf

companies from non-banking activities, including insurance. Segregating banking, investing, and insurance institutions simplified regulatory oversight, alleviated systemic risk, and lowered the capital needs of commercial banks.⁴⁸ These reforms served to ensure against another great depression-type event for the better part of the century.

Insurance Reforms

As mentioned earlier, competition among insurers was fierce in the late 19th and early 20th centuries. Insurers started banding together to set rates and standardize policy forms and agent commissions as a way of preventing destructive competition. In 1944, the Supreme Court ruled in *United States v Southeast Underwriters Association* that insurance was interstate commerce and subject to federal regulation. It also declared the practice of rate setting violated the Sherman Act. Consequently, *Paul v Virginia* was overturned.⁴⁹

Only one year later, through the strong efforts of the NAIC, state insurance regulators, and the insurance industry, the McCarran-Ferguson Act restored state regulation despite its continued classification as interstate commerce.⁵⁰ The Act stipulated insurers were exempt from the Sherman Act's antitrust laws (excluding boycott, coercion, and intimidation), as long as state laws provided sufficient oversight. This led to a flurry of new NAIC model laws (many pertaining to rate regulation) being developed and then enacted by states. It should be noted the McCarran Ferguson Act still keeps insurers from being subject to certain antitrust laws and preserves the state regulation and taxation of insurance absent federal laws expressly stating otherwise.

Consumer Demand Shifts to Long-Term Security in the Golden Age

World War II brought an end to the depression as the nation's production to support the war restored employment and the economy. From the end of World War II in 1945 until the late 1960s, the life insurance industry enjoyed growth and stability. General economic prosperity and shifting demographics from the postwar baby boom helped to raise overall demand for life insurance products.⁵¹ Additionally, the advent of employer-provided group life insurance and government-sponsored insurance enabled consumers to look beyond term life products to

⁴⁸ Mitchell, Stacy. "Glass-Steagall Act and the Volcker Rule." *Glass-Steagall Act & the Volcker Rule*. Institute for Local Self Reliance, 26 Oct. 2010. Retrieved from www.ilsr.org/rule/glass-steagall-act-the-volcker-rule/

⁴⁹ Brock, R. D. (1990). Insurance Regulation in the United States: A Regulator's Perspective. *Journal Of Insurance Regulation*, 8(3), 277.

⁵⁰ Ibid.

⁵¹ Insurance & the U.S. Economy. Best Insurance Education Company. Retrieved from <http://www.bested.com/studyguides/NMIL-IUS/NMIL-IUS.pdf>

products providing long-term investment opportunities.⁵² With the banking failures of the Great Depression fresh in consumers' minds, they turned to the security of life insurers to meet their needs.

Although whole life dominated insurers' portfolios during this period, the lack of price competition and strong investment returns enticed insurers to expand into new products, such as family plan policies and credit life. Additionally, life insurers tripled their group insurance sales and expanded coverage to include sickness and accident.⁵³ The shift in demand toward products offering long-term savings options, coupled with the growth of employers offering defined benefit pensions, also led to a rise in insured pension plans and supporting products.

By 1950, employers were increasingly choosing to fund their pension plans through immediate participation guarantee (IPG) contracts or deposit-type contracts instead of annuities. IPGs allow insurers to credit employers their deposits' actual investment experience and withdraw the insureds' pension payments directly from the deposit, provided the guarantee remains fully funded. If the fund drops below the level needed to fund the guarantee, the IPG converts to a deferred annuity. IPGs allowed employers to maintain control of their retirement accounts and have a more direct link to the market, making them a popular choice. Deposit-type contracts allow insurers to hold employer pension contributions in an unallocated fund until the employee reaches retirement age, at which time funds are withdrawn from the deposit account in an amount sufficient to purchase the contractual fixed annuity amount. Employers found them attractive because they were not required to fully fund their deposit accounts, giving them more flexibility with the timing of their contributions. By 1959, coverage through deposit-type contracts had risen 21 percentage points to 31 percent, while coverage through group annuities had fallen 23 percentage points to 48 percent.⁵⁴

In 1952, the Teachers Insurance and Annuities Association–College Retirement Equity Fund (TIAA-CREF) issued the first variable annuities to fund their pension program. Unlike fixed deferred annuities, crediting rates on variable annuities reflect the performance of the underlying fund (primarily consisting of corporate common stock during this time frame). This variable link to the equity markets provided an important mitigation to the rising interest rates and an increase in longevity of plan participants. Insurers keep the underlying assets supporting

⁵² New York Life Insurance Company- company profile, information, business description, history, and background information In *Reference for Business: Encyclopedia of Businesses*. Advameg, Inc. Retrieved from <http://www.referenceforbusiness.com/history2/64/New-York-Life-Insurance-Company.html>

⁵³ Insurance & the U.S. Economy. Best Insurance Education Company. Retrieved from <http://www.bested.com/studyguides/NMIL-IUS/NMIL-IUS.pdf>

⁵⁴ Poterba, James M., *The History of Annuities in the United States* (April 1997). NBER Working Paper No. w6001. Retrieved from <http://www.annuity-insurers.org/Resources/History/History-sec4.aspx>

variable annuities isolated from their general assets in a separate account, since the insured, rather than the insurer, bears the risk for their performance. However, not all states permitted the use of separate accounts, slowing its growth for several decades.⁵⁵

As the breadth of products grew, the industry began to advance agent and underwriting training. Designations, like the Chartered Life Underwriter offered by the American College of Life Underwriters, began to surface.⁵⁶ Responding to the postwar housing boom, life insurers also shifted their assets out of wartime bonds and back into real estate and mortgages.⁵⁷

Consumer Protections

The increased civil awareness of the 1960s helped inspire a movement advocating consumer rights, protection and full disclosure. The movement lasted through the 1970s and affected all facets of society. Non-profits, such as the Consumer Federation of America (1968), and federal agencies such as the Occupational Safety and Health Administration (1970), and the Consumer Product Safety Commission (1972) were all an outcome of this movement.⁵⁸ But, most important for the insurance industry, the movement served to focus insurance regulators on consumer-protection activities.⁵⁹ The outcome was market conduct examinations, consumer brochures, shopping guides, and consumer representatives.

Insurers Innovate into Investment-Oriented Products to Keep Pace with High Interest Rates

The expansionary monetary policy following the Great Depression eventually led to high inflation and high short-term interest rates in the 1970s and early 1980s. Oil prices, farm commodities, and real estate (in the Northwest and California regions) boomed in the 1970s, aided by bank-financed speculation, loose credit standards, and favorable tax treatment on real estate. The continuation of high interest rates coupled with financial deregulation in the early 1980s pushed up returns on insurers' competing financial products such as Treasuries, money-market accounts and emerging mutual funds.

⁵⁵ Ibid.

⁵⁶ Insurance & the U.S. Economy. Best Insurance Education Company. Retrieved from <http://www.bested.com/studyguides/NMIL-IUS/NMIL-IUS.pdf>

⁵⁷ New York Life Insurance Company- company profile, information, business description, history, and background information In *Reference for Business: Encyclopedia of Businesses*. Advameg, Inc. Retrieved from www.referenceforbusiness.com/history2/64/New-York-Life-Insurance-Company.html

⁵⁸ The Consumer Movement. Encylopedia.com. Retrieved from www.encyclopedia.com/doc/1O119-ConsumerMovement.html

⁵⁹ Brock, R. D. (1990). Insurance Regulation in the United States: A Regulator's Perspective. *Journal Of Insurance Regulation*, 8(3), 277.

Long-term interest rates were substantially lower than short-term interest rates due to an inverted yield curve at the time. As such, insurers' investment portfolios of predominately long-term bonds were unable to support competing crediting rates. Consumers responded by withdrawing their cash out of their whole-life policies (through surrenders or policy loans) and moving their savings dollars into competing products offering higher returns (a process referred to as disintermediation). Although consumers still sought income protection through low-cost term policies, insurers' whole-life policies had fallen out of favor with long-term investors.

Birth of Universal Insurance and Variable Insurance

Prior to the 1980s, insurers sold primarily fixed-premium term and whole-life insurance to individual policyholders. With competitive pressures significantly reducing sales of whole-life products, insurers had little choice but to innovate in the 1980s to meet demand. They did so by redesigning whole-life into a hybrid product that included a traditional income protection component and a long-term investment component using market-based yields (and thus were interest rate-sensitive). The first of these new complex products, universal life insurance, revolutionized the industry. Its popularity was rooted in its flexibility.

Universal life is permanent insurance combining term insurance with a cash account earning tax-deferred interest. Under most contracts, premiums and/or death benefits can fluctuate (within the contract's bounds) with policyholder preference. The policy stays in effect as long as the cash value is sufficient to cover premiums. Additionally, the insurer usually guarantees the cash value will not fall below a minimum value. The cash value of the policy can also be used to pay the term insurance portion of the policy. Like whole-life, loans can be taken against the cash value of the policy. In general, products with interest-crediting rates set by insurers are retained on the general account. Thus, the reserves of most universal life policies are general account liabilities. An insurer's profit comes in part from the spread between its return on general account assets and its set crediting rate paid out to the policyholder. Mortality and expense margins also contribute to an insurer's bottom line.

Variable life insurance was developed in 1976 as a way to protect policyholders' benefits by hedging against the high inflation of the time.⁶⁰ Premiums, fixed by the insurer, are deposited into the separate account. Cash values reflect the performance of the underlying investments, which were designated by the policyholder and included such things as stocks, bonds, and mutual funds. Although death benefits fluctuate with the performance of the underlying assets, the insurer guarantees a minimum death benefit. This guarantee is backed by the surplus of the

⁶⁰Forbes, S. (2004). Management Challenges Involving the Separate Account Business. LOMA.

general account, should the separate account fail to generate sufficient funds.⁶¹ In general, products with variable returns are retained in separate accounts to limit an insurer's investment risk exposure.

Variable universal life insurance emerged onto the scene in the mid-1980s as a means of pairing the flexibility of traditional universal life insurance with the investment choices offered through variable life insurance. Like most other variable insurance products, variable universal insurance fund values are kept on the separate account, where the policyholder can choose from a variety of investments. Cash values fluctuate with the performance of the underlying assets and no minimum guarantee is provided. Like universal life insurance, premiums for variable universal life are flexible to the extent the policy remains sufficiently funded to remain in-force.⁶²

Variable Annuities

Until the 1970s, insurers sold mainly fixed deferred group and individual annuities as funding vehicles for pension purposes. These traditional group and individual fixed deferred annuities were spread-based general account products guaranteeing a certain level of income in retirement. As interest rates and the equity market rose in the late 1970s, policyholders found their income streams from fixed deferred annuities were eroding. Insurers began marketing variable deferred annuities, which offered investors the ability to hedge against rising inflation. In contrast to fixed annuities, variable annuities' income benefits fluctuate with the investment performance of the underlying separate account investments. Originally, variable annuities underlying investment funds primarily consisted of corporate common stock, but as time went on, insurers expanded their fund offerings to include bonds, indices, mutual funds, and other securities. This enabled policyholders to move funds between various subaccounts to achieve a certain investment strategy. The dividends, capital gains, and interest are reinvested to purchase additional annuity units.⁶³ Although the policyholder assumes most of the risk with separate account products, most insurers now offer various minimum guarantees.

Sales of both group and individual variable annuities rose in the 1980s. Demand for annuities in general increased significantly after the Tax Reform Act of 1986 reduced the tax advantages of qualified retirement plans. Individual variable annuities became particularly popular. By the mid-1980s, growth in individual annuities had resulted in insurers' overall product mix becoming almost evenly distributed between annuity considerations and traditional insurance

⁶¹ (2007). *Indexed Insurance Products*. Hudson, Florida: Myceisonline. Retrieved from <http://www.myceisonline.com>

⁶² Forbes, S. (2004). Management Challenges Involving the Separate Account Business. LOMA.

⁶³ Poterba, James M., The History of Annuities in the United States (April 1997). NBER Working Paper No. w6001. Available at SSRN: <http://ssrn.com/abstract=226412>

products.⁶⁴ By 1990, annuity considerations had outpaced life premiums altogether, with variable annuities accounting for most of this increase.⁶⁵

The tax advantages enjoyed by individual annuities helped propel their growth. Investors, who were unable to find the tax incentives they sought in qualified plans due to legislative changes, funded them in individual annuities. Capitalizing on the change in tax treatment, insurers began promoting individual deferred annuities as a tax-advantaged alternative to the newly established individual retirement accounts (IRAs) of the 1980s. The ability to select among a variety of underlying sub-account asset types also enables investors to access equity market returns, when interest rates are low, as they were in the 1990s.⁶⁶

Employers during this time were replacing defined benefit pension plans (which were heavily funded with group annuities) with defined contribution pension plans. As seen in Figure 1, households and non-profit organizations reported \$795 billion of assets in private defined benefit funds in 1985, as compared to only \$431 billion in private defined contribution funds and \$241 billion in IRAs. By 1995, private defined contribution funds and IRAs were closing the gap and by 2000, both had surpassed private defined contributions funds by more than \$500 billion dollars. Insurers, seeking to compete for sales of these new retirement products, started guaranteeing minimum crediting rates on their products through guaranteed interest contracts (GICs).

GICs can reside in the general or separate account. The insurer's guarantee means even if the GIC is held on the separate account, the insurer is responsible for paying according to the contract's guaranteed terms. Thus separate account assets with guarantees are essentially backed by the insurer's surplus funds. This leaves the insurer exposed to interest rate risk that must be managed by hedging and early-withdrawal penalties. It should be noted while funds on the general account are managed by the company, funds on the separate account are usually managed at least in part by investment managers (such as mutual fund managers). Insurers with heavy concentrations of separate account products are usually large in order to accommodate the necessary economies of scale and scope.⁶⁷

Insurers also used other guarantees, guaranteeing the contract holder would receive such things as a minimum death benefit, accumulation benefit, and income benefit or withdrawal

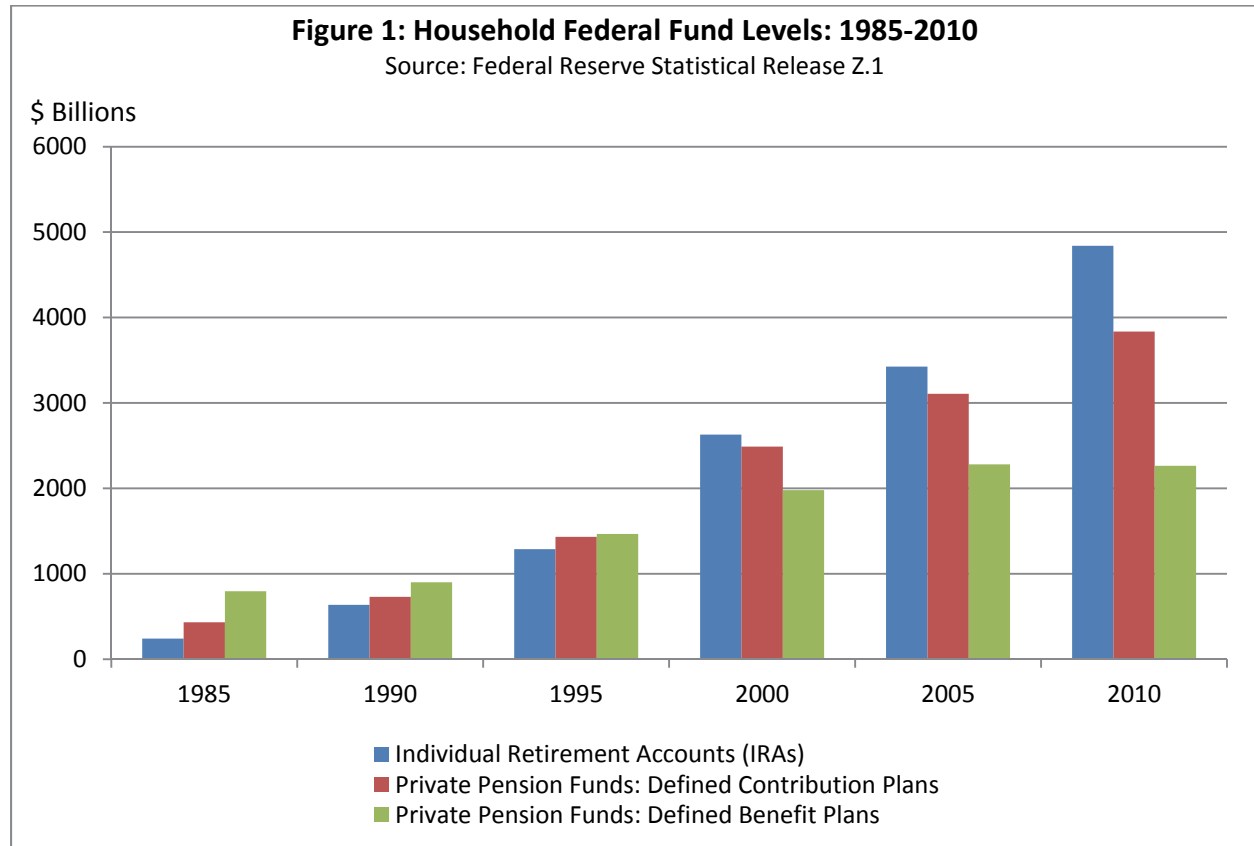
⁶⁴ Schott, F. (1993). The life insurance industry in mid-1993. *Business Economics*, 28(4), Retrieved from <http://www.freepatentsonline.com/article/Business-Economics/14604453.html>

⁶⁵ Shankar, N. (2005, June). A strategic analysis of the U.S. life insurance industry part ii: Products. *The Actuary Magazine*, DOI: www.soa.org/Library/Newsletters/The-Actuary-Magazine/2005/June/act-strategic.aspx

⁶⁶ Poterba, James M., *The History of Annuities in the United States* (April 1997). NBER Working Paper No. w6001. Available at SSRN: <http://ssrn.com/abstract=226412>

⁶⁷ Forbes, S. (2004). *Management Challenges Involving the Separate Account Business*. LOMA.

benefit amount. Variable annuities with guarantees provided an important differentiation to mutual funds, their biggest competitor.⁶⁸



Insurers implemented a technique called Asset/Liability Management to support their growing guarantees. As part of this technique, life insurers reduced the duration of their portfolios by about 10 years to take advantage of the double-digit higher short-term rates. As interest rate levels receded in the late 1980s, the assets supporting policies no longer generated sufficient earnings to cover premiums, and many policyholders let their policies lapse instead of paying higher premiums. Insurers responded by shifting into higher risk-return investments, such as real estate and low-investment-grade bonds (junk bonds), in order to support higher crediting rates.⁶⁹ This strategy proved very profitable until the market collapsed in the early 1990s, leaving insurers with large losses on their junk bond and commercial real estate investments. The drop in asset values constrained insurers' ability to meet the crediting rates they had promised on their guaranteed interest contracts. After three large life insurers had become

⁶⁸ Shankar, N. (2005, June). A strategic analysis of the U.S. life insurance industry part ii: Products. The Actuary Magazine, DOI: www.soa.org/Library/Newsletters/The-Actuary-Magazine/2005/June/act-strategic.aspx

⁶⁹ Cohen, M. (2009). The interest rate spike of the early 1980s: An epic dislocation in the life insurance business. *RiskViews*, Retrieved from <http://riskviews.wordpress.com/2009/09/19/the-interest-rate-spike-of-the-early-1980s-an-epic-dislocation-in-the-life-insurance-business/>

insolvent, an industry-wide panic among policyholders occurred, leading to mass policy surrenders.⁷⁰ The industry responded by shifting their guaranteed products to the separate account, in effect shifting much of the interest rate risk to the policyholder.

The rise of interest-sensitive insurance products designed to attract investors had several effects. First, the popularity of these products brought great growth to the life insurance industry, particularly the annuities market, altering its product mix accordingly. Second, it changed consumers' view of individual life and annuity products from instruments of predominately income protection to instruments predominately for investment purposes. This served to intensify these products' sensitivity to market and economic movement, as consumers continually sought out their best investment choice. Third, it increased the use of separate accounts, which altered many life insurers profit source toward fee income. Insurers' revenues from separate accounts primarily stem from fee income, as most of the investment gains are credited to policy and contract holders.⁷¹ Fourth, it shifted insurers' financial risk profile to encompass traditional mortality risk and investment risk, the latter of which required new diversification strategies.

High Insurance Lapse Rates Lead to Stronger Insurance Regulations

Many policyholders felt deceived when the promised crediting rates proved to be insufficient. The advent of the computer enabled agents to illustrate through charts and graphs how double-digit gains on the cash value would eventually eliminate the need to pay a premium (referred to as vanishing premiums).⁷² When these illustrations didn't materialize, policyholders sued.

These numerous litigations, combined with issues in the property and casualty industry, led to a federal investigation in 1990 (the Dingell Report, named after the investigating committee's chair, Rep. John D. Dingell, D-MI) that accused "state insurance regulators for lacking adequate resources, using unreliable financial information, failing to coordinate, and performing infrequent examinations."⁷³ Soon after the release of this report, three large life insurers failed, further raising the debate about the adequacy of state insurance regulation.

State insurance regulators responded by coordinating through the NAIC to adopt model laws to "establish more stringent capital standards (including risk-based capital standards), expand and standardize financial reporting, improve monitoring tools, and certify insurance departments

⁷⁰ Shankar, N. (2005). A strategic analysis of the U.S. life insurance industry part ii: Products. *The Actuary Magazine*, Retrieved from www.soa.org/Library/Newsletters/The-Actuary-Magazine/2005/June/act-strategic.aspx

⁷¹ Forbes, S. (2004). Management Challenges Involving the Separate Account Business. LOMA.

⁷² (2007). *Indexed Insurance Products*. Hudson, Florida: Myceisonline. Retrieved from <http://www.myceisonline.com>

⁷³ Klein, R. (1995). Insurance regulation in transition. *Journal of Insurance Regulation*, 62(3)

through accreditation standards.” Over the next decade, insurance regulators would also make improvements to agent licensing, improve review processes of rates and policy forms, and expand consumer protections against market abuses.⁷⁴

High Interest Rates Spark Deregulation of Financial Institutions

High inflation and high interest rates were placing competitive pressures on savings and loans and depository institutions too. Securities firms were providing formidable competition with new products such as mortgage-backed securities and mutual funds. By 1978, regulatory restrictions from the post-Depression era prevented depository and savings and loans institutions from keeping pace with interest rates. In reflecting on the current situation, many in Congress began to argue the post-Great Depression restrictions no longer applied in the new environment of rapid financial product innovation and interest rate volatility.

Congress responded by passing a series of legislations designed to reduce regulatory differences between institutions and increase competitiveness. The aim was to remove interest rate restrictions on depository accounts through the Depository Institutions Deregulation and Monetary Control Act (DIDMCA) in 1980. The DIDMCA also provided new lending and investment authorities allowing savings and loans to engage in certain activities previously only allowed to commercial banks. Two years later, Congress passed the Garn-St. Germain Depository Institutions Act allowing depository institutions to offer new deposit products (including money market deposit accounts designed to compete with money market mutual funds) and extended lending and investment authority to savings and loan institutions. These acts allowed for the expansion into new product areas, but they stopped short of allowing banks to enter into securities, mutual funds, or insurance activities.

Free of interest rate restrictions, savings and loans began to offer double-digit depository rates to attract deposits and fund lending growth. They supported these depository rates through speculative investment activity in oil and real estate. When interest rates and the economy receded in the early 1980s, the real estate bubble burst and the savings and loans institutions went under, causing a savings and loan crisis. Banks also struggled during this downturn, albeit to a much lesser degree.

The banking crisis dampened the growing momentum in Congress toward deregulation. Many congressmen felt the repeal of the Glass-Steagall restrictions would allow financial and insurance institutions to effectively compete in the new environment of complex products and interest rate volatility. However, in the climate of the financial crisis, proponents of more stringent regulations prevailed. The result was the passage of the Financial Institutions Reform,

⁷⁴ Ibid.

Recovery, and Enforcement Act of 1989 and the Federal Deposit Insurance Corporation Improvement Act of 1991. These acts focused on fixing the thrift and banking industries, expanding federal regulatory authority, and improving competition by allowing banks to enter into new product areas. However, the acts stopped short of allowing banks to enter into securities or insurance activities.

Although legislation during the 1980s relaxed restrictions on financial institutions, it was regulation that truly served to break down the barriers. Federal regulators and many state regulators supported deregulation as a means for growth. Based on this view, they actively sought to deregulate through reinterpreting existing legislation.⁷⁵ This reinterpretation allowed financial institutions to branch out into previously prohibited products. By 1990, national and state banks had entered brokerage and investment advisory services, credit insurance underwriting, securities underwriting, real estate development, and equity participation. By 1996, the Federal Reserve had effectively ended the Glass-Steagall impact on the blending of financial institutions by allowing bank holding companies to own investment banking operations accounting for as much as 25 percent of their revenues.⁷⁶

The congressional push for deregulation resurfaced in the mid-1990s as the banking crisis came to an end. Legislation was beginning to catch up to where regulatory reinterpretation had left off. The Riegle-Neal Interstate Banking and Branching Efficient Act in 1994 repealed the McFadden Act restrictions, which prevented banks from merging and expanding across state lines. The intent was to prevent banks from being vulnerable to regional economic downturns as they were in the 1980s. The impact was a consolidation trend eliminating more than a quarter of total banking institutions, as financial institutions sought to expand their products and service offerings and achieve economies of scale.⁷⁷

In 1998 Travelers Insurance Group announced it would merge with Citicorp. Although technically illegal, it conformed to the Federal Reserve's reinterpretation of Glass-Steagall at the time. Under the original structure, Citicorp had two years to divest its insurance operations. However, this would not be necessary, because in 1999 the Financial Services Modernization Act (also known as the Gramm-Leach-Bliley Act) eliminated many of the barriers once separating banking, investment, and insurance companies.⁷⁸ Legislation had finally codified

⁷⁵ Federal Deposit Insurance Company, (n.d.). *An examination of the banking crises of the 1980s and early 1990s* (Vol. 1) Retrieved from http://www.fdic.gov/bank/historical/history/87_136.pdf

⁷⁶ Sherman, Matthew. "A Short History of Financial Deregulation in the United States." Center for Economic and Policy Research, July 2009. Retrieved from www.openthegovernment.org/sites/default/files/otg/dereg-timeline-2009-07.pdf

⁷⁷ Ibid

⁷⁸ Ibid

regulatory reinterpretation. The result was the conglomeration of financial institutions and insurers into financial services giants that would dominate the next several decades.

The Financial Services Modernization Act

The Financial Services Modernization Act of 1999 repealed certain portions of the Glass-Steagall Act and certain provisions of the Bank Holding Company Act, allowing authorized banks, insurance companies and investment firms to affiliate through new “financial holding companies”. Under the Act, financial bank holding companies, depository institution subsidiaries (meeting various requirements, such as capitalization levels), and any company with at least 85 percent of its revenues stemming from financial activities were allowed to elect to become a financial holding company.⁷⁹ However, non-financial companies were still restricted from owning commercial banks.

The Act permitted bank holding companies (or qualifying national banks) to offer a myriad of “complementary” financial services, including the sale and underwriting of insurance and securities, “merchant” banking, and investment advisory services. Specifically, financial holding companies were allowed to engage in “insuring, guaranteeing, or indemnifying against loss, harm, damage, illness, disability, or death; providing and issuing annuities; and acting as principal, agent, or broker for the foregoing activities.”⁸⁰

The Act also specified certain nonbanking activities of the financial holding company (or the national bank) could occur through affiliate or subsidiary entities.⁸¹ Insurance could be sold through the financial holding company, but insurance underwriting would be restricted solely to the parent company or nonbank subsidiary/affiliate of the financial holding company.⁸²

Regulatory oversight responsibilities under the Act are assessed based on the functional activities of each affiliate or subsidiary within the financial holding company, thus preserving

⁷⁹ The Gramm-Leach-Bliley Act. In Mayer, Brown, and Plait. Retrieved from <http://www.securitization.net/pdf/ExecSummary.PDF>

⁸⁰ NAIC Financial Condition (E) Committee and Federal Reserve, (2005). *Report of the NAIC and the Federal Reserve System Joint Troubled Company Subgroup: A Comparison of the Insurance and Banking Regulatory Frameworks for Identifying and Supervising Companies in Weakened Financial Condition*. Retrieved from <http://www.federalreserve.gov/boarddocs/staffreports/naicfrs/naicfrs.pdf>

⁸¹ The Gramm-Leach-Bliley Act. In Mayer, Brown, and Plait. Retrieved from <http://www.securitization.net/pdf/ExecSummary.PDF>

⁸² NAIC Financial Condition (E) Committee and Federal Reserve, (2005). *Report of the NAIC and the Federal Reserve System Joint Troubled Company Subgroup: A Comparison of the Insurance and Banking Regulatory Frameworks for Identifying and Supervising Companies in Weakened Financial Condition*. Retrieved from <http://www.federalreserve.gov/boarddocs/staffreports/naicfrs/naicfrs.pdf>

state regulation over insurance activities. Accordingly, state-based licensing requirements still applied. However, new hybrid products would be subject to SEC regulations.⁸³

Consolidation of the Life Insurance Industry

As stated earlier, financial deregulation led banks and other financial institutions to consolidate in the 1980s. Consolidating allowed banks to gain economies of scale, particularly in the risk management efforts of emerging complex financial instruments, and compete more effectively with nonbank financial institutions.⁸⁴ Merger and acquisition activity intensified shortly before passage of the Financial Services Modernization Act in 1991, with 51 mergers and acquisitions in 1998.⁸⁵ Ten of these were the largest on record at that time. The intensity and magnitude of these megamergers resulted in a reduction in the number of banks and banking holding companies by about 40 percent between 1989 and 1999.⁸⁶ The consolidation had resulted in 41.5 percent of the country's banking assets being concentrated within the top eight banks.⁸⁷

With the passage of the Financial Services Modernization Act, banks and insurers were free to consolidate too. By 2001, more than 40 percent of the life insurance industry's premiums were concentrated within the top 10 life insurers.⁸⁸ These cross-industry mergers sought to establish new distribution channels, termed bankassurance, through cross-selling synergies. Through merger or acquisition, insurers and banks can share the same customer base, and, depending on the holding company's specific ownership structure and strategy, marketing and distribution channels too.

Bankassurance seeks to leverage these new mutual customer bases to increase sales volume and product diversification. However, in practice, these cross-sector mergers did not always lead to the desired economies of scale and often came with cultural barriers.⁸⁹ One issue is the customer base for banks and insurers are motivated differently. An insured is looking for products offering protection. Customer satisfaction is largely rooted in the degree to which the

⁸³ The Gramm-Leach-Bliley Act. Mayer, Brown, and Plait. Retrieved from <http://www.securitization.net/pdf/ExecSummary.PDF>

⁸⁴ Lown, C., Osler, C., Strahan, P., & Sufi, A. (2000). The changing landscape of the financial services industry: What lies ahead?. *FRBNY Economic Policy Review*, Retrieved from <http://www.nyfedeconomists.org/research/epr/00v06n4/0010lown.pdf>

⁸⁵ *SIC 6311 Life Insurance* (2nd ed.). Reference for Business: Encyclopedia for Business. Retrieved from <http://www.referenceforbusiness.com/industries/Finance-Insurance-Real-Estate/Life-Insurance.html>

⁸⁶ Lown, C., Osler, C., Strahan, P., & Sufi, A. (2000). The changing landscape of the financial services industry: What lies ahead?. *FRBNY Economic Policy Review*, Retrieved from <http://www.nyfedeconomists.org/research/epr/00v06n4/0010lown.pdf>

⁸⁷ Ibid

⁸⁸ *SIC 6311 Life Insurance* (2nd ed.). Reference for Business: Encyclopedia for Business. Retrieved from <http://www.referenceforbusiness.com/industries/Finance-Insurance-Real-Estate/Life-Insurance.html>

⁸⁹ Commentary (2000). The changing landscape of the financial services industry: What lies ahead? *FRBNY Economic Policy Review* www.newyorkfed.org/research/epr/00v06n4/0010maho.pdf

product fits the customers' needs and the proficiency to which their needs are handled. Mishandling a claim settlement can have the unintended impact of customers leaving the bank, thus decreasing its overall customer base.

Demutualization

Mutual insurers faced growing competition and the threat of acquisition from these emerging financial conglomerates. Adding to this pressure was foreign insurers' growing interest in strategically acquiring insurers in the U.S. Additionally, the shift in consumer demand away from traditional protection products and toward investment-oriented products left mutual insurers at a disadvantage.⁹⁰ Mutual insurers' lack of access to capital, as compared to stock insurers, also left them at a disadvantage. The elimination of tax advantages during this time also hampered mutual insurers' profitability.

Responding to these changes, mutual insurers began a trend of demutualizing in the mid-1990s. The passage of the Financial Services Modernization Act served to intensify life insurers' efforts to demutualize. Fifteen major life insurers—including the industry's largest insurer, Metropolitan Life Insurance—demutualized between 1997 and 2003.⁹¹ Demutualizing allowed mutual insurers to access the capital markets, a key aspect of supporting investment oriented products. Additionally, reforming as a stock company allowed mutual insurers the opportunity to participate in banking and insurance consolidations. This is an important point, given the increase in foreign acquisitions of U.S. life insurers. Interestingly enough, a study from Deloitte found that growth through strategic acquisitions among the largest life insurers between 2001-2005 resulted in lower shareholder returns than those grown organically.⁹²

⁹⁰ Chugh, L., Meador, J., & , (n.d.). Demutualization in the life insurance industry: A study of effectiveness. *Review of Business*, 27(1), 10-17. Retrieved from www.umb.edu/editor_uploads/images/college_management/Demutualization_Industry.pdf

⁹¹ Ibid

⁹² Global insurance industry outlook: Issues on the horizon 2007. *Deloitte*, Retrieved from [www.deloitte.com/assets/Dcom-Montenegro/Local%20Assets/Documents/me_fsi_Global-Industry-Outlook-2007\[1\]\[1\].pdf](http://www.deloitte.com/assets/Dcom-Montenegro/Local%20Assets/Documents/me_fsi_Global-Industry-Outlook-2007[1][1].pdf)

Table 1
Significant Mutual-To-Stock Conversions (1998-2002)

Source: Standard & Poor's Ratings Services

Mutual of New York MONY (now part of AXA)	1998
Standard Insurance/Stancorp	1999
Mutual Life/Clarica (now part of Sun Life)	1999
Manulife	1999
Canada Life (now part of Great-West)	1999
John Hancock (now part of Manulife)	2000
Industrial Alliance	2000
Sun Life	2000
Met Life	2000
Phoenix Home Life	2001
Prudential	2001
Principal	2001

Insurers can fully demutualize or partially demutualize. The most common form of full demutualization is the New York Method, in which policyholders are paid out the mutual insurers' full surplus in the form of cash, stock, or policy credits. Mutual insurers can also opt to partially demutualize by forming a mutual holding company (MHC) to oversee a stock subsidiary. Partial demutualizations using an MHC are growing in popularity. One study found MHC conversions accounted for 74% of all insurance conversions from 1997-2001.⁹³ This study also indicated this growing trend is rooted in a 1999 change in the tax code to extend beneficial tax treatment, previously only accessible to stock insurers, to MHCs. Through MHCs, insurers gain the advantages inherent to both mutual and stock insurers. As American Council of Life Insurers (ACLI) notes in its 2011 Life Insurers Factbook, partial demutualizations continue to be a growing trend.⁹⁴

It should be noted mutual policyholders share in the mutual company's profits by receiving a portion of its annual dividends. This structure ensures insurer's priorities remain in-line with those of the insureds. In contrast, a publicly traded stock insurer is owned by stockholders and thus its financial incentives are different. At times, regulators find this conflict leads life insurers into less conservative actions and, potentially, solvency concerns.

⁹³ Erhemjamts, Otgontsetseg and Phillips, Richard D., Form Over Matter: Differences in the Incentives to Convert Using Full Versus Partial Demutualization in the U.S. Life Insurance Industry (January 2011). *Journal of Risk & Insurance*, Retrieved from <http://ssrn.com/abstract=1653412>

⁹⁴ 2011 Life Insurers Factbook. *American Council of Life Insurer*, Retrieved from <http://www.acli.com/Tools/Industry Facts/Life Insurers Fact Book/Documents/2011 Fact Book.pdf>

Insurance Regulators Respond to the Financial Services Modernization Act

The Financial Services Modernization Act significantly increased privacy requirements related to the sharing of personal information between affiliates. The Act also upheld the McCarran-Ferguson Act, ensuring state insurance regulators oversight of insurance activities. However, it also required states to remove any regulations or legislation impeding insurers or banks from effectively competing under the new structure. It also called for states to reform uniformity or reciprocity provisions for producer licensing by Nov. 12, 2002, or face federal preemption.⁹⁵ If states failed to meet these provisions, the Act called for the creation of the National Association of Registered Agents and Brokers (NARAB), a private nonprofit corporation. Revisions to NARAB (referred to as NARAB II) were proposed in 2006 and again in 2011. These proposals would preserve state regulatory authority while still achieving reciprocity standards through a licensing clearinghouse concept.

Insurance regulators, collectively through the NAIC, responded to the requirements imposed on the insurance industry by the Financial Services Modernization Act by setting forth a commitment to regulatory modernization. To satisfy the Act's privacy provisions, the NAIC adopted the Privacy of Consumer Financial and Health Information Regulation in 2000. Next, the NAIC adopted the Producer Licensing Model Act, which provides states with a framework to achieve compliance with the Act's licensing provisions. As with all NAIC models, state legislators can chose to adopt or partially adopt the model or create their own provisions.

By 2002, most states had enacted sufficient producer licensing reciprocity requirements, preventing the creation of NARAB. Automation was a key component to achieving licensing reciprocity, uniformity, and cost efficiency. To facilitate this, the National Insurance Producer Registry (NIPR) (an affiliate of the NAIC) was created. NIPR developed and implemented the Producer Database (PDB) and the NIPR Gateway. The PDB is an electronic database linking participating state regulatory licensing systems into one common repository of producer information. The NIPR Gateway is a communication network linking state insurance regulators with the entities they regulate to facilitate the electronic exchange of producer information. The NAIC also established producer licensing and administration program guidelines through the *State Licensing Handbook*, which was adopted in 2009.

In the early 1990s, the NAIC began developing the early concept of the System for State Electronic Rate and Form Filings (SERFF). SERFF is a Web-based electronic form and rate filing tool. In 1999, the NAIC modified the SERFF infrastructure, enabling states to use it with minimal

⁹⁵ Florida, House of Representatives. (n.d.). *Licensure of insurance producers: The Gramm-Leach-Bliley Act, the NAIC Producer Licensing Model Act, and Florida law*, Retrieved from http://archive.flsenate.gov/data/publications/2001/house/reports/insurance/glb_plma.pdf

technical and financial support. In 2000, the NAIC set out to achieve several Speed to Market initiatives, which went beyond the requirements of the Financial Services Modernization Act. As part of those initiatives, the NAIC made several enhancements to the SERFF system, including the development and implementation of Uniform Product Coding Matrices (PCM), Uniform Transmittals, Electronic Funds Transfer, and Standardized Filing Types. In 2001, the NAIC launched the Coordinated Advertising, Rate and Form Review Authority (CARFRA). CARFRA provided insurers with the ability to file life and health products through a single site and obtain approval from multiple states. In 2006, the Interstate Insurance Product Regulation Compact became operational, ensuring a central filing point for insurers from participating states for new life, disability income, annuity and long-term care products. Other initiatives included standardized efforts related to guidelines for review procedures of rates and forms filings and producer licensing application guidelines.⁹⁶

The Rise of Derivatives and the Commodity Futures Modernization Act (CFMA) of 2000

The prevailing high interest rates of the 1970s and early 1980s, combined with the move to a flexible exchange rate system, created the need to hedge against interest rate and currency risk. Responding, investors began to expand their use of derivatives beyond agricultural commodities. A derivative is a financial instrument linked to the price of its underlying unit, such as an asset or index.⁹⁷ Responding to this, Congress created the Commodity Futures Trading Commission (CFTC) in 1974 to regulate *all* commodity futures. The CFTC required all commodities contracts to be traded over regulated exchanges, subject to certain exceptions allowed to trade over-the-counter. The most notable exceptions include forward contracts (the commodity is delivered and paid at the end of a contract at a price set at the beginning of the contract) and contracts based on foreign currencies or U.S. Treasury securities.⁹⁸

Expansion of derivatives continued throughout the 1980s with the use of financial derivatives linked to bonds, currencies and indexes. Several of these instruments (particularly the single stock future contract, in which a future was linked to a single stock) had characteristics of both commodities, regulated by the CFTC, and securities, regulated by the SEC. Both agencies wanted to regulate them. To end the dispute, the two regulators reached an agreement in 1981, dubbed the Shad-Johnson Jurisdictional Accord, that prohibited single stock futures, gave

⁹⁶ Gramm-Leach-Bliley Act. *Indiana Compensation Rating Bureau*, Retrieved from <http://sharepoint.icrb.net/public/CompClues/details.aspx?Item=119>

⁹⁷ Financial Derivatives. *The International Monetary Fund*, Retrieved from <http://www.imf.org/external/np/sta/fd/index.htm>.

⁹⁸ U.S. Congressional Research Service. Regulation of Energy Derivatives (RS21401, April 21, 2006), by Mark Jickling. Retrieved from http://assets.opencrs.com/rpts/RS21401_20060421.pdf

the SEC jurisdiction over securities-based futures and the CFTC jurisdiction over broad-based indexed-linked futures and government securities-linked futures.⁹⁹

The exclusion of forward contracts from regulated exchanges served as a catalyst to the over-the-counter market during the 1980s. By the mid-1980s, interest rates had begun to fall and in 1987 the economy lapsed into recession. Responding to the volatile market, investors expanded into swaps linked to interest rates and currencies, which functioned in the same capacity as forward contracts, and thus were being traded “over the counter” (OTC). However, there remained much legal uncertainty surrounding swap contracts that at any time could be deemed a futures contract by the CFTC, making it illegal and void.

By the 1990s, interest rate swaps had become commoditized, leaving investors with thin margins.¹⁰⁰ This prompted the proliferation of new derivatives (including credit default swaps), which again brought up regulatory authority disagreements between the SEC and CFTC. The use of derivatives was believed to be an important source of liquidity and risk transfer in the marketplace. Additionally, legislators wanted to remain competitive with European markets, who were allowing the trade of single stock futures, prohibited in the U.S. Seeking to protect the market from legal risk, settle the jurisdictional battle, and maintain global competitiveness, Congress passed the Commodity Futures Modernization Act (CFMA) in 2000. The CFMA “exempted most OTC transactions from the exchange-trading requirement, permitted the creation of clearing mechanisms for OTC derivatives, and also exempted certain centralized trading platforms from certain regulations.”¹⁰¹

Insurers Enter the Twenty-First Century

Insurance sales and profitability grew rapidly from the mid-1990s until 2000. This increase was led primarily from annuities as consumer demand continued to shift toward investment and wealth accumulation products. Unprecedented growth in the stock market, rising employment and personal wealth, and an aging population were the driving forces behind the life industry’s growth during this time.¹⁰²

⁹⁹ U.S. Government Accountability Office. (2000, April). CFTC and SEC Issues Related to the Shad-Johnson Jurisdictional Accord. (Publication No. GAO/GGD-00-89). Retrieved from <http://www.gao.gov/assets/230/228932.pdf>

¹⁰⁰ Tett, Gillian. Derivative Thinking. (2008, May 30). *FT Magazine*, Retrieved from <http://www.ft.com/intl/cms/s/2/a7cf1d76-2bae-11dd-9861-000077b07658.html#axzz2Gvj2paqR>

¹⁰¹ Pirrong, Craig. A Growing Market. *Regulation*, Summer 2002 (Vol. 24, No. 2-6).

¹⁰² More Than Meets The Eye: What Is Behind The Long-Term Credit Erosion In The North American Life-Insurance Sector? (2012, May 25). *Standard and Poor's Ratings*, Retrieved from www.standardandpoors.com/ratings/articles/en/us/?articleType=HTML&assetID=1245334386548

Insurers growing reliance on annuities and fee income from separate account products increasingly exposed them to the equity market and interest rate risk. Additionally, as more mutual insurers demutualized, the focus of the industry began to shift toward shorter profitability return horizons.¹⁰³ Seeking higher returns, and feeling an artificial sense of security given the long duration of the stock market growth, insurers moved once again into riskier assets. As a result, insurers held higher levels of common stock, commercial mortgages, and non-investment grade bonds. At the same time insurers were increasing their debt to finance their mergers and acquisitions, resulting in more balance-sheet leverage.¹⁰⁴

Financial modernization resulted in distribution changes as well. The insurance industry had relied on the agency system, in which a captive agent sold only his employer's policies, since the late 19th century. As insurers entered the 20th century, they relied on independent brokerage firms and banks to distribute their products, particularly for variable annuities.¹⁰⁵ Direct sales through the Internet also began during this time, but expansion into this area was slow.

Recession of 2001

Life insurers' extraordinary growth came to a halt when the stock market crashed in 2000. The downfall of the market was largely related to the fall of the dot.com technology companies and accounting fraud among several large corporations (including Enron and WorldCom), resulting in their collapse. It is interesting to note many blame the downfall of Enron on the Commodity Futures Modernization Act, which effectively exempted energy trades from regulation (dubbed the "Enron Loophole"). The attacks on the World Trade Center (WTC) on September 11, 2001, further depressed the market. The loss of nearly 3,000 lives resulted in \$2 billion - \$3 billion in insured losses and served as a wake-up call to life insurers on the concentrated mortality risk terrorism represents.¹⁰⁶ By 2002, the Nasdaq index had fallen 78 percent from its high in 2001.

To promote growth, the Federal Reserve implemented 11 rate decreases between 2001 and 2004. The low interest rate environment and volatile financial market depressed insurers' investment earnings and devalued their assets. It also hurt insurers' ability to support spread-based products and variable annuities, many of which had now been issued with minimum

¹⁰³ Ibid

¹⁰⁴ *SIC 6311 Life Insurance* (2nd ed.). Reference for Business: Encyclopedia for Business. Retrieved from <http://www.referenceforbusiness.com/industries/Finance-Insurance-Real-Estate/Life-Insurance.html>

¹⁰⁵ www.soa.org/.../1990-99/1999/January/rsa99v25n161pd.pdf

¹⁰⁶ American Council of Life Insurance. Statement to the Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises and the Subcommittee on Oversight and Investigations of the Committee on Financial Services of the United States House of Representatives. *A Review of TRIA and its Effect on the Economy: Helping America Move Forward*, Testimony, April 28, 2008. Retrieved from <http://archives.financialservices.house.gov/media/pdf/042804acli.pdf>

guarantees. The situation forced insurers to liquidate assets at fire-sale prices to support their minimum guarantee obligations. The depressed equity market also depressed separate account balances, constraining insurers' fee income from equity-based wealth accumulation products held on the separate accounts. At the same time, high credit losses, resulting in large realized and unrealized capital gains, were pressuring insurers' earnings and capital and surplus.

Insurers Return to Growth and Core Competencies

The industry began to stabilize in 2004 and by 2005 it had nearly recovered fully. The return to growth was led by individual life and annuities—in particular, universal life and equity-indexed annuities. Aggressive guarantees (such as the no-lapse guarantee) on universal life and the ability for upside return and downside protection on equity-indexed annuities boosted sales of these products. Additionally, individual health began to play a larger role in insurers' profitability in response to rate increases and moderating medical costs. However, insurers were still faced with relatively low interest rates and a flattening (and sometimes inverted) yield curve. Although minimum crediting rates had been lowered in 2002, the persistent low interest rate environment continued to place pressure on spread-based products, particularly those issued prior to 2002. Additionally, new reserve regulations depressed growth of term insurance.¹⁰⁷

In response, insurers began to spur growth in other areas through new initiatives aimed at the retirement market. This included the addition of accelerated guaranteed living benefits, group variable insurance, wealth management services, and additional distribution channels. Additionally, merger and acquisition activity increased as several insurers realigned their business strategies around their core competencies, divesting noncore businesses or acquiring complementing ones.¹⁰⁸

Insurers Turn to Alternative Funding Mechanisms for Statutory Relief

Insurers during this time were experiencing pressures on their capital and surplus from the implementation of more conservative capital and surplus and reserve requirements. For instance, the NAIC implemented new capital requirements for variable annuities (C3 Phase II) in 2005 to better account for the interest rate and equity risks inherent in the guarantees of these products.¹⁰⁹ As a result, some insurers with aggressive guarantees experienced pressure on their statutory capital and surplus.

¹⁰⁷ Pieck, Keith, U.S. Life Insurance (March 2006). Retrieved from SSRN: <http://ssrn.com/abstract=975296> or <http://dx.doi.org/10.2139/ssrn.975296>

¹⁰⁸ Ibid

¹⁰⁹ C3 Phase II (C3P2) is a principle-based approach to determine capital requirements (applicable in the RBC formula) for Variable Annuities (VA's). Under C3P2, companies use a scenarios approach to determine the worst-

In 2001, the implementation of more conservative reserve requirements for term (referred to as XXX) and universal (AXXX) insurance required insurers to maintain higher reserve levels.¹¹⁰ The intent of the more stringent requirements was to better account for the interest rate and equity risks inherent in the guarantees of annuity products. As a result, some insurers with aggressive guarantees were required to post additional reserves, thus pressuring their statutory capital and surplus.

The increase in XXX and AXXX reserves led insurers to seek strategies to alleviate the resulting statutory capital strain. Finding a lack of capacity and prohibitive rates among reinsurers, life insurers turned to structured capital market solutions, securitizing their redundant (the difference between statutory reserves and economic reserves) XXX and AXXX reserves through captive insurers. Although there are many variations of securitization, insurers most frequently ceded their XXX reserves to a captive, who then issued non-recourse debt via a special purpose vehicle backed by the reserves it had assumed. Other variations include the securitization of policy premiums and policyholder dividends from segmented policies. Relieving statutory strain through securitization also allowed newly demutualized insurers to increase their direct writings in pursuit of higher earnings strategies more in-line with market expectations.

Most insurance captives are single-parent captives, formed as downstream subsidiaries to insure only the risks of its parent or affiliated companies. However, several variations of insurance captives have been formed to fit the particular needs for risk transfer. The most common of these include group captives, association captives, and rent-a-captives. Group captives are formed by a group of companies for the purpose of insuring the group's business. Association captives are formed by trade or service groups of similar insurable risks for the purpose of insuring the risk of each association member. Rent-a-captives are formed by an organization for the purpose of renting licenses and capital to participants for a fee. Captives were initially set up off-shore; however, revisions in several states' regulations have resulted in many captives being established within the U.S.

Suitability and Disclosure of Annuities

The equity-indexed annuity market flourished for several years before it came under regulatory scrutiny in 2005. Equity-indexed annuities were designed primarily for retirement purposes, and thus had significant surrender charges and long surrender periods. Suitability issues arose over accusations producers were selling these products to consumers known to have shorter term investment needs. Moreover, the complexity of the product, including its crediting rate

case present value of after-tax accumulated surplus. A calculation is then performed on the scenario results to calculate the Total Asset Requirement (TAR).

¹¹⁰Ibid

calculations, indexing methods, and distribution stipulations, made it hard for investors to understand and compare it against other products. This made the product prone to intentional and incidental producer misrepresentation and inadequate disclosure. Many producers were accused of using high-pressure sales tactics to prey on the elderly who did not understand their complexity, resulting in numerous lawsuits.¹¹¹

In 2005, the National Association of Securities Dealers (now called the Financial Industry Regulatory Authority Inc. of New York and Washington) recommended broker-dealers improve equity-indexed annuity sales oversight. This prompted the SEC to pursue classifying them as securities (as variable annuities are) in 2008, making them subject to SEC oversight. However, the Federal courts eventually overturned the SEC's attempt to regulate indexed-annuity products, sighting, among other things, the SEC had failed to determine if states were adequately protecting policyholders. As such, equity-indexed annuities were left to be regulated by the states.

The NAIC responded to suitability concerns over equity-indexed annuities by adopting the Senior Protection in Annuity Transactions Model Regulation in 2003. Model provisions were designed to address the inappropriate sales of annuities to persons over the age of 65. In 2006, the NAIC adopted revisions to this model making its provisions apply to all consumers.¹¹² The NAIC adopted more stringent suitability standards for annuities with the 2010 Suitability in Annuity Transactions Model Regulation. As part of the Dodd-Frank Act, the regulation of certain qualifying insurance policies and annuity contracts (namely indexed annuities) would be granted an exemption from being treated as a security under federal securities laws or by any future SEC action. Following the adoption of the NAIC Suitability in Annuity Transactions Model, states are eligible to regulate indexed annuities issued on or after June 16, 2013.¹¹³ According to NAIC staff, 30 states had adopted or were working towards adopting this model as of February 18, 2013.

Contingent Commission Practices Investigation

The use of contingent commissions as incentive-based compensation for new business came under fire in 2004, when New York Attorney General Eliot Spitzer accused brokers of using deceptive practices, such as steering, bid-rigging, and kick-backs to manipulate the competitive

¹¹¹ Maine, Bureau of Insurance. (2012). *Equity indexed annuities* Retrieved from http://www.maine.gov/pfr/insurance/producer/equity_indexed_annuities.htm

¹¹² Sandy Praeger. Testimony of Kansas Insurance Commissioner and NAIC President-Elect Sandy Praeger Before the Senate Select Committee on Aging. Testimony, Sept. 5, 2007, Retrieved from http://www.naic.org/Releases/2007_docs/naic_ks_testimony_aging_sandy_praeger.pdf

¹¹³ NAIC Life Insurance and Annuities (A) Committee. (2010). *Explanation of Harkin/Meeks Amendment in Dodd-Frank Wall Street Reform and Consumer Protection Act* [Committee Document].

market, resulting in higher insurance prices and commissions. Allegations and investigations originally were directed at large brokerage firms, but eventually expanded to include property and casualty and life and health insurers.¹¹⁴

The investigations led to numerous legal actions, state regulatory actions, and fines. They also led to a fundamental reform (or refrain) of contingent commission practices throughout the industry. The NAIC responded to the need for increased disclosure and producer compensation requirements by adopting model legislation implementing new disclosure requirements. These disclosure requirements were designed to bring transparency to broker compensation for consumers.¹¹⁵

Global Financial Crisis

Following the recession of 2001, the Federal Reserve kept interest rates low for much of the next decade. The sustained low interest rate environment brought down key mortgage lending rates, spurring unprecedented growth, price increases, and speculation in the real estate market. Mortgage lenders, encouraged by federal government policies on low-income financing and the potential for profits, lowered down-payment requirements and created subprime mortgages to extend credit to those previously deemed under-qualified. The expansion of loose credit policy was supported by the ease of obtaining credit scores and other relevant information through the Internet. At the same time, current homeowners were leveraging the equity they had built up on their homes to support consumer spending, fueling further economic growth.

The global low interest rate environment also created demand at home and abroad for new investments offering higher returns. Banks responded to this demand by securitizing mortgages (and other debt obligations), instead of keeping them on their balance sheets, and selling them in the capital markets. These new mortgage-backed securities bundled numerous conventional mortgages with a lesser amount of subprime mortgages, thus often maintaining AAA ratings. As subprime lending increased, these instruments became backed by an increasing amount of higher risk mortgages, thus increasing their leverage and susceptibility to market changes.

The sustained low interest rate environment combined with the continued globalization of financial markets created a strong appetite for these new securities. Many investors, including insurers, bought and resold them. To facilitate the sale of these complex products, large

¹¹⁴ Cheng, J., Elyasiani, E., & Lin, T. (2007). *Daily return behavior of the property-liability insurance industry: The case of contingent commission*. Temple University. Retrieved from <http://www.aria.org/meetings/2007papers/IVE%20-%202%20-%20Cheng.pdf>

¹¹⁵ NAIC Adopts Model Legislation Calling for Broker Disclosures. (2004, 12 29). *NAIC News Release* http://www.naic.org/Releases/2004_docs/12-29-04_NAIC_Adopts_Broker_Model.pdf

financial service companies, such as Lehman Brothers and American International Group (AIG), began offering protection against their default in the form of credit default swaps. After time, many investors began buying credit default swaps without purchasing the underlying debt instrument in speculation of the potential default of the underlying asset.

When interest rates began rising in the 2004-2007 period, owners of adjustable or interest only mortgages were faced with higher mortgage payments. Many owners of these types of mortgage loans found they could no longer afford the payments and defaulted or rushed to sell their house to avoid foreclosure. The abundance of homes on the market combined with low demand depressed housing prices causing even primary mortgage loans to exceed their market value. This led to additional foreclosures through strategic defaults, in which those that could afford the higher payments chose not to due to their negative equity positions. It was clear the real estate bubble had burst.

Turmoil in the real estate market spread to the credit market through mortgage-backed securities in 2007. Investors globally experienced large losses on mortgage-backed securities as they began to devalue with the mounting defaults in underlying mortgages. Soon it became evident other asset-backed instruments had devalued, further destabilizing the market. As defaults rose, so did calls on credit default swaps. However, holders and sellers of credit default swaps had become much intertwined, leading to a lack of risk transfer transparency. As a result, many holders of credit default swaps found they were unable to collect from their issuers, who as holders of credit default swaps themselves were unable to collect.

To meet obligations, investors (banks, investment firms, and holding companies) responded by trying to divest their heavily leveraged balance sheets of these assets, but a lack of valuation transparency dried up the market. This paralyzed inter-bank, consumer, and commercial lending. As credit availability and investment earnings deteriorated, so did liquidity and consumer spending, sending an already vulnerable economy into recession. The economic slowdown would soon spread globally and create the deepest downturn since the Great Depression.

Systemic Risk Intervention

Many institutions, heavily exposed to toxic mortgages and CDOs, failed or were at risk of failing due to massive asset write-downs and large investment losses related to these events. In 2008, the Federal Reserve took over two U.S. mortgage finance agencies (Fannie Mae and Freddie Mac), facilitated the sale of Bear Stearns and Merrill Lynch, saw the market fallout from the collapse of Lehman Brothers, and loaned \$85 billion (later revised to more than \$100 billion) to

stabilize American International Group Financial Products (AIGFP) a noninsurance affiliate of AIG. It also injected capital and guaranteed loans for Citigroup.

Acting to mitigate the impact of future large bankruptcies on the economy, the federal government stepped in to prevent the failure of other at-risk financial institutions by passing the Emergency Economic Stabilization Act of 2008.¹¹⁶ This act created the Office of Financial Stability within Treasury and established the Troubled Asset Relief Program (TARP), under which \$475 billion was committed to a series of programs meant to stabilize banking institutions, the U.S. auto industry, AIGFP, and the residential mortgage market through a combination of troubled asset purchases, direct investments, and liability guarantees.¹¹⁷ In total, \$245 billion in TARP funds were used to provide stability to 707 institutions (two of which were insurance companies).¹¹⁸ The Federal Reserve also took a number of other unprecedented actions, including lowering interest rates for a sustained period of time, taking internationally coordinated and individual monetary policy actions, and intervening in the money market and commercial paper market.

Other federal government actions included extending the Federal Deposit Insurance Corporation's guarantee of unsecured bank deposits from \$100,000 to \$250,000 from 2008-2013.¹¹⁹ In 2009, Congress took additional steps to bolster the economy through tax cuts, extending unemployment benefits (among other entitlements), and funding federal contracts, grants and loans through the American Recovery and Reinvestment Act.¹²⁰

Lessons Learned from the Financial Crisis

The Financial Crisis illuminated several deficiencies in the financial system and the perception of risk. First, it showed systemic risk stems not from just firm failures, but from market failures as well.¹²¹ The contagion rate between financial institutions during the crisis brought to light the extent to which financial firms had become interconnected, without the necessary transparency to assess counterparty risk exposure.

¹¹⁶ H.R. 1424--110th Congress: Emergency Economic Stabilization Act of 2008. (2007). Retrieved from www.govtrack.us/congress/bills/110/hr1424

¹¹⁷ TARP Programs. *U.S. Department of Treasury*, Retrieved from <http://www.treasury.gov/initiatives/financial-stability/TARP-Programs/Pages/default.aspx#>

¹¹⁸ U.S. Treasury Plans Auctions for Most Remaining TARP Banks in 2013 (2012, Dec. 18). *Dow Jones Newswire*, Retrieved from www.foxbusiness.com/news/2012/12/18/us-treasury-plans-auctions-for-most-remaining-tarp-banks-in-2013-source/#ixzz2HYEh67eQ

¹¹⁹ Congress Extends \$250,000 Insurance Coverage Through 2013. *FDIC Consumer News*, Retrieved from www.fdic.gov/consumers/consumer/news/cnspr09/coverage.html

¹²⁰ The Recovery Act. *Recovery.Gov*, Retrieved from http://www.recovery.gov/About/Pages/The_Act.aspx

¹²¹ What the Financial Crisis Commission Concluded About AIG's Failure. (2011, January 27). *Insurance Journal*, Retrieved from www.insurancejournal.com/news/national/2011/01/27/182186.htm

Second, it illustrated the assumption under the Commodity Futures Modernization Act that “sophisticated parties” did not need the same level of oversight as other parties to be untrue. This act allowed for the “deregulation of over-the-counter (OTC) derivatives, including credit default swaps, which effectively eliminated federal and state regulation of these products, including capital and margin requirements.”¹²² Even though credit default swaps were similar in nature to insurance guarantees, there was no authority for insurance regulators to require them to post reserves.

Third, it illustrated the current federal capital requirements did not adequately incorporate all the risks inherent in the new market.¹²³ Adding to this was the reliance on short-term historical data in risk-based capital models used by firms, and accepted by regulators, which proved faulty against market shocks.¹²⁴ Fourth, the current regulatory structure proved insufficient to properly supervise the shift in corporate structure to complex interconnected financial conglomerates often including affiliates overseen by multiple supervisors or no supervisor. To this effect, the federal government reorganized its existing regulatory framework to provide a macroprudential (system-wide) approach. Efforts to correct for these deficiencies was largely done through the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) enacted in 2010.

Dodd-Frank Wall Street Reform and Consumer Protection Act

The Dodd-Frank Act sought extensive regulatory reform not seen since the Banking Act of 1933 (also known as the Glass-Steagall Act). Its intent is to “promote the financial stability of the United States by improving accountability and transparency in the financial system, to end ‘too big to fail,’ to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes.”¹²⁵ The Act has numerous provisions impacting approximately 6,000 banking and nonbanking firms.¹²⁶

To prevent gaps in regulatory oversight of large interconnected institutions, the Act establishes the Financial Stability Oversight Council (FSOC) to oversee the various federal regulatory agencies. Voting members of the FSOC council include representatives from the various regulatory agencies and an appointed insurance expert. Non-voting members include the director of the Office of Financial Research, the director of the Federal Insurance Office (FIO), a

¹²² Ibid

¹²³ Ibid

¹²⁴ Nocera, Joe. (2009, January 2). Risk Management. *New York Times Magazine*, Retrieved from www.nytimes.com/2009/01/04/magazine/04risk-t.html?pagewanted=all&_r=0

¹²⁵ H.R. 4173. *Securities and Exchange Commission*, Retrieved from www.sec.gov/about/laws/wallstreetreform-cpa.pdf

¹²⁶ Dodd-Frank Series. *KPMG*, Retrieved from www.kpmg.com/us/en/issuesandinsights/articlespublications/dodd-frank-series/pages/default.aspx

state insurance commissioner, a state banking supervisor, and a state securities commissioner. Among other things, the Council is charged with identifying systemically important financial institutions, including nonbank entities, for regulation under the Federal Reserve. Under the Act, these institutions must meet higher capital standards, regardless of their holding company structure.¹²⁷

The Act made significant changes in the oversight duties of regulatory agencies. It also dismantled the U.S. Office of Thrift Supervision (OTS) and created several new federal agencies, including the FIO within the Treasury. The FIO is not a regulatory agency, but is tasked with monitoring and collecting information on most insurance lines, reinsurance, systemic risk, and affordability. It functions as a federal center for expertise and information on the insurance industry. In doing so, the FIO provides insight on the state of the industry and the identification of systemically significant insurers subject to federal regulation to Congress, Treasury, the United States Trade Representative (USTR), and FSOC.¹²⁸

New regulations were also put in place to ensure sufficient oversight, transparency, and risk retention in securitizations and OTC derivatives. The Act also strengthened regulation of credit rating agencies and included several provisions aimed at consumer protection from lending activities.

Solvency Modernization Initiative

The insurance industry has been transformed over the past several decades, taking its shape from the various regulatory, legal, technological and social changes of its history. As the insurance industry evolved, it became increasingly global, competitive, interconnected, and convergent.¹²⁹ Insurers now compete and operate across many different international jurisdictions, whose regulatory and accounting frameworks differ. Acknowledging the need to ensure insurance regulations were compatible with the new environment, insurance regulators initiated the Solvency Modernization Initiative (SMI).

SMI is a self-examination of the United States' insurance solvency regulation framework. It aims to evaluate and enhance capital requirements, international accounting, insurance valuation, reinsurance, and group regulatory issues. Insurance and banking oversight modernization efforts of other regulatory regimes are also reviewed. This includes Europe's own insurance

¹²⁷ The Dodd-Frank Act: A Cheat Sheet. *Morrison and Foerster*, Retrieved from www.mofo.com/files/Uploads/Images/SummaryDoddFrankAct.pdf

¹²⁸ Federal Insurance Office Overview. *Nelson Levine de Luca and Hamilton*.

¹²⁹ Voss, S. (2011, July 28). "Insurance Oversight: Policy Implications for U.S. Consumers, Businesses and Jobs" Testimony of the NAIC given at United States House of Representatives

regulation modernization initiative, Solvency II. Additionally, new international accounting standards are reviewed for possible convergence or “equivalence”.

As part of this modernization process, state regulators continue to work towards implementing principle-based reserving for certain life insurance products. Additionally, risk-based capital requirements, which function as a regulatory tool for intervention, are being reviewed to ensure they capture all the risks inherent in the new environment. U.S. regulators remain committed to using Statutory Accounting Principles (SAP) due to their specific function of measuring solvency. However, insurance regulators are reviewing the International Accounting Standards Board’s (IASB) international accounting framework for possible convergence, where possible. Additionally, insurance regulators crafted corporate governance principles and incorporated a group supervisory framework. Considerations for a formal Enterprise Risk Management requirement led to the development of the Own Risk and Solvency Assessment (ORSA). An ORSA is an assessment done by the insurer or insurance group to assess its risk management through various levels of stress tests.

Through SMI, insurance regulators have made great progress in building a regulatory framework for the future. However, progress has not been limited to just the SMI project. Advancements have also been made in areas such as market regulation, transparency, and model laws. Additionally, state regulators and the NAIC continue to educate and collaborate with federal agencies as their oversight responsibilities evolve. Finally, state regulators and the NAIC are highly engaged in international standard setting arenas. This includes the International Association of Insurance Supervisors (IAIS), which is a global organization of insurance supervisors working toward universal standards and guidelines for effective insurance supervisory oversight.

Current and Emerging Product Trends in Retirement and Long-Term Care Markets

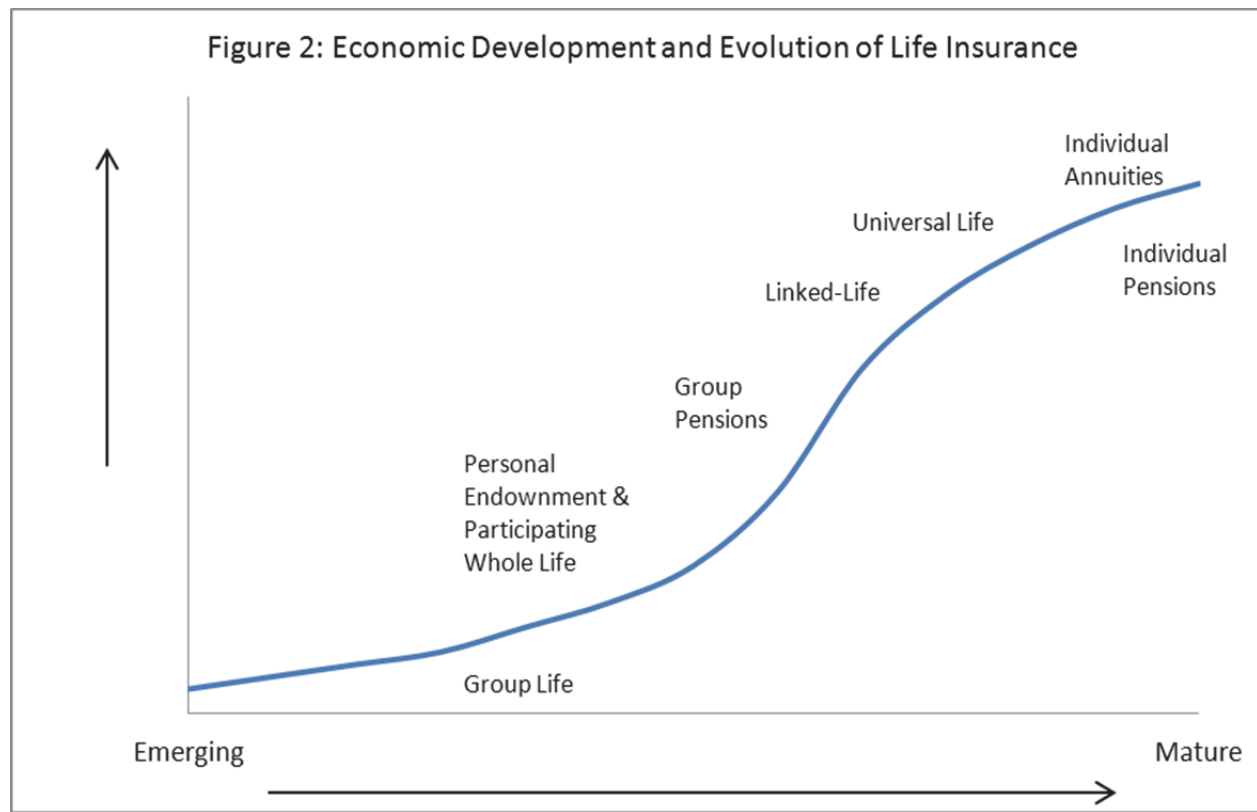


Introduction

By NAIC Staff

While there is no such thing as a single path of development for either the economy as a whole or the life insurance market in particular, as countries differ culturally, politically and economically, there are certain common trends evident in the historical experience of most countries.

As an economy develops (usually measured as Gross Domestic Product (GDP) per capita), the life insurance market evolves alongside it, responding to new needs and requirements. Normally, the growth of the life insurance sector follows an S-shaped pattern as shown in Figure 2. Overall spending on life insurance remains low in the early stages of economic development, often growing at a slower pace than the general economy. Life insurance products tend to be simpler and designed primarily for protection. As the economy moves beyond a certain threshold and into the developed stage, spending for life insurance products begins to accelerate. When the economy reaches maturity, the rate of acceleration of insurance spending tends to slow down. At this level, there is a greater emphasis on individual savings-type products and a corresponding move away from simpler group and protection-oriented products.



This progression was illustrated in the Evolution of Life Insurance section of this study. As the U.S. economy emerged in the 19th and 20th centuries, insurers sold primarily term and whole life insurance products designed to protect against mortality risk.¹³⁰ As the nation industrialized, its population became increasingly urbanized and reliant on a sole breadwinner for financial support. Life insurers met this need through products such as industrial life, which offered a lower and more affordable premium (and a lower face amount) for a specified timeframe.

Consumer demand shifted dramatically in the two decades following World War II. The rapid increase in birth rates, the advent of economic prosperity, and rise of employer- and government-provided life insurance drove consumers to look toward longer-term savings and investment needs. During this time, life insurers' portfolios were heavily weighted with whole life insurance policies, which offered permanent insurance for an insured's lifetime. Whole life insurance policies had the advantage of guaranteed death benefits and accumulating cash values that could be cashed prior to an insured's death. It also became commonplace for employers to offer employee pension plans, insured through group annuities. However, this would change in the coming decades, as employers' preferences for flexibility drove them toward funding their pension plans through immediate participation guarantee (IPG) contracts or deposit-type contracts. Insurers' product portfolios increasingly reflected this shift in preference.

In the latter part of the 20th century, high interest rates provoked another shift in insurers' product designs. Up until this time, insurers sold primarily term and whole-life insurance. To keep pace with high inflation and compete with interest-sensitive banking products, insurers introduced new interest-sensitive policies. The first, universal life insurance, offered both traditional income protection and a cash account earning tax-deferred interest. Universal life insurance was very popular in the 1980s and bolstered life insurers' sales at a time when they faced intense competition from banking products.

The next growth wave for life insurers came from variable annuity sales in the mid-1990s to 2000. Variable products allowed policyholders to invest their premiums into separate account assets, whose values were tied to underlying investments such as mutual funds and stocks. By the end of the century, annuity products had become so popular their sales volumes outpaced those of traditional life insurance. The result would be an historic shift in life insurers' overall product mix toward annuities.

Current life insurance product trends in the U.S. reflect it as a mature economy. Mature economies have a high proportion of their population reaching retirement age requiring it to

¹³⁰ Mortality risk is the risk of premature death.

respond to the needs of this aging demographic. For the U.S., this challenge is magnified by its current economic volatility, low interest rate environment, and increasing longevity of its people. Additionally, the uncertainty of government benefits and departure of defined benefit (DB) plans leaves individuals more accountable for ensuring their own retirement income and health care needs. The result is heightened consumer demand for complex saving vehicles and long-term care solutions designed to help them manage their needs. Many insurers have responded to this demand by shifting their focus toward product innovations to address longevity risks and long-term care needs.

Longevity Risk and Insurance

By NAIC Staff

The need to manage longevity risk has come to the forefront as employers and individuals increasingly become aware of their exposure to longevity risk and their need mitigate it. Longevity risk refers to the risk that actual survival rates and life expectancy will exceed expectations or pricing assumptions, resulting in greater-than-anticipated retirement cash flow needs. The increase in exposure is rooted in changing demographics, a shift in who bears the responsibility of sufficient retirement income, uncertainty of government benefits and economic volatility.

For individuals who fail to mitigate their longevity risk and, as a result, outlive their retirement assets, the consequences may result in a lower standard of living, a return to employment or even greater inability to care for one's self. Beyond attaining a financially secure retirement, the need for long-term care services has become critical as an increasingly higher percentage of seniors live much longer. The high cost of long-term care has brought the question of insurance to the forefront as seniors need to ensure the availability of sufficient financial resources and support at the time they are needed. For those institutions providing covered individuals with guaranteed retirement income and long-term care, longevity risk is the risk of underestimating survival rates, resulting in increased liabilities to sufficiently cover promised payments. Institutions facing longevity risk include DB plan providers, insurance/reinsurance companies, and certain financial institutions.

Insurers' experience with underwriting products exposed to longevity risk makes them a natural fit to fill the growing demand for longevity protection. However, this new growth opportunity also exposes them to additional risks and challenges that will need to be appropriately controlled. The following subsections elaborate on the trends driving longevity risk, how insurers addressed this risk in the past and the need for new solutions. Also discussed are the regulatory concerns about these solutions.

The Growing Need for Retirement Products Provided by Life Insurers

By Andrew Melnyk, Ph.D. (American Council of Life Insurers—ACLI)¹³¹

Households purchase annuities and long-term care insurance (LTCI) in order to manage longevity risk. Demographic and socioeconomic variables such as the age composition of a population, life expectancy, and the expected cost of retirement affect demand for both products. Over the next several decades these variables will change substantially and the demand for annuities and LTCI is expected to increase accordingly.

Older baby boomers are now starting to retire and by 2030, when the youngest will be in their mid-60s, one in five Americans will be age 65 or over. Partly because of improved life expectancy, boomers will likely spend more years in retirement and outside of the labor force, than previous generations. Most will also require some form of formal long-term care (LTC).¹³² How much LTC boomers will require and for how long will largely depend on health. The more time spent outside the labor force and the more LTC consumed, the greater the total cost of retirement.

Despite facing significant costs, many nearing retirement are unprepared. Even those who have prepared face challenges, including: a sluggish economy, a prolonged low interest rate environment, an erratic equity market, and low real estate values. Additionally, there is concern public and private pensions, Social Security, Medicare, Medicaid, and the healthcare system will be increasingly strained as the population ages. Annuities and LTCI, for those who can afford it, can mitigate much of the risk associated with retirement. Whether seniors enjoy a comfortable retirement or suffer economic hardship (along with their families) may depend on whether they have longevity insurance (i.e., an annuity) and LTCI. Life insurers are the only financial intermediary able to provide both of these products.

The following subsections examine some of these challenges, including how households are responding to the challenges and the important role life insurers can play in mitigating a potential retirement crisis. Also discussed are the changing demographics; the factors behind how much retirement will cost; why the old retirement model is no longer optimal; and how households are responding to the new environment and the role of life insurers.

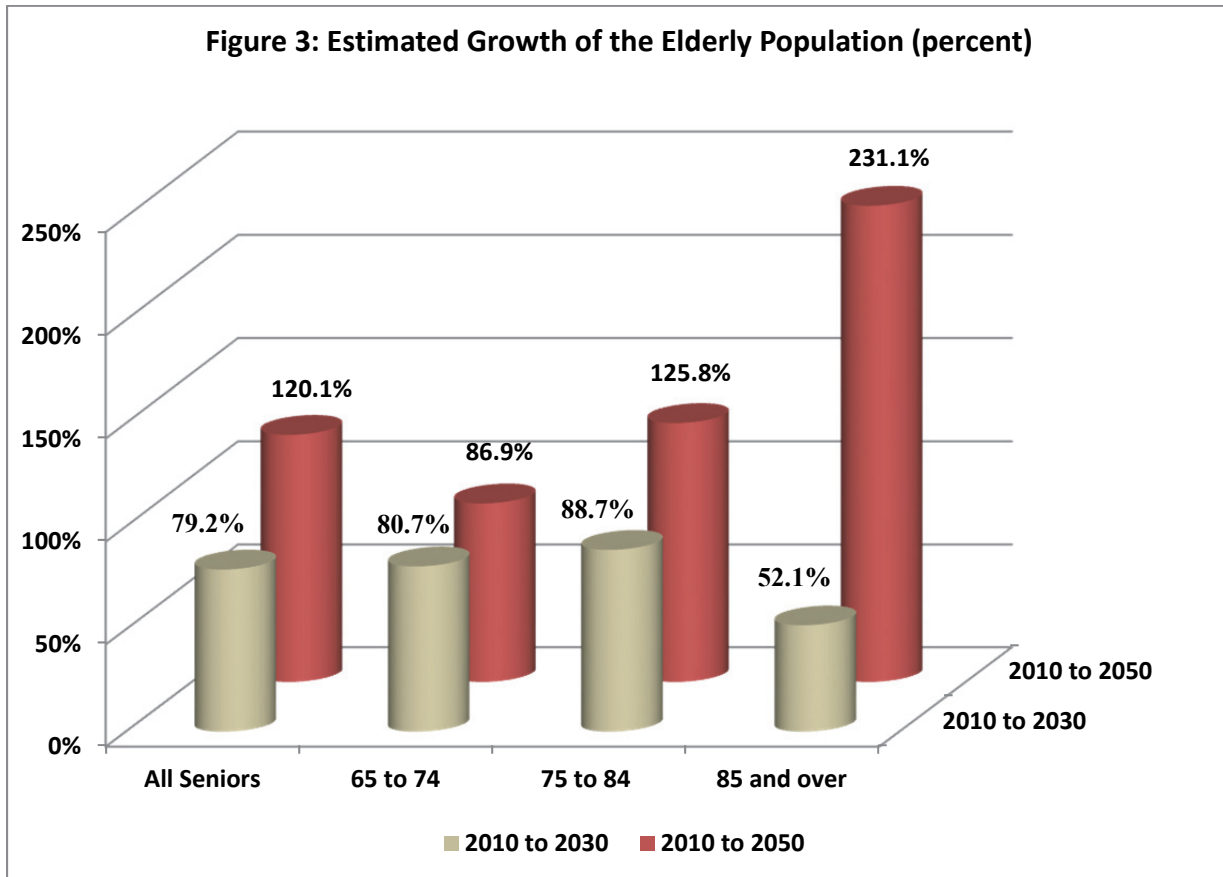
Changing Demographics

The U.S. is undergoing a demographic shift. Baby boomers account for about 28 percent of the U.S. population, and have started reaching retirement age. More specifically, the oldest boomers turned 65 in 2010, and the youngest will turn 65 by 2029. By 2050, the youngest

¹³¹ This section was authored by Andrew Melnyk for the NAIC CIPR Study on the State of the Life Insurance Industry. The opinions expressed are solely those of the author and not necessarily those of ACLI, ACLI member companies, or of the NAIC.

¹³² National Clearinghouse for Long-Term Care Information, U.S. Department of Health and Human Services (See: www.longtermcare.gov).

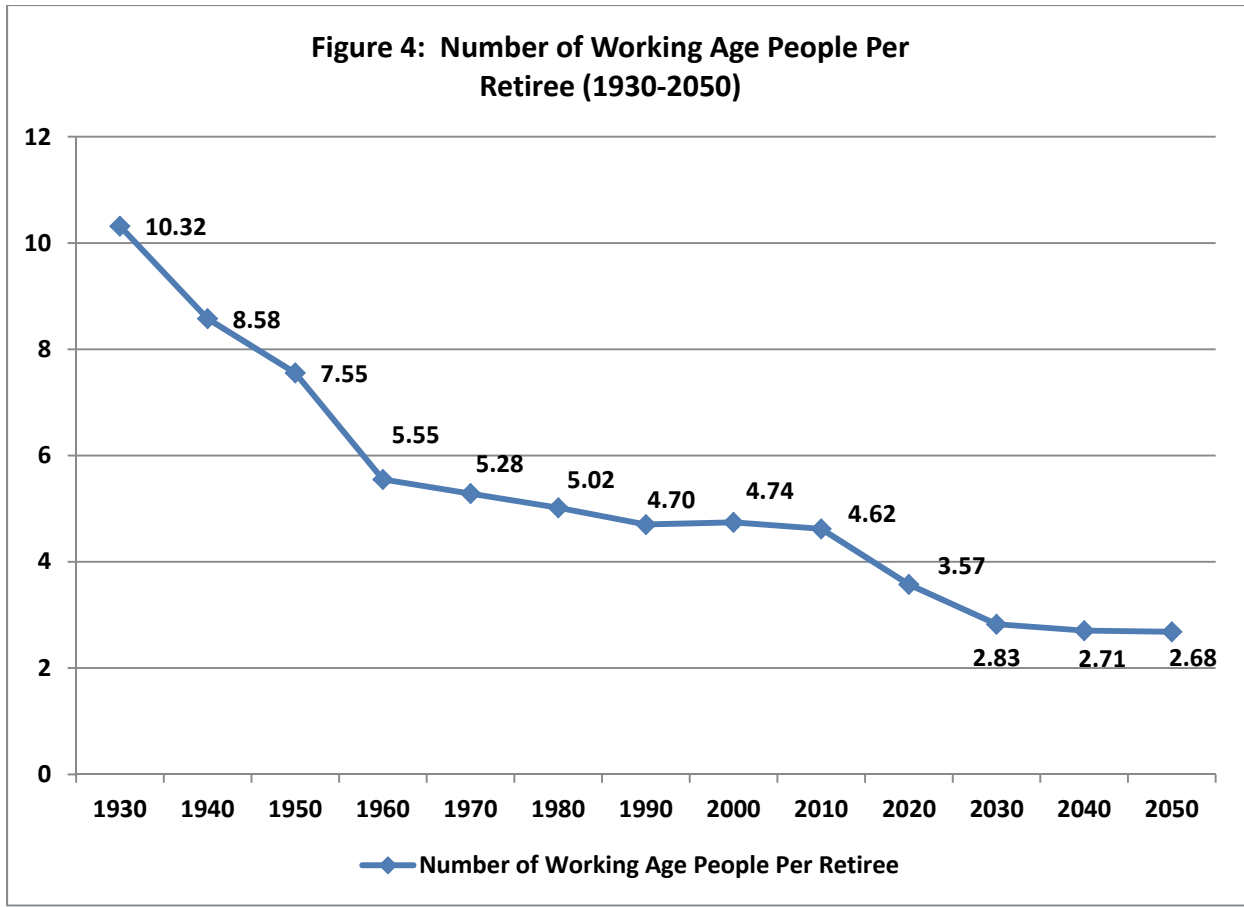
surviving boomers will be over 85, roughly the age at which long-term care is most needed.¹³³ Between 2010 and 2050, the size of this “very old” age group—those 85 and older—will have grown by 231.1 percent and the overall elderly population will have grown by 120.1 percent (Figure 3).



Source: Calculated using data from U.S. Census Bureau, “2008 National Population Projections, August 2008; and U.S. Census Bureau, Current Population Reports, *various issues*. Working-age population is composed of all people between the ages of 20 and 65. Those 65 and over are considered retirement age.

Baby boomers experienced a lower fertility rate than previous generations. In 1960 the average woman had 3.6 children, today she has 2.1. A consistently low fertility rate accompanied by low mortality result in a demographic shift where the age distribution of a population changes. As boomers start to retire, the number of working-age people (age 20 to 65) per retiree will start to decline. Between 1960 and 2010 the number of working age people per retiree only declined from 5.6 to 4.6, but by 2030 it will reach 2.8 (Figure 4).

¹³³ The average age at which a person first enters a nursing home is 83 for men and 84 for women (Brown and Finkelstein (2008)).



From: U.S. Department of Health and Human Services, Center for Disease Control, National Health Expenditure Survey.

This decline is significant for two reasons. First, working-age people provide most of the tax revenue needed to fund Medicare, Medicaid, Social Security, and other public programs. Public programs such as Social Security and Medicare, which most seniors rely on, as well as Medicaid, were developed and implemented prior to the boomers’ sharp fertility decline, at a time when there were more working-age people per retiree. The U.S. Social Security system was put in place when there were 10 working-age people per retiree, and the Medicare and Medicaid systems were implemented when there were over five. Second, if there are relatively fewer working-age adults there will be relatively fewer caregivers for the elderly, which will put upward pressure on the cost of LTC and medical care. This is true for both formal care and informal care provided at home by family and friends.

The Cost of Retirement

The total cost of an individual's retirement is largely dependent on the length of retirement, the health of the retiree, and lifestyle. People have more control over the length of their retirement and what sort of lifestyle they will have than they do over their own longevity. Lifestyle is

outside the scope of this study, but length of retirement and health during retirement bear close examination.

The Length of Retirement

The length of an individual's retirement depends on: (1) how long he/she lives; and (2) the age at which he/she permanently leaves the labor force. The earlier an individual permanently leaves the labor force, the more financial resources they will require and the greater the risk they will outlive their assets (longevity risk). Similarly, the longer they live, the more financial resources will be required, and the more likely they are to require LTC.

Today an average 65-year-old is expected to live 4.2 years longer than a 65-year-old in 1970. Putting aside health and the need for LTC simply because they live longer, seniors today need to either plan for considerably more retirement income than did seniors 40 years ago. Alternatively, they need to remain in the labor market substantially longer.

For the sake of illustration, assume a retirement age of 65 in both 1970 and 2010.¹³⁴ If an individual desires an income of \$60,000 per year during retirement (2010 USD), then the 65 year-old in 2010 should plan for an additional \$252,000 in retirement income compared to a 65-year-old in 1970 (Table 2 illustrates various scenarios). If factors other than longevity were to be considered, substantially more retirement income would likely be required—for example, if: (1) seniors choose to leave the labor force at a younger age than in the past; (2) longevity unexpectedly increases; (3) there is a significant decline in health; or (4) there is a need for more LTC than expected. There are likely also secondary effects which would further increase the total cost of retirement. For example, if demand for medical and long-term care services (or other goods and services routinely consumed by the elderly), were to increase without a corresponding increase in supply, the price of these goods and services will rise, driving up costs. If these factors could all be taken into account, the additional cost of retirement would be considerably higher than the estimates reported in Table 2.

¹³⁴ Retirement at age 65 was the standard set in Germany by Otto von Bismarck in the late 1800s. Germany was the first nation to adopt a social security system. When designing the U.S. Social Security system, Germany was used as a model.

Table 2: Additional Resources Required for Retirement, 2010 vs. 1970 (2010 USD)*

Current Age	Change in Life Expectancy between 1970 and 2010	Annual Income During Retirement**				
		\$20,000	\$40,000	\$60,000	\$80,000	\$100,000
Newborn	7.9	\$158,000	\$316,000	\$474,000	\$632,000	\$790,000
45	5.9	\$118,000	\$236,000	\$354,000	\$472,000	\$590,000
55	5.2	\$104,000	\$208,000	\$312,000	\$416,000	\$520,000
65	4.2	\$84,000	\$168,000	\$252,000	\$336,000	\$420,000
75	2.9	\$58,000	\$116,000	\$174,000	\$232,000	\$290,000
85	1.3	\$26,000	\$52,000	\$78,000	\$104,000	\$130,000

Source: Based on calculations using data from the U.S. Department of Health and Human Services, National Center for Health Statistics, *National Vital Statistics Reports*.

* Assumes retirement at the age of 65.

** In 2011, the poverty line was \$14,710 for 2 people. The average social security benefit in 2011 for a retiree is \$14,137.

There is some disagreement regarding the trends in average retirement age. Gendell (2008) estimates the average retirement age from 1965-1970 was 64.2, and in 2005-2010 was 61.8. If these estimates are correct, then the typical senior in 2010 will spend six additional years in retirement than a typical senior 40 years earlier, an increase of about 40 percent.¹³⁵ However, according to Munnell (2011), the age at which men retire increased from 62 in 1990 to 64 in 2010, and women from 60 in 2000 to 62 in 2010. If increasing longevity is taken into account, Munnell's findings suggest the number of years spent in retirement has remained flat over the last decade or two. Since the recent recession many seniors are likely more inclined to remain in the labor force.

Longevity Shock?

As mentioned above, in addition to having fewer children than their parents and grandparents, baby boomers are living significantly longer than previous generations. According to the U.S. Census Bureau, the longevity of an average 65-year-old person has increased by about one year per decade since 1970. Much of this increase can be attributed to rapid advances in medicine, early screening for cancer and cardiovascular disease, and a reduction in smoking.¹³⁶

Most governments assume longevity will not continue to increase at the same rate as in the past and have planned pensions and social security systems based on that assumption.¹³⁷ But a

¹³⁵ It should be noted the number of two-earner households was greater in the 2005-2010 time period than in 1965-1970. The labor force participation rate is also lower for men in the latter period.

¹³⁶ Taylor, et al. (2002) and Cutler (2008).

¹³⁷ One reason diminishing longevity is assumed is medical breakthroughs and improved treatments for terminal illnesses (e.g., HIV/AIDS, cancer, etc.), which result in discrete increases in longevity, cannot be easily predicted.

number of researchers have determined previous longevity estimates, which also assumed diminishing growth rates, were consistently lower than actual longevity. Taking account of this and potential medical breakthroughs, Olshansky et al. (2009) estimates by 2030, the life expectancy of a 65-year-old may actually be up to 3.8 years greater than the U.S. Census Bureau predicts, and up to 7.9 years greater by 2050. Nobel Laureate Robert Fogel goes even further, predicting as many as half of today's college students will likely survive to age 100 (Fogel, 2005). A recent International Monetary Fund study (IMF, 2012) generally agrees with such assessments and finds most countries underestimate longevity. They add, "If individuals live three years longer than expected—in line with underestimations in the past—the already large costs of aging could increase by another 50 percent."

The Old Retirement Model

Retirement Income

Traditionally, most Americans relied on DB pension plans and Social Security to finance their retirement. Seniors still rely on Social Security, which guarantees almost all Americans some financial support during retirement by directly providing an inflation-indexed annuity. Fifty-three percent of married couples and 74 percent of unmarried persons receive half or more of their income from Social Security.¹³⁸ But in order to ensure a consistent standard of living, most financial professionals advise retirees to have enough retirement savings to replace 70 percent of their pre-retirement income on an annual basis for the remainder of their lives (Moore and Mitchell, 1997). For the majority of retirees, Social Security alone is not enough to maintain a standard of living comparable to that prior to retirement.

Though they are becoming less common, many Americans are enrolled in DB plans. In 1980, 84 percent of workers employed full-time in large and medium-sized establishments were enrolled in a DB plan. Today, less than 30 percent are.¹³⁹ But since the 1980s, defined contribution (DC) plans and individual retirement accounts (IRAs) have become commonplace. According to the U.S. Federal Reserve, Flow of Funds, in 1996 DC plans overtook DB plans in terms of total assets under management. As of 2010 DC plans composed \$3.9 trillion (63.3 percent) of total pension fund assets, and DB plans composed \$2.2 trillion (36.4 percent). According to the Federal Reserve Survey of Consumer Finances, in 2010 about 60 percent of families where the head of household is nearing retirement had an IRA and/or a DC plan (Table 3). This is a substantial percentage of households, given people in this age cohort entered the labor force in the late 1960s and 1970s and are likely also participating in a DB plan, particularly those employed in

Given the rate at which genetic research is progressing, a diminishing rate of longevity growth may not be a realistic assumption.

¹³⁸ U.S. Social Security Administration website (www.ssa.gov).

¹³⁹ Source: EBRI (2010).

the government sector. Of those who do have retirement savings accounts, the average balance is \$100,000, compared to an average balance of \$38,600 (2010 USD) 21 years earlier.¹⁴⁰

Table 3: Retirement Accounts and Values, Families where the Head of Household is 55 to 64

	Percent of Families with Retirement Accounts	Median Value of retirement accounts (in 2010 USD)
1989	42.6%	\$38,600
1992	53.4%	\$55,800
1995	50.9%	\$44,300
1998	58.4%	\$42,500
2001	59.1%	\$67,900
2004	62.9%	\$95,400
2007	61.2%	\$110,300
2010	59.8%	\$100,000

Source: Board of Governors, Federal Reserve System, Survey of Consumer Finances.

Note: Retirement accounts include employer sponsored 401(k), 403(b), and thrift savings accounts from current or past jobs, as well as individual retirement accounts (IRA) and Keogh accounts.

While significant assets have been accumulated in DC plans, it is the responsibility of the plan participant to decide how much to contribute, how to allocate investments, and whether savings will be paid out by annuitization or withdrawal of lump sums. Though plan participation is high among relevant groups, few participants have the training and skill to optimally manage longevity risk on their own and would be best served by annuitizing some portion of retirement savings. By self-managing withdrawals, DC plan participants may expose themselves to greater longevity risk than necessary.

Retirement Today and in the Future and the Role of Life Insurance Products

Changing Perceptions and Changing Behavior

Americans of all ages are becoming aware of how costly retirement can be and that spending 20 or more years outside of the labor force may no longer be feasible. Recent survey work summarized by Helman et al. (2011) finds that among those 25 and older, confidence in the ability to afford a comfortable retirement has plunged to a new low. Helman et al. also find people are revising their expectations of what constitutes retirement age.¹⁴¹ Whereas in 1991, 34 percent of survey respondents expected to retire at age 65, in 2011 only 26 percent expected to. More revealingly, in 1991 only nine percent of respondents expected to retire at

¹⁴⁰ It should be noted 78.1 percent of those households nearing retirement owned a primary residence, with a median value of \$185,000.

¹⁴¹ The findings in Helman et al. (2011) are based on the “21st Annual Retirement Confidence Survey,” co-sponsored by the Employee Benefits Research Institute and Matthew Greenwald and Associates, Inc. The survey interviewed 1,258 individuals (1,004 workers and 254 retirees) age 25 and older in the United States.

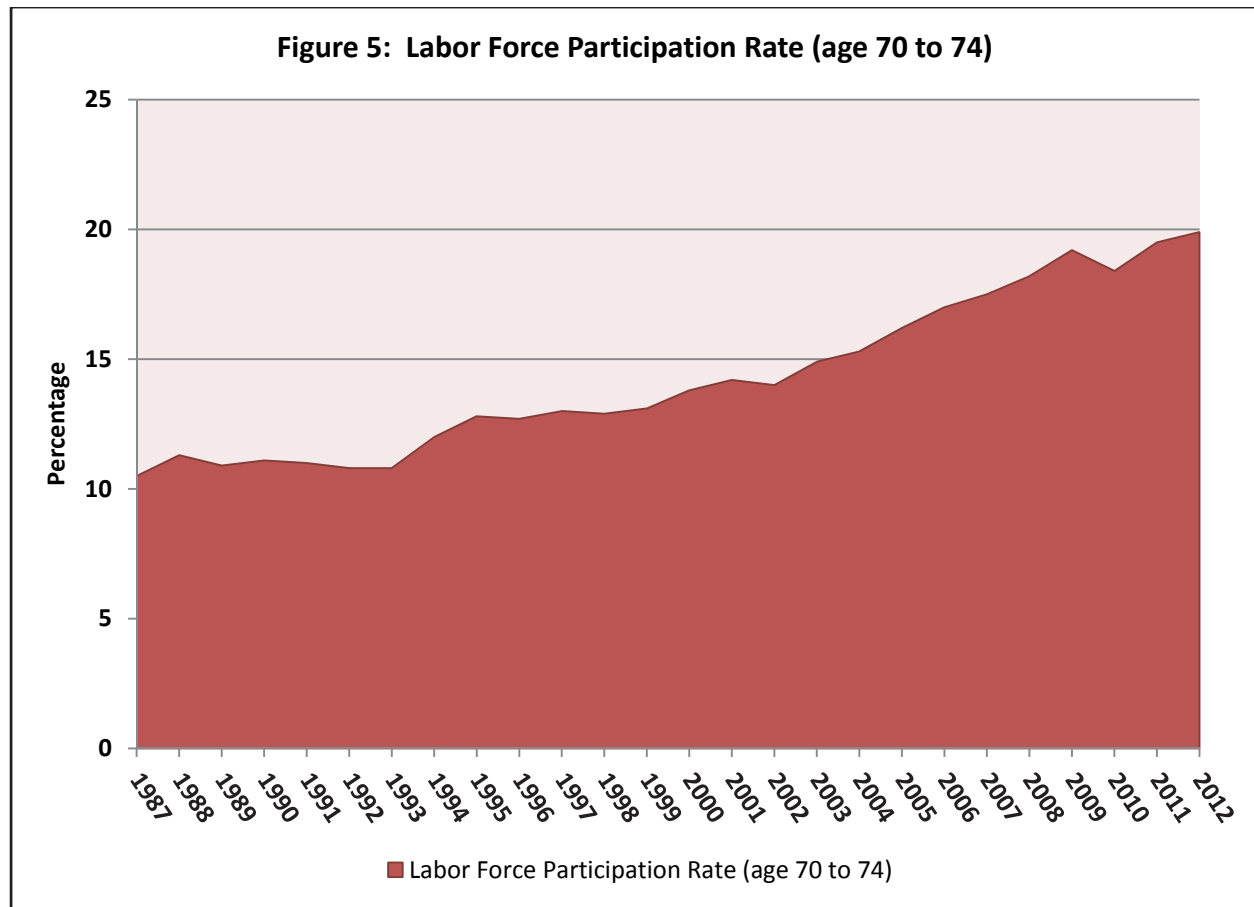
age 70 or older but, in 2011, 25 percent expected to. Helman et al. refer to this as the “New Normal.”

A similar survey by Gallup found, on average, Americans expect to retire at age 67 and only 38 percent think their retirement will be comfortable, compared to only 10 years ago, when the average American expected to retire at age 63 and 59 percent expected to have a comfortable retirement. In another recent survey, 92 percent of middle market households reported they are unprepared for retirement, yet saving enough for that purpose is one of their most important financial goals (Retzloff 2009).¹⁴² Most people are also concerned Social Security and Medicare may not be there for them.

These results may in part reflect the average age of survey respondents is increasing. As people age their expectations become more realistic. But the results also suggest the combination of a depressed real estate market, an economy that has been stagnant for several years, insufficient savings, low returns on investments, long bouts of unemployment, and inadequate planning may have forced many people to revise expectations and may have induced those who would normally be moving from the financial asset accumulation phase of life to the retirement/decumulation phase to plan on staying in the labor market longer than they otherwise would.

Perceptions may have changed, but are people behaving differently? Post-recession data on the median age of retirement is not available, but labor force participation among seniors has been steadily increasing for several decades. Since 1987 the labor-force participation rate of those between 70 and 74 has steadily increased from 9.8 to 19.9 percent in 2011 (Figure 5). Though there was a clear decline in 2010, likely due to the economic downturn, labor force participation has continued to trend upward and has remained over 19 percent over the last two years, greater than at any time in the recent past. But a potential unintended consequence of this trend is the elderly labor pool may eventually grow undesirably large and employment opportunities for younger workers may be more limited. Currently, the unemployment rate among those aged 20 to 24 is 13.3 percent, compared to 6.9 percent for those between 70 and 74 (BLS, 2012-Q3). Several researchers are now considering this possibility, and at least one study found evidence the opposite may be the case (Munnell and Wu, 2012).

¹⁴² In Retzloff (2009), the “middle market” is defined as a household whose total annual income is between \$35,000 and \$124,999. The report is based on a 2008 survey of 2,174 households where the head of household was between ages 25 and 64.



Data does not yet support it, but there is speculation some seniors are now taking longer to transition into retirement by working part-time or on a contracting basis. Delaying retirement or transitioning into retirement are rational responses and would offer a partial solution to the potential retirement crisis.

[Annuities](#)

Life insurers offer four basic product lines: life insurance, annuities (immediate and deferred), LTCI, and disability income insurance (DI). Traditionally life insurance generated the most premium income with annuities a distant second. This is no longer the case. For example, in 1970, 15 percent of premium income was generated by annuities and 85 percent by life insurance.¹⁴³ By 2011, 68 percent of premium income was generated by annuities, 26 percent by life insurance, 4 percent by DI, and 2 percent by LTCI. This shift can be attributed to at least three factors: (1) the increased use of DC plans managed by life insurers; (2) consumers purchasing relatively less permanent life insurance and more term life insurance, which

¹⁴³ Individual LTCI was first introduced in the 1980s. Group LTCI became more commonplace in the early 2000s. LTCI and DI premium data is only available from 2007 onward.

typically requires lower premiums for a similar death benefit; and (3) an aging population requiring greater protection from longevity risk.

There are two basic types of annuities, fixed and variable. Fixed annuities provide certain returns and are usually backed by fixed-income investments such as corporate or government bonds and commercial mortgages which are held in a general account. Variable annuities are backed primarily by equity investments held in a separate account and provide more uncertain returns. About 10 years ago life insurers started to routinely offer variable annuity products with guarantees. Guarantees are now common and can take several forms, including minimum death benefits, guaranteed living benefits, and minimum credited interest rates, which ensure the return on an annuity contract cannot fall below a particular rate defined at issue. When equity markets perform poorly or erratically, guaranteed minimum benefits may be triggered. Because both short-term and long-term interest rates have been at record lows for several years, guarantees on new variable annuity products and returns on new fixed annuities are lower than they were in the past. But despite challenging economic conditions and lower interest rates, annuity sales are strong. In 2011, annuity considerations reached a record high of \$363 billion, 13 percent greater than in the previous year, with \$2.8 trillion held in reserves.

Life Insurers vs. Banks

Though life insurers and banks are both financial intermediaries and can facilitate retirement savings, they have very different functions and are not adequate substitutes for each other.¹⁴⁴ The primary capital market intermediation function of banks is maturity transformation. Banks specialize in highly liquid, short-term deposit liabilities which are aggregated and used to provide longer-term loans. Life insurers, on the other hand, specialize in matching long-term assets with long-term liabilities. A life insurer's asset-liability management profile is determined by the need to invest in assets adequately covering obligations to policyholders over time.

Unlike banks, prior to issuing a contract, life insurers need to predict numerous variables impacting both sides of the balance sheet many years into the future, including availability of assets which are compatible with liabilities, investment returns, reinvestment risk, economic conditions, regulatory changes, lapses, surrenders, longevity and/or mortality. Based on this information, products are developed and premiums and product features, such as guarantees, are determined. In effect, insurers enter a long-term contract before actual liabilities are fully known, and have long-term exposure to changing economic conditions. In particular, they need to carefully consider how future premiums are likely to be invested and what future interest rates are likely to be. The essence of life insurers' financial management is to spread risk over multiple policyholders, while maintaining a relatively close match between assets and liabilities.

¹⁴⁴ A financial intermediary is defined as an institution bringing together investors and users of funds.

Even though many households have saved adequately for retirement, an important decision facing them is how to best manage the decumulation phase of life and longevity risk. Many financial intermediaries can facilitate retirement savings, but life insurers can also mitigate longevity risk and effectively manage the decumulation phase of life. As the population ages there will be a growing need to convert wealth to post-retirement income. Annuities are an important form of insurance that manages this uncertainty by spreading risk and providing seniors protection against the possibility of outliving their assets.¹⁴⁵

Annuities in Pensions

By NAIC Staff

As illustrated in *The Growing Need to Provide Retirement Products by Life Insurers*, the need to reconcile the desire of a long life with the reality of longevity risk has brought the issue of lifetime income to the forefront of the retirement debate in the U.S. Whereas the once-prevalent DB pension plans generally provide the participant with steady lifelong income, paid in fixed payments, DC plans are mostly designed to pay benefits as a lump sum at the time of retirement. Individuals without DB plans can ensure lifetime income by purchasing annuities within their defined contribution plans and personal retirement accounts. They can also purchase a single-premium immediate annuity by rolling over their account balances into an annuity independent of their employer-supported retirement plan.

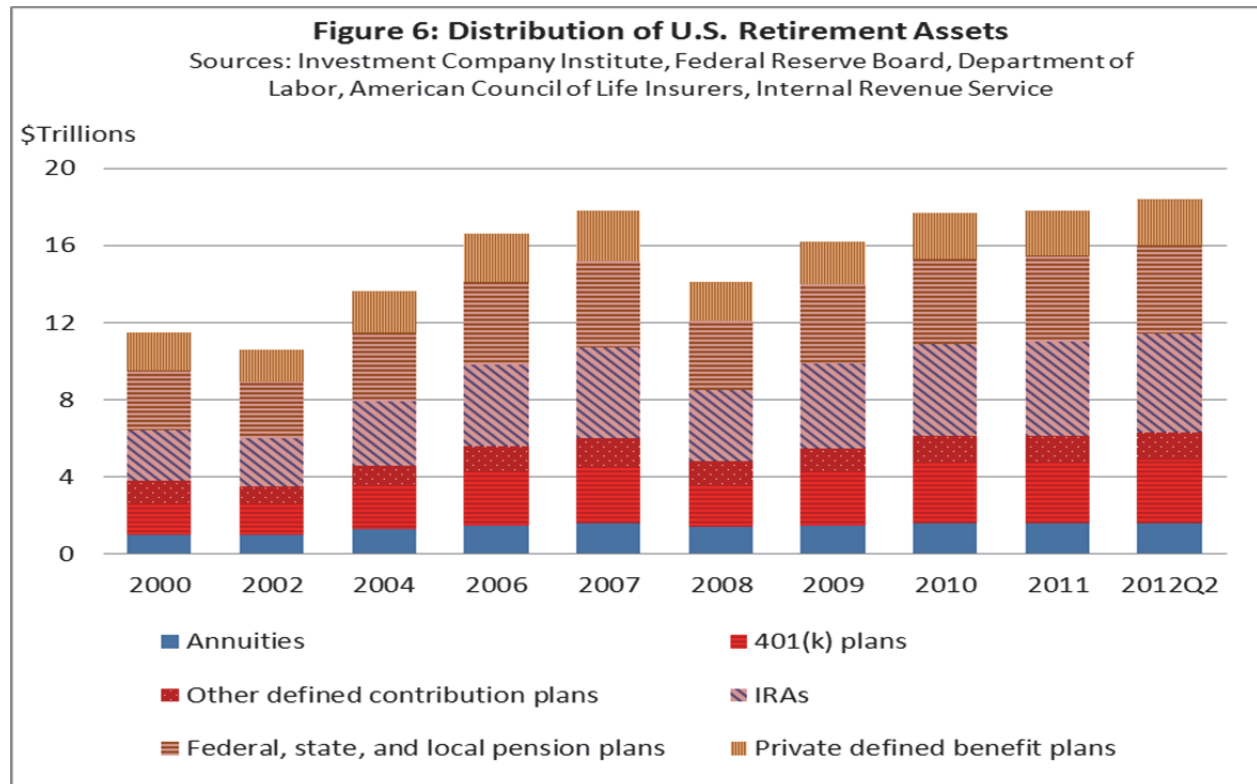
However, despite the ostensible benefits of annuities to provide lifetime income protection, they represent only about 9 percent of the total U.S. retirement market, compared to DC plans and IRAs, who represent 26 percent and 28 percent, respectively (Figure 6).¹⁴⁶ Additionally, just 16 percent of DC plan sponsors offered annuities as in-plan retirement income solutions in 2011 and only 1 percent of participants of these plans took advantage of this option.¹⁴⁷ Likewise, only 7 percent of participants actually choose to annuitize their plan's lump-sum distribution at retirement.¹⁴⁸

¹⁴⁵ Mitchell et al. (1999) offer a succinct explanation of how an annuity works: “[An] annuity contract generally specifies what happens during two distinct phases, the *accumulation phase*, when the premium is paid and capital accumulates, and the *decumulation [or payout] phase*, when benefits are paid out. There are many different paths for building up the annuity capital. One approach is to deposit a single-premium lump sum with the insurer; another is to gradually accumulate capital over a long period. The annuity's payout path can also vary a great deal. Popular options include a life annuity with payments over the annuitant's lifetime, a joint-and-survivor annuity with payments to the annuitant and to his survivor, and a ‘years certain’ annuity (p. 1300-1301).”

¹⁴⁶ Annuities include all fixed and variable annuity reserves at life insurance companies less annuities held by IRAs, 403(b) plans, 457 plans, and private pension funds (including 401(k) plans).

¹⁴⁷ Aon Hewitt, 2011. “2012 Hot Topics in Retirement Survey Report.”

¹⁴⁸ Brien, Michael and Constantijn Panis, 2011. “Annuities in the Context of Defined Contribution Plans.” U.S. Department of Labor, Employee Benefits Security Administration.



Some of the often-cited reasons for the lack of enthusiasm for annuities among participants of DC plans include loss of control of retirement assets, lack of transparency, and heightened concern on the long-term soundness of annuity providers.¹⁴⁹ The complexity of annuity products can also create apprehension, particularly for those who lack familiarity with such products and the income protection benefits they can offer. Additionally, plan sponsors cite concern for meeting their fiduciary responsibility under the U.S. Department of Labor’s (DOL) long-standing standard requiring plan sponsors to offer an annuity only if it is deemed to be the safest.

As a solution to the growing need for longevity solutions, the DOL, which oversees the Employee Retirement Income Security Act (ERISA),¹⁵⁰ is seeking to broaden the options available to DC pension plan participants. In particular, policymakers have indicated they seek to encourage the incorporation of annuities in DC plans as a way to minimize the risk of retirees

¹⁴⁹ Beshears John, James Choi, David Laibson, Brigitte Madrian, and Stephen Zeldes. 2012. “What Makes Annuitization More Appealing?” *NBER Working Paper No. 18575*.

¹⁵⁰ The Employee Retirement Income Security Act of 1974 (ERISA) is a federal law that sets minimum standards for pension plans in private industry. ERISA does not require any employer to establish a pension plan. It only requires those who establish plans to meet certain minimum standards. ERISA requires plans to regularly provide participants with information about the plan, including information about plan features and funding; it sets minimum standards for participation, vesting, benefit accrual and funding; it requires accountability of plan fiduciaries; and it gives participants the right to sue for benefits and breaches of fiduciary duty.

outliving or underutilizing their retirement savings. Annuity products offered as institutional products through DC plans have the added benefit of a lower fee structure than comparable retail out-of-plan annuities. This can help produce higher lifetime income.

In February 2012, the DOL issued new rules regarding participant disclosure requirements. These requirements set standards on fees and expenses, compensation received by third-party service providers and subcontractors, detailed performance information and recordkeeping, and other investment-related disclosures. The increased transparency resulting from these rules will help fiduciaries fulfill their duties, prevent harmful conflicts of interest, enhance value for plan participants, and make it easier for the DOL to address mistakes and/or abuses committed by plan sponsors and service providers.¹⁵¹ The aim of the new rules is to better manage fiduciary liability. If all due diligence requirements have been met, fiduciaries are afforded protection from liability for the investment decisions made by participants.

Fiduciaries were provided with a safe harbor for selecting annuity providers for DC plans under the new rules. However, many plan sponsors continue to be hesitant to assume the additional liability of picking a service provider. Counterparty risk is a main concern of plan sponsors, due to their increased fiduciary exposure stemming from the required long-term relationship, often spanning several decades, with annuity providers. Plan sponsors cite lack of expertise and information as barriers to their ability to determine annuity providers' financial soundness and perform the continuing surveillance required.

The White House Council of Economic Advisers (CEA) and the DOL have turned to state insurance regulators to help them identify possible options for easing plan sponsor concerns with the financial soundness of annuity providers as it relates to the DOL safe harbor rule and fiduciary responsibility requirements. State insurance regulators, through the NAIC ERISA Retirement Income (A) Working Group, are currently working with the CEA and DOL to inform their understanding of state insurance regulation as it relates to the DOL safe harbor rules and fiduciary responsibility.

Also, actions taken by the U.S. Department of Treasury would help remove some of the constraints faced by plan sponsors in purchasing annuities. The application of the annual required minimum distribution (RMD) rules are relaxed to allow the inclusion of longevity annuities in DC plans. RMD rules require distributions be taken from DC plans when participants turn 70½. By removing this impediment, longevity annuities, which typically do not begin to make payouts until the holders 85th birthday, can now be included as an option for participants

¹⁵¹ Executive Office of the President. 2012. *Supporting Retirement for American Families*. February 2. Council of Economic Advisers.

in DC plans. Also, the clarification of how plan qualification rules apply to annuities in DC plans will facilitate the use of such products by plan participants.

Through these changes, DC plan sponsors will be able to offer participants the option to purchase an annuity and still satisfy spousal protection rules with minimal administrative burden.¹⁵² Also, offering participants the choice of partial annuitization (investing only a part of their retirement savings in annuities) could help increase the consideration of annuities for those who desire a guaranteed income stream while maintaining overall control of their retirement plan and future. The culmination of these actions could have a significant impact on demand for annuity products.

Pension Risk Transfer

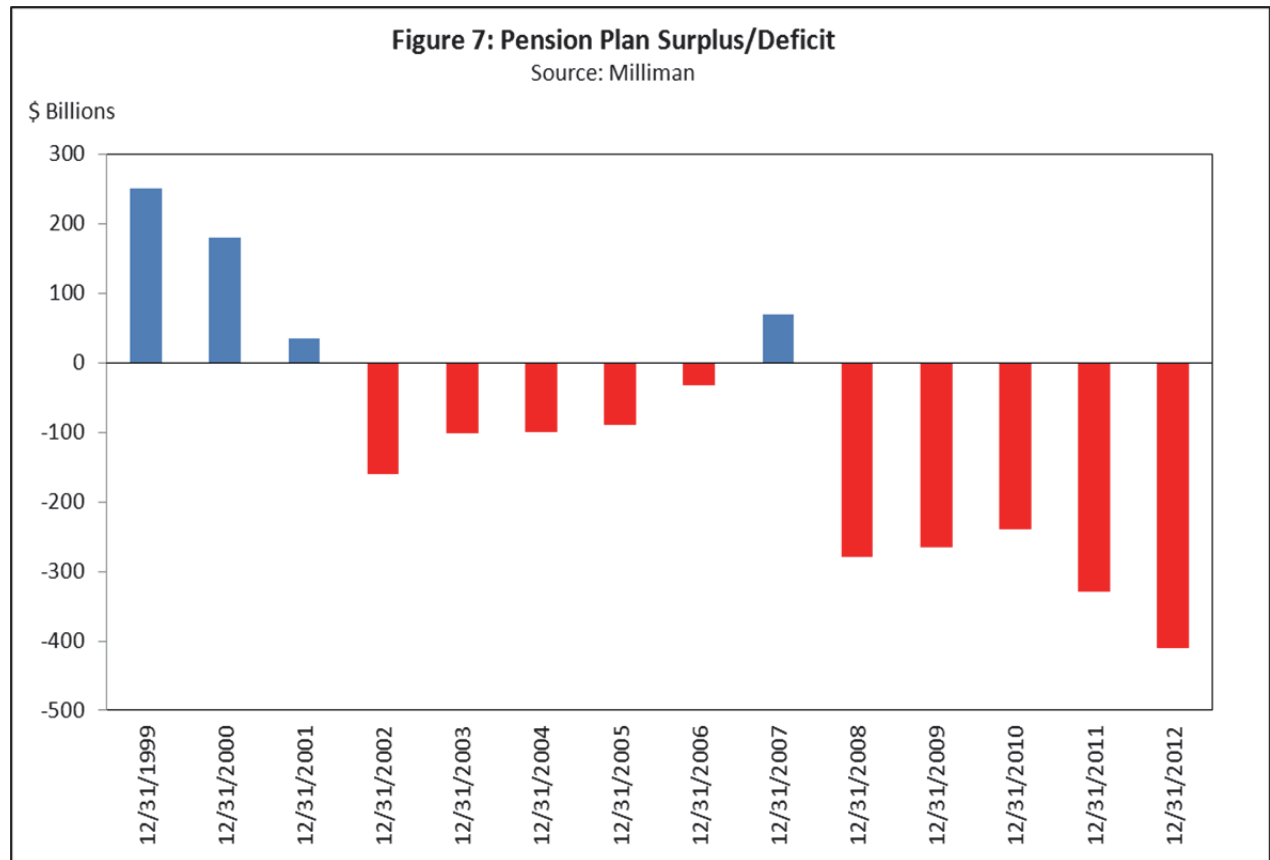
By NAIC Staff

The economic uncertainty and market volatility, especially following the 2008 financial crisis, has turned an increasing number of companies to pension risk transfer as a solution to their plans' rising deficits and spiraling contributions. After years of experiencing significant losses in their pension plans, many large companies sponsoring pension plans are looking to life insurance companies to help them remove such non-core risks which pose a potential constraint to their growth. The reduction or complete elimination of pension risks is accomplished with the use of institutional annuity products.

For most of the past decade, many plan sponsors experienced deficits in their funding due to volatile investment returns and declining discount rates. Two economic downturns in the last 10 years have drained significant value of many pension plans while their liabilities continued to grow. The pension plans of the 100 largest DB pension plans sponsored by U.S. public companies included in the Milliman 100 Pension Funding Index suffered a record year-end 2012 funding deficit of \$411.8 billion, a 26 percent increase from the 2011 year-end deficit of \$326.8 billion and a 77 percent jump from the end of 2010 (Figure 7). This is the largest deficit recorded in the 12-year history of the Milliman Pension Funding Study.¹⁵³

¹⁵² Executive Office of the President. 2012. Supporting Retirement for American Families. February 2. Council of Economic Advisers.

¹⁵³ Ehrhardt, W. John and Wadia, Z. 2013. "Historic Low Interest Rates Increase Pension Funding Deficit in 2012." Milliman 100 Pension Funding Index, January.



Although there was a year-to-year improvement in the investment returns in 2012 for most pension plans, their funded status still worsened further due to historically low discount rates. According to Milliman, the cumulative investment return during 2012 was 9.3 percent while the cumulative liability return—the projected benefit obligation increase—was an even higher 14.4 percent. In this low interest rate environment, the only way for plan sponsors to offset their rising pension liabilities is through exceptional investment returns or higher cash contributions. Continuing to support underfunded pension plans can adversely impact companies’ balance sheets and negatively affect their credit ratings, increasing their cost of capital.

Given increasing pension fund liabilities and funding deficits, many pension plans are more often looking at risk-transfer mechanisms to reduce their pension obligations. Additionally, stricter disclosure and funding rules from the Pension Protection Act of 2006 are expected to increase liability recognition and funding needs. Furthermore, new mortality improvement projection scales and base rate mortality tables are expected by 2015. The recognition of longevity risk—and any resulting increase in pension liabilities—as companies incorporate these new scales and tables could put greater strain on liability funding needs. It could also expose companies to potential negative valuation assessments, thus increasing their desire to reduce exposure to longevity risk and seek mitigating solutions.

Risk Transfer Mechanisms

In general, pension plans de-risk their portfolios by transferring longevity risk through a buy-in, a buy-out, or a longevity insurance transaction. In a buy-in, the insurance company issues an annuity kept on the pension plan's financial books. The plan sponsor pays a single premium in exchange for periodic payments matching those of its pension obligations. The plan sponsor uses the periodic payments to pay the benefits owed to plan participants. Buy-in transactions are useful to companies whose plans are under-funded and who wish to transfer risk to reduce accounting and funding volatility without triggering a settlement.

A buy-out is designed for well-funded plans wanting to settle their liabilities. It is the full transfer of pension plan assets and liabilities from the sponsor's balance sheet to that of a life insurer. The main benefit of a full pension risk transfer for plan sponsors is it eliminates all related risks, such as investment, interest rate, longevity, and credit default, as well as all associated costs like investment management, administration, and Pension Benefit Guaranty Corp. premiums. Following the buy-out, plan participants receive individual contracts underwritten by the life insurer and have no additional pension claims with the plan sponsors.

Longevity insurance (longevity swap) replaces the unknown cost of future obligations with the purchase of a known liability. The pension plan pays a fixed periodic premium based on mortality assumptions to a counterparty (either an insurer/reinsurer or an investment bank). The swap counterparty in turn pays a floating premium to the pension plan based on the difference between actual and expected mortality experience. An index swap is an emerging type of longevity swap in which mortality rates are based on the experience of an index rather than the portfolio.

Longevity bonds are a future possibility and would be used by pension plans to hedge their portfolios against longevity risk. The bonds would be correlated to an index of a given population. The buyer would receive a higher coupon payment when survivorship in the population is high, thus offsetting its higher obligation payments.

Insurers can limit the amount of longevity risk they assume through pension risk transfers by offloading it after purchase to the capital markets, to an insurer/reinsurer, or to both. This was done in 2011, when Rolls Royce transferred \$3 billion in pension liabilities to Deutsche Bank which, in turn, transferred portions of it to a group of insurers/reinsurers.¹⁵⁴ Additionally, insurers can hedge their longevity risk directly through capital market transactions. Hedging provides an effective way to reduce volatility within portfolio outcomes. Given the growing need for institutions to protect against longevity, the use of capital market solutions such as forward contracts, longevity hedging, swaps, and securitizations are expected to increase.

¹⁵⁴ Crosson, Cynthia, 2012. "Emerging Trends in Life Reinsurance: Non-Traditional Players Enter Global Longevity Risk Transfer Market." *Reinsurance News*, Issue 72, March

The Market

Most pension risk transfer transactions have occurred in the United Kingdom due to this jurisdiction's specific longevity risk capital charge. However, transactions are beginning to surface in the U.S. and elsewhere. In 2012, General Motors' eliminated \$26 billion of pension liabilities by moving 67 percent of retirees away from the automaker's pension plan to a group annuity plan.¹⁵⁵ In another major deal, Verizon purchased a single-premium group annuity contract to transfer approximately \$7.5 billion of its pension liabilities to Prudential Financial.¹⁵⁶

It is estimated a total of only \$2 billion to \$3 billion worth of pension-risk transfers are currently done each year in the U.S.¹⁵⁷ However, the U.S. private DB pension market has remained consistently around \$2.4 trillion.¹⁵⁸ As the need to offload pension liabilities grows, the demand for these risk transfer transactions will likely increase and could reach enormous proportions. As a top executive of a large life insurer stated in an interview with CIPR staff, buy-outs of pension plans are "a big opportunity to put a lot of capital into and a big opportunity for profit."

The capacity of the life insurance market to absorb the enormous growth potential for pension risk transfers has been raised as a concern. In the U.S. life insurance market, there are only a handful of large companies capable of potentially handling multi-billion dollar pension risk transfer transactions and a few mid-size carriers capable of moving in to meet demand from smaller plan sponsors.¹⁵⁹ This issue was illustrated when Dutch insurer Aegon hedged its annuities by transferring €12 billion in longevity risk to Deutsche Bank through a longevity swap in 2012.¹⁶⁰ The company cited the size of the transaction in its decision to use the capital markets instead of reinsurance.¹⁶¹ Furthermore, although life insurers have great expertise in managing mortality risk, taking over pension liabilities exposes them to additional risks. These risks are covered in a later subsection.

Contingent Deferred Annuities

By NAIC Staff

Contingent deferred annuities (CDAs) are a buy-in product that emerged onto the scene in 2008 as a way of guaranteeing invested assets not held by an insurer. Their benefits are very similar to variable annuities with guaranteed lifetime withdrawal benefits (GLWB), as they provide

¹⁵⁵ Longevity risk transfer takes many forms, GM offloads \$26 billion pension liabilities | www.artemis.bm.

¹⁵⁶ Moore, R. (n.d.). Verizon Prudential Complete Partial Pension Buyout. *PLANSPONSOR.com*.

¹⁵⁷ SSgA Capital Insights. 2012. "A Potential DB Game Changer." State Street Global Advisors.

¹⁵⁸ Cerulli Quantitative Update. 2102. "U.S. Retirement Market 2012." Cerulli Associates

¹⁵⁹ Moody's Investor Service. 2012. "Pension Terminations: No Free Lunch" Special Comment, August 2, 2012.

¹⁶⁰ Whittaker, T. (n.d.). Aegon €12 billion longevity swap 'shows appetite of capital market for diversifying assets.' Risk.net.

¹⁶¹ The transaction was unique not only in its size, but in that it used an index-based modeling approach which proved to be appealing to capital market participants looking to diversify their sovereign or corporate credit risk holdings.

protection against outliving one's assets. CDAs allow investment owners to insure their investments against longevity risk without actually purchasing a variable annuity.

Unlike variable annuities, the underlying investment funds (or covered assets) linked to CDAs are not held on an insurer's separate accounts. Thus individuals retain ownership and greater control over their invested assets. Additionally, since CDAs isolate coverage to guaranteed income protection, and do not provide a death benefit, they can be priced competitively against variable annuities with GLWB riders, which offer both.

Insurers market CDAs to advisors of mutual funds, separate managed accounts and fee-based products sold by brokers.¹⁶² Given the large volume of funds coming through these investment vehicles, the CDA market has the potential to significantly boost insurers' sales volumes. While advisor interest in annuities has been weak in recent years, the increase in demand for guaranteed income protection in retirement could reverse the trend.

CDAs are an emerging product. Many of these newly released or soon-to-be released products are sold in the individual market. However, pairing a CDA with a nonqualified account does not offer the same tax-deferred status afforded to variable annuities. For this reason, pairing CDAs with qualified employer-sponsored plans may offer individuals the ability to gain income protection and preferential tax treatment. However, advisor interest in annuities has been weak, due in part to the uncertainties inherent with an emerging product. Insurance companies and regulators are still working towards a regulatory and operating framework that establishes clear guidelines for supervisory authority, applicable regulations, and information transparency.

Regulatory Implications of the Risks Inherent in Longevity Products and Transfer Mechanisms

By NAIC Staff

Regulatory Activities

As the longevity risk market continues to innovate and develop new products, insurance regulators are evaluating the adequacy of the current regulatory framework in place to govern these products. Specifically, regulators are working toward answering questions surrounding the supervisory authority, sufficiency of current laws and regulations, suitability, consumer protection, solvency, transparency, and potential contagion risk of emerging products. To address these concerns, many domestic and international work streams have been established to study the related issues and their implications on and across the various financial sectors.

¹⁶² Hersch, W. (2012). "Hit the Gas." *LifeHealthPro*, Retrieved from www.lifehealthpro.com/2012/06/01/hit-the-gas?t=suitability

In 2012, the Joint Forum¹⁶³ established a work stream to examine the potential for contagion issues in the longevity risk market. The Joint Forum's Risk Assessment and Capital Working Group is expected to finish a report on the cross-sectorial aspects of the longevity risk transfer market during 2013. State insurance regulators, working through the NAIC, assist the Joint Forum in this work by participating in discussions and commenting on papers related to this work. The Joint Forum recognizes the potential size of the longevity risk transfer market is so large, if improperly controlled and monitored, excessive build-up of risk could occur in one or more sectors, with the potential for harm to the financial system.

State insurance regulators, through the NAIC, are currently studying issues surrounding CDAs. As stated earlier, CDAs are new products designed to provide longevity risk protection. Their regulation has varied by state, with some states not allowing them at all. Questions surrounding product classification and applicability of existing regulations on reserving, solvency, regulatory authority, and consumer protections continue to be considered and addressed in the relevant NAIC Committees of jurisdiction. In addition, the Life Risk-Based Capital (E) Working Group will consider whether there should be an explicit and separate factor for longevity risk in 2013.

Other federal regulatory activities include developing strategies to increase the use of annuities in DC plans. The new federal guidelines make it easier for individuals to purchase annuities. However, retirement plan sponsors are reluctant to offer annuity products due to concern over their fiduciary responsibilities for selecting an annuity provider under ERISA. As noted earlier, the DOL is working with state insurance regulators through the NAIC ERISA (A) Fiduciary Working Group to consider options for easing plan sponsor concerns about the soundness of annuity providers in the context of DOL fiduciary responsibility and safe harbor rules.

As new products designed to provide protection against longevity risk roll out, regulators will need to gain a deep understanding of the inherent risks. Concerns about the ability of participants to adequately control their exposure to a risk difficult to quantify and mitigate will need to be addressed. Additionally, regulators will need to identify ways to ensure insurers maintain appropriate levels of capital and mitigate effectively against counterparty, concentration, and basis risk.

Difficulty Quantifying Longevity

How to accurately predict mortality rates has been a widely debated and contentious subject. Many experts predict the rate of mortality improvements to moderate in the future. They point out survival rates for younger populations may have reached their upper boundaries, although all such prior predictions have been wrong. Nonetheless, given this and the significant advances

¹⁶³ For more on the Joint Forum see: www.naic.org/cipr_topics/topic_joint_forum.htm

in limiting mortality from extrinsic activities, many experts argue continued mortality reductions would need to stem mostly from mitigating intrinsic causes of the biological process of aging. Although advances in such activities as stem cell research and cloning biological parts hold promises to do just that, they are in their infancy and are not expected to impact longevity in the near future. Other experts predict a sharp increase in life expectancies, with a predicted life expectancy at birth of 100 in 2060.¹⁶⁴ Still others argue there are limits to a human's life span and question whether we have approached these limits.

Capacity and Capital Adequacy

The longevity risk market is currently in its infancy. However, given the level of current pension obligations, it has the potential to reach enormous proportions. Global longevity exposure from pension funds (90%) and insurance contracts (10%) has been estimated at \$21 trillion of asset protection.¹⁶⁵ Regulators are concerned the potential immensity of longevity exposure could be beyond the capacity of the insurance industry. There are also concerns longevity risk products, if improperly sold and priced, could exhaust the capacity of state guarantee funds or not qualify for protection under certain state laws. To this effect, the National Organization of Life and Health Guaranty Associations (NOLHGA) has preliminarily concluded that CDAs would fall within the scope of the NAIC Life and Health Insurance Guaranty Association Model Act (#520). This Model Act serves to protect policy owners, insureds, and beneficiaries, against losses from the impairment or insolvency of an insurer.¹⁶⁶

Protecting policyholders and ensuring financial stability requires life insurers/reinsurers to appropriately account for longevity risk within their capital models. However, current factor-based capital models fail to effectively consider longevity trends, and standard stochastic mortality models fail to incorporate portfolio-specific characteristics. Moreover, prospective life tables projecting longevity have not been updated frequently enough and often underestimate improving mortality rates. This underestimation of life expectancies can lead to substantial underfunding of liabilities. One study suggested outdated mortality tables resulted in a 12% understatement of pension liabilities for a typical male participant.¹⁶⁷ The issue, in part, is due to the difficulty in quantifying the uncertainties inherent in such a long-tailed risk and the impact of future interest rates. Additionally, national tables in many jurisdictions tend to be based on aggregated population data lacking pertinent demographic and socio-economic data.

¹⁶⁴ Siegel, Jacob. 2005. "The Great Debate on the Outlook for Human Longevity: Exposition and Evaluation of Two Divergent Views." *SOA Living to 100 and Beyond - 2005 Monograph*.

¹⁶⁵ Crosson, C. 2012. "Emerging Trends in Life Reinsurance: Non-Traditional Players Enter Global Longevity Risk Transfer Market." *Reinsurance News (SOA)*, March 72, 10.

¹⁶⁶ NAIC Life and Health Insurance Guaranty Association Model Act (#520)

¹⁶⁷ *Global financial stability report: the quest for lasting stability* (pp. 123-151). (2012). The Financial Impact of Longevity Risk. Washington, DC: International Monetary Fund (IMF).

Current and Emerging Product Trends

U.S. statutory risk-based capital (RBC) models also fail to adequately account for longevity risk, as they lack a charge specific to this risk. As such, state insurance regulators are now looking into adding such a charge to the NAIC RBC calculation. A longevity risk charge would help ensure insurers keep sufficient capital to account for the longevity risk embedded in their contracts. It also forces insurers to assess their capacity limits for taking on additional longevity risk.

The incorporation of dynamic assumptions and variables under principle-based stochastic models is expected to provide better capital estimates, but in specific instances would need to incorporate explicit longevity assumptions. Insurance contracts issued in and beyond 2015 will likely be subject to principle-based reserving (PBR). PBR is a new paradigm shift and will require companies to use experience studies in their reserving analysis. It will also mandate insurers share their experience data with statistical agents who compile the data for use by the Society of Actuaries in their published experience tables.

Counterparty and Concentration Risk

As the financial crisis demonstrated, counterparty risk can present significant dangers. Longevity risk transfer mechanisms allow pension plans, insurers/reinsurers, and investment banks to de-risk their portfolios, but add counterparty default risk. The ability to ensure the strength of counterparties—potentially over extended periods—the sufficiency of collateral posted for security, and the transparency of secondary trading transactions is of key concern to state insurance regulators. Reliance on third-party investment management, particularly in partial risk transfers, also presents concerns on market risk and the ability of the counterparty to accurately reserve for future obligations. Requirements ensuring assets are kept as a segregated fund or an agreed-upon investment strategy can help to mitigate these risks.

Additional state insurance regulatory concerns include insurers' ability to project appropriate withdrawal rates to protect against policyholders pulling out too much money. This is of particular concern with buy-in transactions, as they involve a full transfer. Careful review of policies by regulators when they are filed, together with the appropriate capital charges, will help to secure appropriate pricing and product design.

Investment banks participating in the longevity risk market typically offload their assumed risks through securitizations sold to insurers/reinsurers and investors looking to diversify their portfolios. Although it is not completely clear yet exactly who these investors will be, they will likely include large fund managers and brokers. There is potential for these large players to unknowingly create interconnected counterparty risk or concentration risk by redistributing the very same risk to those that sought to divest from it, thereby creating a spiral effect. Counterparty exposure to tail risk from sudden increases in mortality rates, as would occur in a

longevity swap, could also pose an unforeseen risk. Transparency of the risks bundled through securitization is critical to successful regulatory monitoring of the potential for interconnectivity

Basis Risk

The ability to quantify and manage transparently residual basis risk resulting from actual portfolio mortality trends is also of concern to state insurance regulators. Basis risk is the residual risk from two offsetting risks not perfectly matched. Life insurers/reinsurers can hedge large books of mortality-based business with longevity risk, as unanticipated increases in death claims would be expected to be offset by a lack of claims from unanticipated increases in longevity. The hedge is imperfect, however, as populations are not homogeneous between books of business, leaving the insurer exposed to basis risk.

The insurance industry also faces basis risk in the difference between the mortality trends of national and industry indices and the actual mortality and longevity experienced in their book of business. This discrepancy arrives from selection criteria insurers use to accept policyholders. Likewise, the variance between actual mortality trends and those of aggregated indexes would expose investors to basis risk and create opaqueness in the assumptions insurers use for hedging strategies. Additionally, the likelihood that those pension plans seeking longevity relief would be experiencing longer mortality rate trends than their counterparts exposes insurers/reinsurers and investment banks to adverse selection when entering risk transfer agreements.

Conclusion Related to Risks Inherent in Longevity Products

Life insurers' experience managing life contingent products and their natural hedge against longevity risk make them an obvious player in the search for longevity solutions. However, the potential enormity of this exposure could have significant consequences for the industry if not controlled. Risk sharing with reinsurers and capital market participants may be inevitable. This brings additional concerns the continual transfer of longevity risk between capital market participants from a wide array of institutions and sectors could create significant regulatory challenges to the insurance sector and, in the worst cases, the wider financial system. These challenges can be mitigated through regulations already in place restricting hedging and other investment activities, as well as through transparency and future limits on distribution. Capacity and capital adequacy concerns will need to be managed by state insurance regulators through appropriate longevity risk charges and modeling assumptions. Furthermore, third-party risks must be managed by mandating transparent liability data and investment strategies. Finally, regulators must ensure insurers use appropriate risk control mechanisms and suitable product design.

The Growing Need for Long-Term Care Insurance

By Andrew Melnyk, Ph.D. (American Council of Life Insurers—ACLI) ¹⁶⁸

Health During Retirement

Researchers have not reached consensus on whether morbidity in old age has changed significantly. It is clear, however, as people age the incidence of degenerative diseases require constant care and monitoring in their advanced stages, such as Alzheimer's and dementia, become more common and are costly to manage. Alzheimer's is of particular concern, with 43 percent of all seniors 85 and over having this condition.¹⁶⁹ A recent study also found limitations in basic activities of daily living (ADL's) among those 65 and over increased nine percent between 2000 and 2005 (Fuller-Thompson et al., 2009). Indicators of poor health, many of which can be better managed than in the past, are also on the rise among the elderly. For example, during the 1988-1994 time period, 41 percent of men 75 or over and 43 percent of women 75 and over were of a healthy weight. By 2005-2008, this declined to 28 percent and 36 percent, respectively. Similarly, during those same time periods, the percentage of men 75 and over who had high cholesterol or were being treated for high cholesterol increased from 24 percent to 39 percent, and women from 41 percent to 52 percent. Finally, in 1988-1994, 20 percent of those 65 and over had diabetes. By 2005-2008 this increased to 27 percent (CDC, 2010).

A rapidly aging population, along with greater longevity and a potential increase in morbidity suggest the demand for LTC (i.e. LTC utilization rates and the length of time receiving LTC) may soon increase significantly, placing an unanticipated financial burden on many seniors, families, and state and federal government. According to the U.S. Department of Health and Human Services, about seven out of 10 seniors will require LTC services at some point during their lives and more than four in 10 will need nursing home care.¹⁷⁰ While 30 percent of seniors may never use LTC, 20 percent will require it for more than five years. Indeed, the Federal Administration on Aging estimates the number of seniors requiring LTC is expected to reach 15 million by 2020, 50 percent more than in 2010 (Greenlee, 2011).

For many seniors, long-term care is the most costly part of retirement. Since 2003 the cost of nursing home care has been increasing at an average annual rate of 4.5 percent, almost double the rate of inflation.¹⁷¹ Currently, the average cost of a year-long stay in a nursing home is

¹⁶⁸ This section was authored by Andrew Melnyk for the NAIC CIPR Study on the State of the Life Insurance Industry. The opinions expressed are solely those of the author and not necessarily those of ACLI, ACLI member companies, or of the NAIC.

¹⁶⁹ Source: Alzheimer's Association (2011) and Genworth (2005).

¹⁷⁰ National Clearinghouse for Long-Term Care Information, U.S. Department of Health and Human Services (See: www.longtermcare.gov). Nursing home care is the most intensive and expensive form of LTC available.

¹⁷¹ Based on data from: MetLife, "Market Survey of Long-Term Care Costs: The MetLife Market Survey of Nursing Home, Assisted Living, Adult Day Services, and Home Care Costs," *various issues*.

\$87,235 for a private room and \$78,110 for a semi-private room, about six times the average Social Security benefit for a retiree.¹⁷² Currently, the average cost of one year of residence in an assisted living facility is \$41,724.¹⁷³ The cost of a full-time home health aide averaged \$43,680 per year.¹⁷⁴ If costs simply continue to increase at a similar rate, it is projected that a year-long stay in a nursing home will cost \$124,500 for a private room and \$117,500 for a semi-private room by 2020; residence for one year in an assisted living facility will cost \$55,600; and full-time home health care will cost about \$53,000 per year.^{175,176}

Few seniors have LTCI and few can afford to pay out-of-pocket. Those who have neither LTCI nor sufficient income either forego care—turning to family, friends, and neighbors for assistance—or become impoverished and qualify for Medicaid.¹⁷⁷ Today, only 8.2 percent of LTC expenditures are paid by private insurance, compared to 34.2 percent for all other health care services, with the remainder paid by government (32.4 percent by Medicaid and 31.2 percent by Medicare); out-of-pocket (20.7 percent); or by other third parties (7.5 percent) (Figure 8).¹⁷⁸

¹⁷² From: MetLife (2011). All reported figures are based on 2011 data. On average, 28 percent of nursing home residents occupy a private room and 72 percent a semi-private room.

¹⁷³ MetLife (2011). Assisted living facilities charge additional fees for services such as dementia care, frequent personal care, and special meal or laundry service.

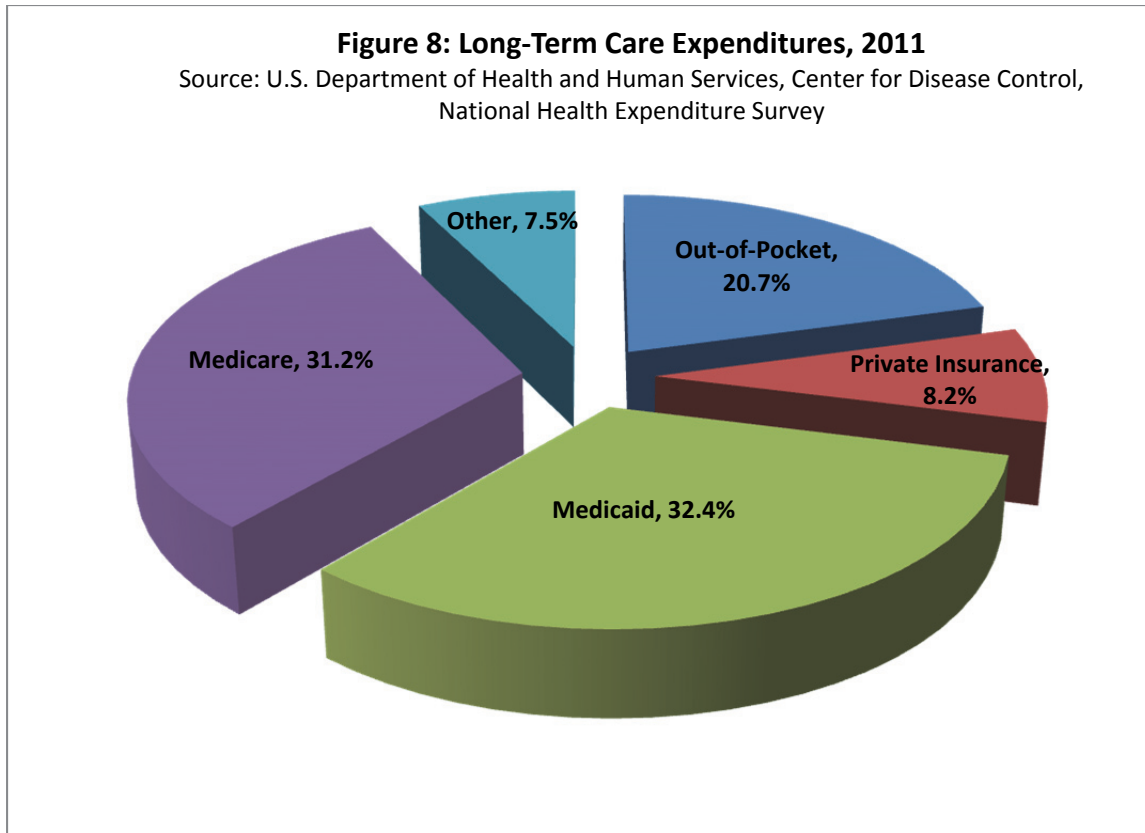
¹⁷⁴ Ibid

¹⁷⁵ Not adjusted for overall inflation.

¹⁷⁶ From: MetLife (2011). It should be noted there is a great deal of regional disparity in the cost of LTC. For example, in some parts of Texas a one year stay in a semi-private room in a nursing home costs \$44,895, whereas the same room costs \$239,075 in Alaska. Similarly, the cost of a private room ranged from \$51,465 in parts of Louisiana to \$247,470 in Alaska. The base cost of a one-year residence in an assisted living community ranged from \$25,872 in areas of Arkansas, to \$69,084 in Washington, DC; and the cost of a full-time home health aide ranged from \$29,120 in Shreveport, LA, to \$70,720 in Rochester, MN.

¹⁷⁷ Medicare covers only post-hospitalization skilled long-term care services for a limited time. It does not pay for any non-medical home care.

¹⁷⁸ From: U.S. Department of Health and Human Services, Center for Disease Control, National Health Expenditure Projections, 2010-2020. These figures only include home care and nursing home care, not assisted living or other forms of long-term care.



The Old Long-Term Care Model

Today 15 million Americans provide unpaid care for a person with Alzheimer’s disease or another form of dementia.¹⁷⁹ But in previous generations informal care, where seniors rely on family, friends, and neighbors to provide LTC, was much more common. Significant societal and demographic changes have made informal, home-based care an increasingly less viable alternative to formal LTC. Specifically, over the last few decades there has been a decline in fertility, an increase in job-related mobility, greater labor force participation among working-age women, higher divorce rates, and increases in the number of people who choose to remain single, all of which result in smaller households and, eventually, a decline in the number of working-age adults per senior.

A common reason for choosing to forego LTCI is the belief informal care provided by a spouse or one’s children is an adequate and inexpensive substitute for formal LTC. Although this belief may serve as a disincentive for the purchase of insurance, several studies argue there is a high hidden cost to informal care, and family members, although well-intentioned, may not have the skill to care for relatives with many ADL limitations.¹⁸⁰ According to a recent study by the National Alliance for Care Giving, six percent of caregivers quit work to care for an older person,

¹⁷⁹ Alzheimer Association (2011).

¹⁸⁰ See: Mellor (2001) and Pauly (1990).

nearly 10 percent have to cut back their work schedules, 17 percent take a leave of absence, and four percent turn down promotions. Women are more likely to be primary providers of informal care for elderly spouses and other family members and tend to carry a greater share of the burden. Today, women provide between 60 and 75 percent of family or informal care.¹⁸¹ Specifically, Johnson and Weiner (2006) found two-thirds of unpaid caregivers for elderly adults are women, usually adult daughters. Women are also more likely to retire early in order to care for a spouse or elderly parent. Johnson and Lo Sasso (2006) concluded “women who help their parents over a two-year period cut back their work hours by 367 hours per year, or 41 percent on average.”

The Need for Long-Term Care Financing

Long-term care services include home health care, assisted living, and nursing home care. Typically, LTCI benefits are paid when a policyholder needs help with two or more ADLs or is cognitively impaired. Home health care is most appropriate for individuals who have fewer limitations in ADLs, is most flexible, and is a less expensive form of LTC. “Assisted living” refers to a broad range of living arrangements and is generally not covered by Medicaid or Medicare. Nursing homes, the most expensive and comprehensive form of care, focus on those who are most dependent.¹⁸² Until 1992, home health care made up less than 24 percent of total LTC spending. Since then, it has grown to 33 percent. According to the American Association for Long-Term Care Insurance, newly opened LTCI claims typically begin with assisted living (44 percent) or home health care (35 percent).

Because it is a long-term product, when issuing an LTCI policy and determining premiums, insurers predict the likely cost of care as well as the investment climate 20, 30 or more years into the future. They must also consider an individual’s age and health at the time the policy is purchased, the extent of coverage, specific benefits, and various options chosen (e.g., a “free look” period, inflation protection, shorter or longer elimination period, coverage of Alzheimer’s, a waiver of premium provision, benefit periods, various levels of maximum daily benefit, etc.). Though LTCI premiums are designed to remain unchanged throughout the life of a policy and are based on the assumption an individual will hold the same policy until they need LTC, many factors can change during the life of a policy. Because of uncertainties, regulators and insurers continue to struggle with adequate pricing. If it is actuarially justified, an insurer can file a request for a rate increase with a state insurance department. Regulators may permit insurance companies to increase premiums on existing business on a “class” basis. Rate increases occur most often when an insurer has continued coverage of products acquired from other companies who have left the LTCI market.

¹⁸¹ AALTCI (2010).

¹⁸² See Stone (2000) for a more complete discussion of this topic.

It is particularly important for women to plan for their future needs for long-term care. After age 65, women are far more likely than men to need the services of a nursing home, outnumbering men about 3 to 1. They also reside in nursing homes longer than men. A typical elderly female resident spends 2.6 years in a nursing home, compared to 2.3 years for a typical male.¹⁸³ One reason for this difference is women are more likely to be widowed and to live alone than are men. On average women marry at a younger age than men, with the median age at first marriage being 28.4 for men and 26.5 for women, so they are usually younger than their spouses. Women tend to live longer than men, with life expectancy at birth for men in the U.S. being 75.6, whereas for women it is 80.8.¹⁸⁴ For these reasons women are more likely to spend their elder years alone.

When LTCI was first introduced, most purchasers were in their 60s or 70s. In recent years the average age of new policyholders has declined. For example, the average age of a LTCI purchaser in the individual market decreased from 72 in 1990 to 62 in 2001.¹⁸⁵ By 2010, 56 percent of those who purchased individual LTCI were between 55 and 64, with 45- to 54-year-olds composing the next largest group (20.9 percent).¹⁸⁶ Interestingly, the average age of LTCI policyholders who purchased their policy through an employer has been increasing. From 1990 to 2000, the employee purchaser's age was constant at about 43. From 2001 to 2013, it increased to about 46.¹⁸⁷ However, buying LTC so early means there are a lot of unknowns about the costs associated with LTCI, and greater changes will likely occur during the life of the policy.

In 2009 only 6.1 percent of those 45 and older had LTCI coverage, compared to 83.9 percent of Americans between age 45 and 64 who had private health insurance coverage, most of which was employer-based.¹⁸⁸

The Role of Medicaid in Long-Term Care

Some households, particularly those with very high incomes, may make a conscious decision to simply pay out-of-pocket if LTC is required. But, among middle- and lower-income households, a frequently cited reason for low LTCI coverage is the availability of substitutes, particularly Medicaid.¹⁸⁹ Medicaid is a means-tested program where individuals qualify for LTCI coverage if they do not have enough income, assets, and/or insurance to pay for the care on their own.

¹⁸³ AALTCI (2010).

¹⁸⁴ U.S. Census Bureau, "American Community Survey," 2009.

¹⁸⁵ HIAA (2003).

¹⁸⁶ AALTCI (2010).

¹⁸⁷ Coronel (2011).

¹⁸⁸ U.S. Department of Commerce, Census Bureau, "Income, Poverty, and Health Coverage in the United States: 2009," September 2010.

¹⁸⁹ See: Brown and Finkelstein (2008).

Though it is a very costly public program, Medicaid serves as an effective safety net. Indeed, those in the lowest income and asset groups may rationally choose to not purchase LTCI.¹⁹⁰ But many middle-income individuals at or close to the Medicaid income and asset threshold may also prefer to forgo LTCI, and rely on Medicaid instead. Eligibility rules are such that middle-income seniors may qualify for coverage by spending down their income and assets. A sizable number of middle-income people do in fact qualify for Medicaid.¹⁹¹ By some estimates about 30 percent of elderly residents whose primary source of payment is Medicaid first entered a nursing home as out-of-pocket residents, spent down their assets, and eventually qualified for Medicaid.¹⁹² Because spending down after entering a nursing home is common, Medicaid has effectively become a safety net both for the poor and middle-income who fail to adequately plan for their long-term care needs.

To qualify for Medicaid, the recipient and their spouse are allowed to keep a very limited amount of income or assets. The bulk of the Medicaid budget is spent on nursing home and home health care. LTCI policies are more likely to cover all forms of LTC services, not require prior hospitalization, and offer options for receiving care. Flexibility is important because most seniors prefer the comfort, familiarity and independence of home-based care or assisted living and in most cases would rather delay entering a nursing home. In fact, a recent survey found 37 percent of LTCI beneficiaries receive home health care, 23 percent are in assisted living, and only 14 percent are in a nursing home.¹⁹³ It is also important to note seniors who have LTCI are more likely to settle into one particular form of care rather than transitioning from one form of care to another.¹⁹⁴ When LTCI policyholders do transition, it is for medical rather than financial reasons.

Partnerships for LTCI

State Partnerships for LTC, first introduced in 1992 in California, Connecticut, Indiana, and New York, were targeted to middle-income families who want to protect their assets. Under State Partnerships, consumers must purchase private LTCI, but when benefits are exhausted, the insured will qualify for Medicaid and will be permitted to retain a certain amount of assets. However, soon after the program was established, Congress suspended expansion due to concerns about a publicly funded program endorsing private insurance and a fear that

¹⁹⁰ See: Konetzka and Luo (2010) and Brown and Finkelstein (2008).

¹⁹¹ According to the U.S. Government Accountability Office (September 2005, p. 2): “[t]he evidence on the extent to which individuals transfer assets to become eligible for Medicaid long-term care is generally limited and often based on anecdotes”. See Waidmann and Liu (2006) and Bassett (2007) for additional analysis. An important deterrent is a 3- to 5-year “look-back” period on all assets and income to determine Medicaid eligibility.

¹⁹² Wiener et al. (1996).

¹⁹³ From: Doty et al. (2010). Please note, 26 percent had not yet begun care at the time of the survey but had filed and were approved.

¹⁹⁴ See: Doty et al. (2010).

Partnerships would increase overall Medicaid spending. It was eventually determined this concern was unfounded. From 1992 to 2005 Medicaid LTC spending continued to increase, despite the suspension. During this time, interest among non-Partnership states also increased. In 2005 Congress responded by allowing the Partnership program to expand. They did so under the Deficit Reduction Act of 2005 (DRA). Currently, in addition to the four initial Partnership states, 36 state Partnerships have become operational. In total, 40 states are either DRA Partnership states or are pre-DRA.¹⁹⁵ There were 286,434 partnership policies in force throughout the United States as of December 31, 2010, but only 119 policyholders had exhausted their policies and accessed Medicaid.¹⁹⁶

Partnerships benefit seniors, their families and ultimately taxpayers and have the support of both industry and most regulators. Essentially, there are two types of Partnership policies: (1) dollar-for-dollar, which protects a specified amount of assets; and (2) total asset protection, where 100 percent of assets are protected when private insurance coverage is exhausted. Because Partnership policies are initially covered by private LTCI, seniors have a greater selection of services and may have the option of living at home. Policyholders and their families do not become impoverished and states pay only a fraction of long-term care costs.¹⁹⁷ Medicaid clearly gains from these programs because households have a strong incentive to take responsibility for most of their LTC, saving Medicaid resources for those who are truly low income.

The Future of LTCI

By 2020, 15 million Americans will need LTC, compared to 10 million today, a 50 percent increase in less than a decade (Greenbe, 2011). Though in the last few years sales of traditional LTCI products have declined somewhat, hybrid products, which combine some form of life insurance or annuity with a long-term care benefit, have become very popular. According to LIMRA International, sales of LTC/life insurance combination products jumped 56 percent in 2011, the third consecutive year of double-digit gains. In fact, a recent survey of life insurance industry professionals found 75 percent of respondents thought sales of LTC/life insurance combination products will grow over the next three years. Similarly, 66 percent felt sales of LTCI/annuity products will grow during the same time frame (Douglas, 2012). In the same survey, 67 percent of respondents reported feeling optimistic about the future of LTCI because of the need for private solutions, given the inability of government to pay for care; 58 percent felt optimistic because of increasing consumer awareness; and 42 percent because of changing

¹⁹⁵ California, Connecticut, Indiana, and New York are pre-DRA and were grandfathered.

¹⁹⁶ See: <http://w2.dehpg.net/LTCSPartnership/Reports.aspx>.

¹⁹⁷ Robert Wood Johnson Foundation, "Issue Brief - Long-Term Care Partnership Expansion: A New Opportunity for States," May 2007.

demographics. LTCI is clearly evolving as industry knowledge grows and as consumers become more aware of the need for LTC.

Challenges and Opportunities for the Life Insurance Industry

Seventy-five million American families, about two out of three, rely on life insurance products to ensure financial security. Despite a slow economy, the life insurance industry is financially stronger than at any other time in the past. In 2011, assets totaled \$5.5 trillion, 3.4 percent greater than in 2010. Both premium income and investment income were greater than in 2010, at \$634 billion and \$221 billion, respectively, and the average RBC ratio is now greater than at any time in the past. Given a rapidly aging population, a need for households to increasingly rely on themselves for their retirement security, financially strained public programs, and growing awareness regarding the cost of retirement and likelihood of needing LTC, the demand for life insurance products is poised to increase.

Perhaps the primary reason retirement savings and LTCI coverage are insufficient among many nearing retirement is a lack of awareness. For example, many people believe Medicare will provide for all their LTC needs. A 2001 survey showed 55 percent of adults age 45 and above falsely thought Medicare covered extended nursing home stays for “age-related or other chronic conditions.”¹⁹⁸ Since age demographics have shifted, younger working-age individuals are more likely to have greater exposure to the reality of aging and the cost of retirement via their parents. Given this exposure, they will likely better prepare for their own retirement. Additionally, though their standard of living is higher than that of their parents, individuals in the labor market during the last five years have faced greater economic challenges than baby boomers. For example, during the 2007–2011 time period, annual economic growth averaged an anemic 0.5 percent, compared to an average growth rate of 2.7 percent during 2002–2006, 3.8 percent during 1997–2001, and 3.3 percent during 1992–1996. People who are now in their 20s and 30s are more likely to be risk-averse regarding financial matters than their parents and may gain a greater understanding and appreciation of life insurance products and the need to save and plan for retirement.

Conclusion on the Growing Need for Long-Term Care Insurance

According to standard economic theory, households save and insure in order to enjoy consistent living standards over time, particularly in the event the household head or spouse dies during retirement years when they are no longer able to work. Life insurance products play an important and unique role in American life by offering families the financial security they need at such crucial times in their lives. Without life insurance and annuities, the burden on society and on individual families would be significant. More families would suffer a substantial decrease in their

¹⁹⁸ Cramer and Jensen (2006).

standard of living and many would be in danger of losing their homes or be forced to turn to government for financial support, ultimately placing a burden on society. Simply put, there is no adequate substitute for the financial security life insurers are able to provide.

Retirement security and longevity risk are particularly important issues at the present time. Baby boomers are now on the cusp of retirement and are living longer than their parents due to advances in medical care and greater prosperity relative to previous generations. Today seniors can expect to spend more years in retirement than previous generations. Since the 1930s, when Social Security was implemented, the time spent in retirement has increased by about seven years, or 57 percent.¹⁹⁹ If this trend continues, by 2030 the average 65-year-old can expect to reach age 86, and 88 by 2050, further increasing the time spent in retirement. Some researchers claim genetically based medical treatments and other advances may soon result in even greater life expectancies than those predicted by the U.S. Census Bureau and the Social Security Administration. If true, it is crucial retirement security and longevity risk be effectively managed. If people are living longer and spending more years in retirement, they will require additional financial resources. The responsibility for generating at least a portion of that income lies with the individual, but life insurers can assist in effectively managing the risk of outliving resources.

Many Americans are financially unprepared for retirement, or for the possibility of needing LTC. A disproportionate number of seniors, a declining working-age population/retiree ratio, increasing life expectancy, early withdrawal from the labor force, insufficient LTCL coverage, and frequently poor self-management of the decumulation of assets, may lay the foundation for a crisis in the very near future. At the very least, many Americans will be forced to revise their retirement expectations.

Given the increasing need for retirement products, it is particularly important life insurers innovate quickly and develop products most in demand by an aging population. Insurers urge states to be uniform in regulating policy forms on all products and keep filing times reasonable to facilitate innovation useful to consumers. It is also important state laws accommodate combination products (e.g., life insurance/LTCL; life insurance/annuity; annuity/LTCL, etc.) and that tax laws readily accommodate such products.

¹⁹⁹ ACLI calculations based on data from the U.S. Department of Health and Human Services National Center for Health Statistics, National Vital Statistics Reports, various editions. The calculations are based on a retirement age of 65.

Insurance Regulatory Perspectives on Long-Term Care Insurance

By Guenther Ruth (GHR Consulting, LLC)

LTCI is one of several ways to finance long-term costs, providing individuals with protection against the financial burdens associated with the need for long-term care services. However, the product has been very challenging to regulate. Although the product has improved tremendously over the last 20+ years, there are still regulatory and consumer protection issues insurance regulators need to address.

For those who have accumulated savings over their lifetime, LTCI can be a tool to protect their assets in the event they enter a nursing home or assisted living facility, or receive long-term care services in another setting. People can pay for long-term care in a variety of ways. Some choose to set aside a portion of their savings to finance it, while others, who have fewer assets, will rely upon the Medicaid program for their needs. For others, LTCI may be the best way to finance this care for them.

Those who elect to purchase LTCI pay a premium to mitigate the risk of incurring long-term care expenses, which will likely not occur until well after the coverage was purchased. LTCI's primary purpose is to provide protection, up to the limits of the policies, for the assets that have been accumulated by the policyholders in case they need long-term care services with their associated significant costs. In addition, with LTCI, policyholders usually have greater flexibility in choosing the source of their care than they would if they were relying upon the Medicaid program.

Since approximately 40 percent of all long-term care and 50 percent of all nursing home care is financed by state and federal governments through Medicaid, LTCI could save money for these programs' budgets. Additionally, demographic trends indicate a likely increase in the expenditures of long-term care services to governments, while at the same time, the percentage of Americans who are of working age and paying taxes to support Medicare and Medicaid decreases. To the extent LTCI is able to help people avoid spending down their assets in order to receive care through Medicaid, LTCI may be helpful to state and federal Medicaid budgets. In order for this to be a significant savings for these programs, LTCI will need to significantly increase its funding of long-term care services.

The Long-Term Care Insurance Market

Though LTCI, in its current form, has been available since the 1980s, some still consider it to be a relatively new product. The first long-term care policies, issued in 1965, were designed to supplement the limited benefits provided by the new Medicare program for skilled nursing facility care. These early long-term care policies functioned much like Medicare supplement policies, covering deductibles and coinsurance associated with care in a skilled nursing facility

covered by Medicare. For this reason, they, like Medicare, required the policyholder to spend at least three days in the hospital prior to their admission to the skilled nursing facility and required care in the facility be “medically necessary.”

By the 1980s, LTCI had evolved into a stand-alone product. It still generally covered only nursing home care, but it no longer was designed to wrap around Medicare’s skilled nursing facility coverage. It covered nursing home admissions even if they were not immediately preceded by a hospital stay, as required under Medicare. The benefit triggers were redefined from a medical necessity trigger to the policyholder’s cognitive impairment and inability to perform defined activities of daily living (ADLs), such as eating, walking and using the restroom. This change to the benefit trigger definitively moved LTCI from the acute care comprehensive health insurance model to the chronic care coverage model, a model with significantly different characteristics from a pricing, marketing and claims-handling perspective.

Since then, the product has further evolved by adding more comprehensive coverage for additional types of long-term care services—such as home health care, respite care, hospice care, personal care in the home—and services provided in assisted living facilities, adult day care centers and other community facilities. Furthermore, in addition to individually purchased policies, group LTCI policies began to make up a significant and growing portion of the market.

As the LTCI product has developed, so have the states’ LTCI regulatory programs. States enacted additional consumer protections designed to keep up with changes in policy design and pricing, and to address the problems encountered in the marketplace by consumers.

Though LTCI has not been a major player in funding today’s long-term care expenditures—financing around 10 percent of long-term care services in the United States—it has been growing steadily in recent years. In the past 10 years, the market has grown from covering fewer than 3 million lives to covering more than 7 million. In terms of premium volume, premiums are well over \$110 billion.

One factor in the growth of LTCI has been the growth in sales of group long-term care policies offered as employment benefits. Group policies have grown from a small portion of the market to well over 20 percent of the market and have continued to grow at a faster rate than individual plans. One advantage of group coverage is the medical screening criteria may be more relaxed than in an individual LTCI policy. Generally, group coverage may either be continued after an individual’s employment ends, or the policy may be converted into an individual long-term care policy, though benefits and premiums may change.

In 2002, the federal government began offering LTCI to its employees through the Federal Long-Term Care Insurance Program, making the federal government the largest group sponsor of

Current and Emerging Product Trends

LTCI in the country. There have, however, been some issues with the program where some carriers left the program and most all carriers in the program needed to significantly raise their premium rates, to the concern of some in Congress.

Another positive factor in the growth of LTCI has been the limited deductibility of all or part of the premiums of tax-qualified long-term care policies. The Health Insurance Portability and Accountability Act (HIPAA) includes standards for qualified LTCI policies, which must meet a number of consumer protection standards drawn from the NAIC Long-Term Care Insurance Model Act and Regulation (#640, #641). The tax treatment accompanying tax-qualified LTCI policies requires premiums be considered a Schedule B itemized deduction—the same as medical expenses—after meeting the 7.5% of adjusted gross income limit. In addition, it is now clear benefits received from tax-qualified LTCI policies are not considered taxable income. In excess of 90 percent of individual LTCI policies are tax-qualified.

Finally, the product itself has improved significantly in recent years by providing more comprehensive coverage along with better consumer protections, making it more attractive in the market. These improvements to the product were, in part, the result of a collaborative effort between the LTCI industry, state insurance regulators (NAIC) and consumer advocacy groups to improve the coverage and the market for LTCI.

The Deficit Reduction Act of 2005 (DRA) included a provision authorizing long-term care partnerships. An LTC Partnership program allows an individual with a qualified LTCI policy to retain a portion of the policyholder's assets for the purposes of Medicaid eligibility determination and protect those assets from estate recovery. The level of asset protection provided is equal to the amount of benefits paid by the policy. Partnership policies must be tax-qualified and contain all consumer protections required of a tax-qualified policy and must provide inflation protection for all policies issued to those under 76 years of age.

The Regulation of Long-Term Care Insurance

LTCI has, for several reasons, been a particularly challenging product to regulate. Besides being a product which has changed significantly over the years with claims experience just beginning to accumulate, the product combines both life and health insurance features in a single product. The product is sold as a means to mitigate future long-term care expenses where those expenses may not occur until 15 to 30 years into the future, depending upon the age at which the policy was purchased, much like a life insurance policy. However, once the policyholder develops a condition eligible for benefits, the policy acts more like a health insurance product.

As in the health care industry, long-term care services are evolving and are subject to high levels of inflation in the cost of services and growing utilization of the services. Long-term care policies

need to be able to provide meaningful coverage in this evolving environment. LTCI is also subject to the same rapid changes in delivery of care as health insurance. The combination of these factors results in a situation where insurers must price their policies so they will pay for services 15 or 30 years from the date of purchase, when the cost, utilization and nature of those services may have radically changed.

Coping with these and other regulatory challenges in this market requires a determined effort and constant attention from state regulators. The three main priorities in regulating these products have been:

- 1) Ensuring the solvency of companies offering long-term care policies so the companies can pay claims for the policies they have sold.
- 2) Ensuring all LTCI sales are conducted in an appropriate manner and are suitable for those purchasing the policy.
- 3) Establishing a regulatory framework that results in premium stability and gives consumers sufficient options to mitigate premium increases, if they occur, and ensuring policyholders receive the benefits promised them in a timely and accurate manner.

LTCI premium stability has been a difficult goal to achieve. Early in the evolution of the LTCI market, many insurers based their initial premium on assumptions that proved to be inaccurate, especially for lapse rates and future anticipated claims. Thus, the premiums charged for these policies were too low to cover their actual claims experience. As a result, premium increases needed to be made, some of which were multiple increases and significant. Without such increases, however, the insurance company's financial future would be in jeopardy, especially for those companies writing only LTCI. State insurance regulators, acting independently and through the NAIC, reacted to this situation very quickly and developed rate stabilization provisions in order to compel LTCI companies to charge a more adequate initial premium so future premium increases would be few and far between, if at all. To date, efforts to stabilize the premium rates have been only marginally successful. State insurance regulators (both independently and through the NAIC), insurance industry representatives and consumer groups continue to work on this difficult problem so functional price competition and the ability to innovate is still maintained in the marketplace, while premium stabilization can still be achieved.

The LTCI market has also experienced some marketing and sales challenges. In the 1980s and 1990s, the product was primarily sold to seniors. Some companies used deceptive and high-pressure sales tactics. Many sales were considered unsuitable because policies were sold to individuals who did not have the financial wherewithal to afford the premium for the insurance protection, did not have sufficient assets to warrant the purchase of the coverage and were

Current and Emerging Product Trends

close to qualifying for Medicaid. There were also instances of improper LTCI policy replacements, where one long-term care policy was replaced by another to the benefit of the replacing insurance agent and company, but to the detriment of the consumer. Additionally, some policies sold as not needing a premium increase for the life of the policy were priced using unrealistic assumptions, resulting in the need for large premium increases later in the life of those policies. It is from these early policies we are seeing many of the premium increases today.

The question of suitability has always been an issue with these products. In the past, many of these products were sold on a stand-alone basis, outside of a comprehensive financial plan. Now, because of all the options consumers have to pay for long-term care services, buying a LTCI policy without a financial plan is unwise. These types of standalone LTCI sales often resulted in unsuitable purchases by consumers. Consumers who have very few assets to protect and are relatively close to qualifying for Medicaid should think carefully about whether they will benefit from the purchase of LTCI coverage.

In response to the suitability concerns, many state insurance regulators, working both independently and through the NAIC, developed suitability standards and processes to minimize unsuitable sales of LTCI policies. However, older LTCI policies do not have some of the consumer protections currently available, especially in the area of rate stability, benefit adjustments, non-forfeiture options, unintentional lapse protection, and inflation protection. Hence, many of the problems in today's market can be attributed to policies issued prior to the implementation of the consumer protections in place today.

The NAIC Model Long-Term Care Insurance Act and Regulation

The NAIC's earliest Long-Term Care Insurance Model Regulation was adopted in 1988. Since then, the NAIC, in collaboration with consumer advocates and the insurance industry, has amended its model act and regulation more than 20 times to address the problems discussed above.

For example, the original model regulation contained a provision requiring all individual LTCI policies to meet a minimum 60 percent loss ratio. This meant over the life of the policy, a minimum of 60 percent of the premium had to go toward the payment of claims. A maximum of 40 percent of the premium could be allocated to administrative costs and profit. This requirement, though an important consumer protection to ensure a majority of the premium was being used for paying claims, did not address the potential underpricing of policies and the resultant premium increases. In response to this problem, the NAIC adopted amendments to the model regulation in 2000 designed to ensure greater premium stability. These amendments eliminated the 60 percent minimum initial loss ratio requirement, and substituted an actuarial certification required to be filed with the initial premium rate filings, attesting premiums will

not increase over the life of the policy under moderately adverse conditions. However, in the event future premium increases became necessary and were filed with the insurance department, the original premiums filed now needed to meet a 58 percent loss ratio, and the premium increases needed to meet an 85 percent loss ratio. Furthermore, following each rate increase, the insurer must file its subsequent experience with the regulator for three years. If the increase appears excessive, the regulator may require the company to reduce premiums or take other measures, such as reducing its administrative costs, to ensure unnecessary premium increases are returned to policyholders.

The 2000 amendments to the model regulation also put in place two additional levels of protection against premium increases. If premiums rise above a given level, based upon the age of the policyholder, for a majority of policyholders, the company is required to file a plan for improved administration and claims processing or to demonstrate appropriate claims processing is in effect. Furthermore, if the regulator believes a rising rate spiral exists, the company may be required to offer policyholders affected by the premium increase to replace their existing policies with comparable ones currently being sold, without underwriting. This allows policyholders trapped in a rising rate spiral to switch to a more stable policy. Finally, as a last resort, if the regulator determines a company has persistently filed inadequate initial premium rates, the company may be banned from the state's LTCI marketplace for up to five years, essentially putting the company out of business in the state.

These changes were designed to create a strong incentive for companies to price policies accurately up-front, in order to avoid future increases and to encourage suitable sales of the products. In order to assist consumers in selecting a policy with premiums that do not drastically increase over time, insurers are required to disclose to prospective policyholders all prior rate increases for the past 10 years. Unfortunately, it appears further analysis and work needs to be done on the rate stability provisions in the NAIC model.

A second focus of state regulators is to ensure LTCI policies are sold only to those individuals for whom the coverage is suitable. Whether to purchase a LTCI policy is an individual decision and should take into account the potential purchaser's age, health status, overall retirement goals, income, and assets. For instance, if an individual relies solely upon Social Security, the individual's income is likely insufficient to afford LTCI premiums. Senior citizens should not purchase LTCI if paying premiums will prevent them from paying other important bills, such as shelter, food and clothing expenses, or if they are already enrolled in Medicaid.

For consumers with significant assets, a LTCI policy may be a good way to protect their assets against large long-term care expenditures. However, LTCI should not be purchased until all

long-term care funding options are explored. Not until then can the determination be made whether LTCI is the right option.

The NAIC's Long-Term Care Insurance Model Regulation (#641) requires all long-term care insurers to develop suitability standards, based upon general categories contained in the regulation, to determine whether the purchase of a LTCI policy is appropriate for the applicant. These standards must take into account (1) the ability of the applicant to pay the premiums and other pertinent financial information related to the purchase; (2) the applicant's goals with respect to long-term care; and (3) the advantages and disadvantages of insurance to meet those goals and any insurance the applicant may already have. The NAIC model regulation also contains a worksheet for insurance agents and financial planners to use to determine suitability prior to selling a policy. This worksheet collects relevant information about the prospective policyholder and helps to ensure the applicant is aware of the various options available under the policy and the consequences of decisions regarding those options with respect to both premiums and future benefits under the policy.

The insurer must review the worksheet prior to issuing the policy. If the insurer finds the policy would not be suitable for the applicant, based upon its suitability standards, it must either reject the application or inform the applicant the policy may not be suitable. Written confirmation must be obtained from an applicant who wishes to purchase the policy regardless.

The NAIC model regulation also requires agents to provide purchasers with copies of the NAIC's *Shopper's Guide to Long-Term Care Insurance* and a fact sheet titled "Things You Should Know before You Buy Long-Term Care Insurance." All states have this requirement in their LTCI regulations.

Finally, the Long-Term Care Insurance Model Act (#640) and all states' long-term care regulations provide consumers the right to return the policy within 30 days of receipt of the policy for a full refund if they are not satisfied for any reason. Notice of this right must be prominently included on the first page of the policy. This provides an opportunity for the applicant to reconsider the decision to purchase coverage and acts as a back-up defense against high-pressure sales tactics and unsuitable sales.

The third priority in regulating LTCI is ensuring that consumers are treated fairly when they purchase LTCI and they receive the benefits they are entitled to under their policies. Because most policyholders are elderly and living on fixed incomes when collecting benefits under a long-term care policy, and are likely suffering from a physical incapacity, cognitive impairment or both, consumer protections for access to benefits are of the utmost importance with LTCI.

States already have prompt claim payment laws applying to LTCI. In addition, the NAIC model regulation includes consumer protections for claim denials based upon the insurer's assessment of whether the policyholder has met the benefit trigger requirements under the policy. An independent external review provision for these types of situations was developed and is a valuable consumer protection in challenging an insurer's claim denial.

Prior to being revised in 2000, 2006 and 2008, the NAIC Long-Term Care Insurance Model Act (#640) and Long-Term Care Insurance Model Regulation (#641) already contained many important consumer protections. These protections were designed to help ensure that consumers understand what they are purchasing and the purchase is suitable and affordable over the life of the policy. These protections include:

- **Guaranteed renewability:** All policies must either be guaranteed renewable or non-cancellable. Guaranteed renewable policies may not be altered by the insurer, nor may they be cancelled except for the policyholder's failure to pay premium, but premiums may be increased. Non-cancellable policies are similar to guaranteed renewable policies, except premiums may not be increased.
- **Mandatory offer of nonforfeiture benefits:** All applicants must be offered the opportunity to purchase nonforfeiture benefits, whereby if the policy were to lapse, the policyholder would be issued a paid-up policy with reduced benefits based upon the length of time the policy was held. Applicants who decline to purchase nonforfeiture benefits are still entitled to receive contingent nonforfeiture benefits, which are provided if premiums rise above a certain percentage of the initial premium. That percentage varies depending upon the policyholder's age at the time of purchase of the policy and ranges from 200 percent for those purchasing prior to age 30, to 10 percent for those purchasing after age 90.
- **Limitation on benefit triggers:** The conditions required to be satisfied before the policyholder becomes eligible to collect benefits are known as "benefit triggers." Benefits must be triggered when no more than three activities of daily living (bathing, dressing, eating, continence, toileting, and transfer) are impaired or the policyholder suffers from cognitive impairment. Additional benefit triggers may be added, but the policy may be no more restrictive than the model's requirements.
- **Limitations on rescissions:** Policies may only be rescinded for fraud or misrepresentation during the first six months of the policy. After which, and for the first two years of the policy, policies may be rescinded for material misrepresentations pertaining to the condition for which benefits are being sought. After two years, policies

are incontestable, except for intentional and knowing misrepresentation of relevant facts about the insured's health. Once a policy is rescinded, previously paid benefits may not be recovered by the company.

- **Limitations on post-claims underwriting:** Health questions on an application must be clear and unambiguous. For applicants over the age of 80, insurers must receive health information through a physical examination, an assessment of functional capacity, an attending physician's statement, or medical records.
- **Mandatory offer of inflation protection:** Applicants must be offered the opportunity to purchase inflation protection through compound annual inflation protection of at least five percent or the opportunity to increase benefits by at least five percent every year without additional underwriting, as long as previous offers to increase benefits have not been declined. An applicant's rejection of inflation protection must be explicit and in writing.
- **Protection against unintentional policy lapse:** Each policyholder must be allowed to designate an individual who will be notified at least 30 days before the policy is cancelled for nonpayment of premium. If the policyholder suffers from a cognitive impairment, the insurer must reinstate a lapsed policy and back premiums must be paid within five months.
- **Prohibition on waiting periods on replacement policies:** If a policyholder who has begun collecting benefits replaces one contract with another, or the policyholder converts a group policy to an individual policy, the insurer may not require a new waiting period to be fulfilled. To qualify for this protection, the new policy must be from the same company, and the policyholder may not increase the benefits of the policy.
- **Standardized outline of coverage:** The insurer must provide a standardized outline of coverage to the applicant at the time of initial solicitation. The outline must describe the principal benefits and exclusions and limitations of the policy and must state the terms under which it may be continued or discontinued, as well as any right the company has to raise the premium. It must also inform the policyholder whether the policy is intended to be tax-qualified.

Regulators also determined additional changes to the models were necessary to add several important new consumer protections, including requiring insurers offering new policies to cover new long-term care services and providers to make the new coverage available to existing policyholders. The intent of this change was to ensure LTCI coverage keeps pace with the changing nature of long-term care services.

Current and Emerging Product Trends

Additionally, the model regulation was amended to require LTCI policies to include a provision allowing policyholders to reduce their coverage and lower their premiums in order to avoid lapse due the policyholders' inability to pay the current premium. This provision will help protect policyholders if their financial situation changes and they can no longer afford the coverage at the current premium level.

Finally, new producer training requirements were put into place to ensure agents selling LTCI products, particularly State Partnership policies, are properly equipped to accurately explain coverage options to consumers. LTCI is a complex product in a constantly changing service system. Under the new producer training section of the model regulation, agents and brokers must complete eight hours of initial training before they can sell LTCI and then four hours of continuing education on long-term care every two years. The training must cover state and federal requirements pertaining to long-term care services, the relationship between qualified State Partnership programs and other public and private coverage of long-term care services.

Since these changes were implemented more and more states have decided to implement the Long-Term Care Insurance Partnership and, as part of this process, have revised their laws to incorporate the most recent versions of the NAIC model act and regulation. Regulators believe these changes will prove to be valuable consumer protections.

Conclusion on Regulatory Perspectives

LTCI has evolved over the past 20+ years to provide a suitable way to fund the costs of long-term care services. The product will continue to evolve as the market makes its demands on the LTCI providers.

In the meantime, regulators will continue to monitor the LTCI marketplace and will stand ready to address problems as they arise. The area of rate stability continues to require attention.

Consumers should be good shoppers and make informed decisions. They should know LTCI is only one way to address the long-term care risk. There are others, some of which include life insurance products, and they should all be explored. Once the decision is made to buy LTCI, consumers should rest assured the regulatory framework for the coverage and the regulators' ability to enforce the provisions of the regulatory framework will provide a source of confidence for the product.

The Impact of Technology on the Life Insurance Industry



Internet and Mobile Technology and the Life Insurance Industry

By NAIC Staff

The insurance industry has a rich history of adopting and innovating through information technology. It was among the first to widely use computers and fully digital data and document management processes. The industry has also been at the forefront of employing cutting-edge financial and risk modeling technology and implementing state-of-the-art enterprise systems. However, life insurers have lagged behind their financial services counterparts in the use of the Internet and social media to market directly to consumers.

Insurers' Use of Emerging Technology

Primarily, insurers' Internet and social media efforts promote their brand and products to consumers while recruiting partners and sales agents.²⁰⁰ According to a recent LIMRA study, 60 percent of insurers are maintaining or developing mobile initiatives, primarily to support prospecting and sales functions.²⁰¹ Internal NAIC interviews with life insurance executives corroborate these findings. As one executive noted regarding her company's outlook on emerging technologies, "There has been more interest in the whole social media and Internet world."

As life insurers struggle with low interest rates in the current economy, emerging technologies offer a cost-effective method of reaching consumers.²⁰² LIMRA anticipates insurers' future focus will be mostly on creating mobile platforms offering a cheaper and more encompassing interaction channel.²⁰³ Life insurers are also leveraging these new channels to educate consumers on the need for life insurance and the product offerings available to do so. Farmers Insurance demonstrated this in 2010 when they partnered with the maker of FarmVille, a virtual farm simulation game, to create a blimp that floated across user's virtual crops to promote their crop protection products.²⁰⁴

Maintaining and monitoring social media also provides a conduit for gauging insurance consumers' perceptions and real-time reactions to ad campaigns, various issues and products.²⁰⁵ Through the interactivity unique to social media, insurers can respond to questions, concerns and complaints—strengthening customer relationships. Given these

²⁰⁰ Schwartz, Elizabeth, "Untangling the Social Media Web," LIMRA, 2010.

²⁰¹ LIMRA. (2012, February 14). LIMRA Study: Serving Producers is Top Reason Life Insurers Adopt Mobile Technology Initiatives [News Release]

²⁰² National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

²⁰³ LIMRA. (2012, February 14). LIMRA Study: Serving Producers is Top Reason Life Insurers Adopt Mobile Technology Initiatives [News Release]

²⁰⁴ Ibid, Also referenced: Retrieved from www.You-Tube.com/watch?v=M6v5clHX8KI

²⁰⁵ Ibid

benefits, it's not surprising *Insurance Networking News* estimates an average of 13 Twitter accounts are maintained by large insurers.²⁰⁶ Insurers also use social media sites for forensic data mining to uncover fraud.²⁰⁷ Such use would include verifying a disability claim by reviewing a Facebook account for comments or photographic postings that would indicate a false statement of health.

Despite these examples of adoption, the actual sale of an insurance policy still takes place primarily by phone or in person through an intermediary. Web and social technology serves mainly to facilitate sales—providing consumers with access to more information regarding price and product benefits. Online quote engines generate “ballpark” quotes for a narrow set of homogenous insurance products after collecting contact and basic demographic information from a prospective buyer. This information (or lead) is transferred to subscribing agents or companies who then engage in the actual sale.

Insurers' desire to avoid eroding agents' sales of higher-profit products remains a major barrier to online direct sales. Furthermore, pricing pressures keep insurers from fully underwriting through electronic means, leaving relatively expensive, small face-value term life products as their primary online offer. As a somewhat surprising result, Internet sales initially led to higher prices for life insurance products sold online.²⁰⁸ The reduced search effort and ease of Internet purchases proved valuable enough for buyers to pay a marginally higher price. Only after this temporary inflation attracted competition did the cost of online term life products experience a reduction in price of up to 15 percent. More on the barriers to Internet sales are included in the *Barriers to Insurers' Use of the Internet for Product Distribution* subsection.

Producers' Use of Emerging Technology

Producers predominately use social media sites as a means to connect with current and prospective customers. They also use it to network with other insurance professionals. Producers traditionally network within the limitations of their geographical locations. However, social media expands these geographical boundaries, facilitating customer relationships and potential leads to a far greater extent. Understanding the importance of social media, many producers have established social sites, but lack the expertise to actively engage with

²⁰⁶ Karlinsky, F., Fidei R., & Fried, N. “Social Media: The Times, They are a-Changin.” *The Journal of Insurance Compliance Professionals*, 2(4). Retrieved from www.aicp.net/journal/sample.pdf.

²⁰⁷ National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

²⁰⁸ Brown and Goolsbee, “Does the Internet Make Markets More Competitive? Evidence from the Life Insurance Industry,” *Journal of Political Economy*, 2002.

consumers.²⁰⁹ Those companies recognizing social media as perhaps most suited to the producer level actively train producers on how to use social media sites, ensuring they operate within legal and company policy guidelines.²¹⁰

Consumers' Use of Emerging Technology

Emerging mobile platforms, such as smart phones and tablets, are accelerating the impact the Internet has on society. Since 2008, mobile Internet access has seen user adoption rates roughly three times faster than the Internet's adoption on desktop computers. By 2012, more than 95 million smartphone subscribers began surfing the Web using mobile phones and tablets, accounting for 20 percent of all Internet activity. Previously, Internet usage was limited to users of desktop computers.²¹¹ Now, new consumers enjoy Internet access through mobile devices. According to Web-watchers and marketers, nearly one-third of mobile users identified their phone or tablet as their primary or exclusive method of accessing the Internet.²¹²

Mobile technology is enabling Internet access on a larger scale to many previously underserved demographics. To the extent the Internet can be found to have an impact on the insurance market, the impact from mobile access could equal or even surpass desktop Internet use. However, it is important to note that mobile use is particularly popular with a younger age demographic, which is less likely to be in the life insurance market.

Where mobile goes, social media quickly follows. Roughly two-thirds of online adults use social media platforms such as Facebook, Twitter, YouTube, LinkedIn and Wikipedia. These platforms provide content well-suited to smaller, mobile-screens. This creates small, easy-to-process messages users can immediately respond to and distribute to large audiences. Social media users organize themselves into affinity groups, focused often microscopically around preferences, interests, professions, relationships or demographics. Social media sites sell customized advertising, targeting these affinity groups while collecting and measuring a large amount of information in order to gauge their efforts. As marketers attempt to identify audiences and methods for promotion, information about preferences, genealogy, habits and lifestyle is volunteered by more than 160 million Facebook users in the U.S. alone.²¹³ As a result,

²⁰⁹ National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

²¹⁰ National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

²¹¹ Leonard, Craig (August 24, 2012). Personal interview.

²¹² Aaron Smith, "Pew Internet and American Life Project: Cell Internet Use 2012," Web, June 26, 2012.

²¹³ United States Facebook Statistics, *SocialBakers*, Web, 2012. Retrieved from www.socialbakers.com/facebook-statistics/.

Facebook maintains nearly 800 pages of information per user on a staggering 180,000 servers in its Pineville, Oregon data center.²¹⁴

Social media connects and facilitates communication between all its users. This “crowd” interaction transforms the Internet from a producer-generated tool into a user-generated tool. The old one-way stream of traditional commercial speech is now a multi-threaded exchange—its speed, spontaneity and permanence turning consumers into content providers on equal footing with companies. For all markets, this has a powerful effect on customer relationships and brand reputation. When shopping for products or selecting an insurer, a consumer has only to log onto Facebook or Twitter or search through YouTube to seek out the opinions and advice of others. In fact, 90 percent of consumers prefer peer recommendations over traditional marketing and advertising.²¹⁵

Through social media, consumers have great influence over others’ perceptions of life insurance products, companies and producers. This shift in power toward consumers alters the way in which life insurers and producers approach marketing, customer service and distribution.²¹⁶ As today’s young mobile-users age into life insurance markets, pressure on the insurance industry to reach them through mobile/social media platforms will increase exponentially.

Market/Technology Trends

During the 1920s and ‘30s, insurance firms pioneered the use of tabulating machines, as users of the punch card technology found innovative ways to improve their use in the administration of day-to-day tasks. The machines themselves had been used since the 1890s.²¹⁷ As technology matures and works its way into the hands and lives of new generations and individuals, the opportunities for innovation increase exponentially. The hurdles limiting new media’s role in the execution of life insurance sales are known—insurers still depend heavily on person-to-person medical interviews, examinations and laboratories to fully underwrite life products. In addition, product sales are still executed primarily through referral networks and personal relationships.

Life insurance underwriters are gaining access to huge new caches of data and predictive modeling tools to leverage it as never before. As an example, the insurance medical laboratory

²¹⁴ Matthew Humphries, “Facebook Stores up to 800 Pages of Personal Data per User Account,” *Geek.com*, Web, Sept. 28, 2011.

²¹⁵ The Nielsen Company. (2009, July 7). “Personal Recommendations and Consumer Opinions Posted Online are the Most Trusted Forms of Advertising Globally.” Retrieved from blog.nielsen.com/nielsenwire/wp.../07/pr_global-study_07709.pdf.

²¹⁶ PricewaterhouseCoopers. (2012, January). “Insurance 2020: Turning Change into Opportunity.” Retrieved from www.pwc.com/en_GX/gx/insurance/pdf/insurance-2020-turning-change-into-opportunity.pdf.

²¹⁷ Yates, JoAnne, “Structuring the Information Age: Life Insurance and Technology in the Twentieth Century,” Johns Hopkins University Press, 2005.

ExamOne's Risk IQ platform ranks a life insurance applicant's risk of mortality using 140 different laboratory, paramedical and demographic variables. The process boasts shorter underwriting cycles, improved risk calculation and a reduced dependence on traditional medical analysis.²¹⁸ To collect the information, the labs themselves use a smaller infrastructure located closer to consumers in retail stores and pharmacies.

Trends indicate marketers and producers will increase their dependence on social media's built-in communities, psychographic measures and feedback tools to match their brands, products and messages to audiences with ever-increasing precision.²¹⁹ Companies will leverage online and mobile tools to recruit, educate and motivate agents and personnel. Internet and mobile technology can be used by insurers to extend their loyalty marketing operations, using wellness tools and information to improve in-force mortality and persistence.

In addition, as buyers make more complex purchases on their mobile devices and companies can assess risks through indirect means, a greater variety of life insurance products could become available for direct purchase online. Companies may find a tremendous number of buyers beyond the reach of traditional sales. To this point, many life insurance executives indicated during personal interviews that they may begin offering certain products online only and not through the traditional distribution sources.

Barriers to Insurers' Internet Use for Product Distribution

By Brenda J. Cude (University of Georgia)

At least since the late 1990s, many experts have predicted growth in online insurance sales. As the Internet boomed, other financial services, most notably retail banking and investing, demonstrated how online applications could change traditional channels of distribution.²²⁰ However, the predicted growth in insurance sales has not taken place, perhaps especially in life insurance.

Experts have offered varying explanations for the limited growth of online life insurance sales. Some see efforts to sell insurance online as designed to cut agents out of their customer relationship or disintermediation and thus have resisted efforts to move sales online. Many have noted relative to the overall financial services industry, the insurance industry has been slow to build a Web presence truly functional. Providing self-service tools which allow the

²¹⁸ Hank, George, "Culture Shock: Lab Test Predictive Modeling for Life Underwriting," NAILBA Broker Insights, May/June 2012.

²¹⁹ Charlesworth, Alan, "Internet Marketing: a Practical Approach," 2009.

²²⁰ Online-only banks (such as Ally, ING Direct, and Bank of Internet USA) and online-only investment services companies (such as E*Trade, Scottrade, and TD Ameritrade) have the potential to become competitors in the insurance market place by gaining licenses to offer insurance products through their existing online infrastructure.

consumer to assume greater control of researching, buying and managing their life insurance may be something consumers expect based on other Internet experiences. However, until relatively recently, it is not something most life insurance websites provided. In fact, studies by the Customer Respect Group in 2005 and 2006 rated the life insurance industry websites as a whole considerably worse than the cross-industry group of life, health and property/casualty insurers. A Booz-Allen (2001) study reported that insurance companies attracted far fewer visitors to their websites than other financial institutions, and consumers spent less time on insurance industry sites once they were there.

Websites have improved somewhat in the intervening years. In 2010, the Customer Respect Group noted a “significant” investment as “websites migrate from information repositories to be an integral part of the customer experience.” Nearly two-thirds of major insurers provided an online tool to help calculate the amount of term life insurance needed. However, as the report noted, this type of online tool does not have much influence on the distribution model. Only one in four sites provide a tool to help consumers choose between term and whole life, a role typically associated with insurance agents.

According to Comscore, aggregator websites (which pull together information from various websites) provided 78 percent of online life insurance quotes in 2010. Most, if not all, aggregator sites focus on term rather than whole life insurance sales. In 2011, the Customer Respect Group reported nearly 90 percent of life insurance quotes started on aggregator sites. Consumer advocates have challenged the quality of information available from these sites. Two studies (Hunter and Hunt, 2001; Mayer, Huh, and Cude, 2005) have reported these sites are not always successful in identifying the lowest-priced policies, which consumers would presume to be the function of the site. As a group, the sites were biased in favor of policies carrying commissions. In addition, sites claiming to provide instant quotes often were lead generators for insurance companies and intermediaries. After providing personal information, consumers received a follow-up phone call or email rather than a quote.

Another set of explanations for the limited growth of online life insurance sales focuses on the consumer. Some doubt whether consumers really want to buy any type of insurance online. Clemons and Hitt (2000) wrote, “Insurance is an event driven product (buy a car or house, change jobs, get married and so forth) and the vast majority of customers renew their policies with a reconsideration of the product, company, or agency. Even for the short-term products such as term life, at most 1/12 of the policies are up for renewal in any given year, and only a small fraction of these are actually ‘in play’”.

Support for this argument comes from Deloitte’s (2012) “The Voice of the Life Insurance Consumer” study. Per this study, 62 percent of non-buyers had not received an unsolicited offer to buy life insurance in the past year compared to 44 percent of buyers.

Another consumer-focused argument is consumers may not want to serve as their own insurance agent. They may not trust themselves to make the best choice, especially if they realize price is not necessarily a key indicator of quality for insurance products. The Customer Respect Group quoted Beth Hirschhorn, senior vice president and chief marketing officer for MetLife, as saying, “Of those people who say they will buy life insurance, research shows more than 80 percent fail in their attempt.”

A third explanation for why consumers may be leery of online life insurance sales is the amount of personally identifying and sensitive information needed to provide an accurate quote. Consumers may be reluctant to provide this type of information online and to an entity with which they have no previous relationship. Yet if they provide some, but not enough information, they still have sacrificed personal privacy without the reward of an accurate quote. In addition, even if they provide the requested information, consumers may be required to submit to a blood test and/or in-person health screening. If so, buying life insurance online no longer seems more convenient than buying through an agent. Deloitte (Fairley, 2012) reported about 26 percent of the respondents in their study found the application and underwriting process to buy life insurance to be too difficult.

There is clear evidence consumers do value online availability of information about life insurance. Deloitte (Fairley, 2012) reported 32 percent of current buyers and 27 percent of non-buyers in their study searched online for information about life insurance and another 21 percent of buyers and 16 percent of non-buyers had searched specific insurance company websites. However, in a 2002 study (Goch, 2002), the Independent Insurance Agents of America found “many respondents do not perceive cost savings from buying insurance through the Internet.”²²¹ If this dichotomy is still true today, it explains the “shop, not buy” mentality of consumers toward life insurance sales.

LIMRA’s 2011 Insurance Barometer Study suggests online insurance consumers are not monolithic. Younger adults (aged 25 to 44) are more likely to buy life insurance online than older adults, and males are more likely than females. Similarly, those with higher incomes (\$100,000 or greater in household income) are more receptive to online insurance purchases. Among the three groups examined, Hispanics were more likely than African Americans or Caucasians to prefer to buy life insurance online. Twenty percent of the respondents said they would not use the Internet at all to buy life insurance online. Additionally, 43 percent of those aged 65 and older were unwilling to buy life insurance online.

²²¹ The only empirical evidence on this topic, a study by Brown and Goolsbee (2002) more than 10 years ago, found term life insurance costs were lower in households with higher Internet use. While the authors attributed this difference to online insurance sales, it seems just as likely it describes consumers who are more efficient and/or effective at product search in general.

Implications of Emerging Technology on Insurance Regulation

By NAIC Staff

The impact of mobile communications and social media on the way insurers, consumers and regulators interact, communicate and do business will forever alter the fabric of our business culture. These emerging technologies are creating new marketing, distribution and customer service channels, requiring insurers to develop new business models and distribution strategies. They are also raising compliance, privacy and security issues that need to be addressed by insurers and regulators alike.

Insurer and Producer Concerns on the Use of Emerging Technology

Despite all the advantages to emerging technology, many companies and producers still do not engage, or fully engage, in its usage. This is due, in part, to the ambiguous guidance on the proper use of emerging technology in current legislation and regulation.²²² Many compliance officers would like to use social media, but need additional guidance to proceed with confidence.²²³ There are numerous concerns, but most involve the appropriate use of statistical data, liability of improper use from associated entities, product suitability and endorsement restrictions, and proper handling of negative feedback.

Through posts on social sites, insurance consumers can share their positive and negative feedback. However, social media and the Internet can magnify negative reviews, reaching more people in a faster way than word-of-mouth.²²⁴ Companies seek guidance on the proper treatment of this feedback, particularly when it comes to complaints. Compliance officers want to know, “Can I remove negative posts from my social site?” It should be noted, in the absence of clear guidelines, most companies are choosing to not remove complaints or negative feedback on their social sites.²²⁵

Insurers also seek clearly defined rules for solicitation through social media and clarity on what constitutes a third-party endorsement. For instance, is “liking” a company, producer or product considered an endorsement? Liability for producers’ use of social media is another concern. Companies understand, in most cases, they are liable for their own employees’ or captive agents’ use of social media. However, liability concerning the actions of independent agents is more ambiguous. Lastly, insurers have raised suitability concerns.²²⁶ Insurers are required to

²²² National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri

²²³ Ibid

²²⁴ Ibid

²²⁵ Leonard, Craig (August 24, 2012). Personal interview.

²²⁶ Ibid

provide sufficient information and disclosures regarding their products and marketing statistics. This can be difficult to do within the size limitations and new framework characteristics of emerging technologies. For instance, Twitter allows only 140 characters, making it difficult for insurers to provide sufficient product disclaimers to ensure they have accurately represented the product.²²⁷ Additionally, the smaller screen sizes of mobile phones limit insurers to presenting only select information.²²⁸ Insurers are required to use new technology platforms and refine their ability to identify key information in order to adapt.²²⁹

State Insurance Regulators' Use of Emerging Technology

State insurance regulators use emerging technologies primarily to communicate to insurers and consumers. Through state-sponsored social media sites, insurers post information and bulletins to educate and inform consumers about insurance products, market issues and consumer risks.²³⁰ The combination of social sites and mobile devices can be a particularly useful tool during a catastrophe, when obtaining the information necessary to file insurance claims is only accessible through a mobile phone chargeable by a car.²³¹ Regulators are also beginning to use apps (computer applications) to assist consumers with insurance-related needs.

Several states currently monitor market practices and compliance issues involving emerging technologies, particularly social media sites, through their market conduct exams or complaint process. Regulators are also beginning to track consumer complaints on regulatory-sponsored social media sites. However, most states do not allow employees to access social media sites while at work. These restrictions curtail the ability of regulators to actively monitor the activities of insurer and producer social media sites during office hours. This presents a formidable barrier to address complaints. If state insurance regulators are to provide effective oversight, they will need to bridge this gap by establishing appropriate Internet usage policies and security clearance to those with surveillance functions.²³²

²²⁷ National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

²²⁸ Leonard, Craig (2012, August 24, 2012). Personal interview.

²²⁹ National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

²³⁰ Ibid

²³¹ Sartor, Kristin. (2010, May). *Mobile Technologies, Social Media Facilitate Insurers' Responses to Nashville Flood Claims*. Insurance and Technology. Retrieved from www.insurancetech.com/claims/224900426.

²³² National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

State Insurance Regulatory and Compliance Concerns

In general, state insurance regulators have a greater concern with the actions of agents, employees, smaller insurers and unknown participants than they do most insurers.²³³ This is because insurers have a greater understanding of the existing laws and regulations applicable to the use of emerging technology. In contrast, many other stakeholders remain unaware of the legal risks involved, potentially placing them in unknown danger. Additionally, many companies never review their employees' or agents' (particularly independent agents') materials before they are posted online, compounding the legal risks involved. In examining this issue, regulators have cited such cases as local agents posting YouTube videos that cite non-sourced statistics, which violates many advertising laws.²³⁴

Most current statutes and laws related to advertising, marketing, record retention, consumer privacy and consumer complaints provide broad guidance on the use of emerging technologies. These laws specify insurers and producers must adhere to the same standard of conduct when communicating through emerging technologies as they do with traditional communication mediums.²³⁵ Accordingly, all solicitations, regardless of medium, must comply with the licensing requirements of a particular state.²³⁶ This may apply to insurers and producers whose solicitations through social media naturally cross state borders. Likewise, communication through emerging technologies must be accurately portrayed, with all statistical data relevant, and all product recommendations in compliance with existing state laws and regulations.²³⁷

Although existing legislation does provide a framework, many regulators also acknowledge the specific nuances between emerging technologies and other more traditional distribution channels warrant clearer guidance within existing legislation and model laws, such as the NAIC Unfair Trade Practices Act (#880). In this regard, some states, such as New York, have issued specific guidance to insurers, making it clear the promotion of insurance-related activities through social networking sites “constitutes an advertisement, announcement or statement under New York Law.”²³⁸

²³³ Leonard, Craig (August 24, 2012). Personal interview.

²³⁴ Ibid

²³⁵ National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

²³⁶ Karlinsky, F., Fidei R., & Fried, N. “Social Media: The Times, They are a-Changin.” *The Journal of Insurance Compliance Professionals*, 2(4). Retrieved Sept. 4, 2012 from www.aicp.net/journal/sample.pdf.

²³⁷ National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

²³⁸ Ibid

The treatment of static and interactive content used on social media sites is one area of concern for regulators. Static content, such as profile data, is more akin to traditional content types such as print media and commercials. As such, its legal treatment is the same as other traditional static advertising content.²³⁹ In contrast, interactive content is unique to social media, allowing for sharing of information through the posting of links and comments from customers or non-associated parties.

Considerable ambiguity exists regarding insurer/producer liability from third-party content. Clearly, insurers/producers are not responsible for third-party content in which they had no involvement. But what if the insurer/producer was involved in the posting of third-party content? Different theories provide different solutions. Under the entanglement theory, liability would fall to the insurers/producers. Under the adoption theory, insurers/producers only become liable when the third-party's content provides for an implicit or explicit endorsement.²⁴⁰ The issue of third-party content needs to be clearly defined within existing legislation and model laws.

The applicability of record-retention expectations within emerging technologies is another area of concern for regulators. Insurers and producers are required to adhere to the record-retention regulations of their states. However, the volume and complexity of communications through emerging technologies challenges retention systems.²⁴¹ For instance, what is the expectation for insurers and producers to capture communication during chat sessions, or through posts on social sites? Should they be treated more like a phone conversation or electronic print?

Privacy of personal information exchanged during, or stored as a result of, communication through emerging technologies is another area of concern. Additional privacy concerns arise when insurers purchase data from a third party-vendor who tracks consumers' personal information and preferences from social sites.²⁴² Potential suitability issues related to red-lining can arise if an insurer or producer specifically excludes consumers based on consumer preference and statistics gained through social media or third-party vendors.²⁴³ Other suitability issues include the ability to properly disclose information on products and services, given the space limitations on mobile phone screens or social media posts. The proliferation of Internet use to potentially vulnerable segments of the population through the expansion of mobile devices also deserves attention. Statistics show although senior citizens make up the smallest

²³⁹ Ibid

²⁴⁰ Ibid

²⁴¹ Ibid

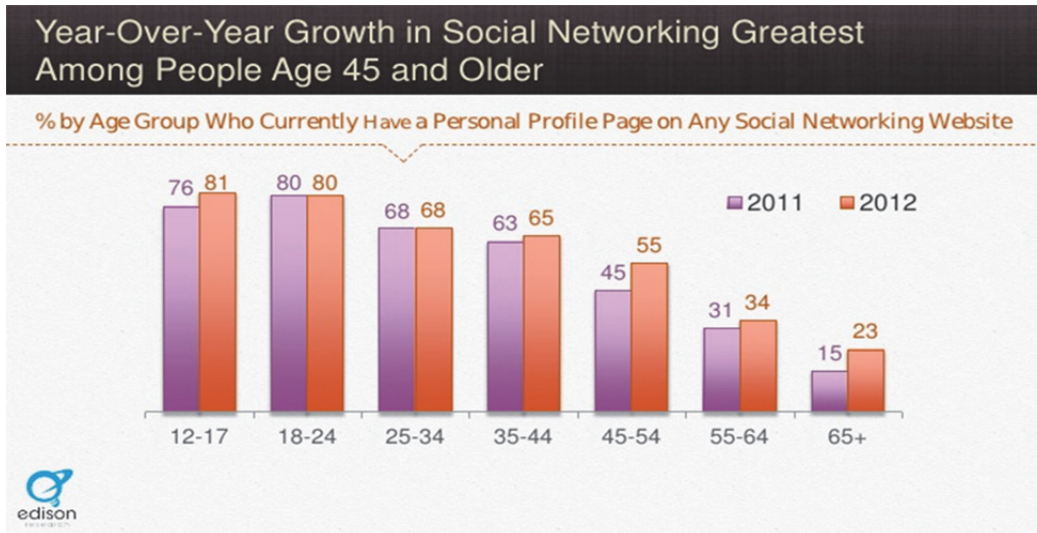
²⁴² Ibid

²⁴³ Leonard, Craig (2012, August 24, 2012). Personal interview.

percentage of the Internet usage market, they also represent the fastest growing segment (Figure 9).²⁴⁴

Figure 9

Source: *The Social Habit* 2012 by the Edison Research Group



State insurance regulatory response

Regulators have responded to these concerns by developing a white paper to identify the issues surrounding social media.²⁴⁵ Regulators are addressing issues identified in the white paper by incorporating their findings into the NAIC *Market Regulation Handbook*. This will outline the processes insurers and producers should take to appropriately address the nuances of social media. Additionally, several states are incorporating the oversight of insurers' social media practices into their market conduct exams and/or through their consumer complaint process. The incorporation of social media into the handbook should proliferate this.

²⁴⁴ National Association of Insurance Commissioners. (December 20, 2011). *The Use of Social Media in Insurance* (Social Media (D) Working Group of the Market Regulation and Consumer Affairs (D) Committee). Kansas City, Missouri.

²⁴⁵ Ibid

Life Insurer Balance Sheets



Life Insurer Balance Sheets: Description and Issues of the Past Decade

By Greg Niehaus (University of South Carolina)

Introduction

The past decade has been one of substantial economic volatility. GDP growth rates rose from the three to four percent range during the first few years of the decade to over six percent during the middle years. GDP then gradually plummeted to below negative two percent in 2009, and has since rebounded. Naturally, unemployment rates show the opposite pattern to that of GDP growth, although unemployment remains much higher than it was during the early part of the past decade. These changes in the real economy are linked to the major changes that occurred in financial markets. Interest rates, as measured by the 10-year constant maturity Treasury rate, have declined from above 6.5 percent at the beginning of this century to below 2.0 percent this year.²⁴⁶ Equity markets have exhibited high volatility, with the S&P 500 index rising from 800 in September 2002 to heights of 1,558 in October 2007 and then falling to depths of 683 in March 2009.

To further our understanding of the impact of this economic volatility on life and health insurers and their reactions to it, this section provides a descriptive analysis of the financial condition of the companies in the industry. More specifically, this section summarizes the academic literature and uses NAIC annual statement data to give an overview of the industry and to identify some of the important changes to life and health insurers' balance sheets over the past decade.²⁴⁷ The ultimate aim is to answer questions related to the impact of the financial crisis on insolvency risk, such as (1) to what extent did the financial crisis negatively impact insurer capital-to-asset and NAIC RBC ratios?; and (2) how did negatively impacted insurers respond?

During the crisis, there were widespread downgrades of credit-sensitive securities and therefore prices dropped for these securities, as well as for equity securities. To the extent that insurers held these securities, one impact of the crisis was a decrease in the market value of insurers' assets. This caused insurers to assess whether an other-than-temporary impairment (OTTI) had occurred and, when an OTTI was determined to have occurred, to take permanent carrying value write-downs for the securities. The crisis is also associated with a decline in

²⁴⁶ GDP data is from the U.S. Department of Commerce website (<http://www.bea.gov/national/index.htm>). Unemployment rates are from the Bureau of Labor Statistics (<http://data.bls.gov/timeseries/LNS14000000>), and Treasury rates are from the St. Louis Federal Reserve website (<http://research.stlouisfed.org/>) and measured as of January 3 of each year.

²⁴⁷ See American Council of Life Insurers (2010) for an excellent summary of the life and health insurance industry at the aggregate level.

interest rates, which increased the economic value of life insurer liabilities as well as the value of high-grade bonds. For some insurers, the net impact of these factors was a negative shock to capital.²⁴⁸ In a well-functioning market, with consumers who are sensitive to insolvency risk, insurers would be expected to reduce risk and increase capital. This was seen following the financial crisis, when some insurers, who were writing riskier products, reduced their exposure to asset and product risk by discontinuing or de-risking products. Several large insurers also sold subsidiaries that were heavily invested in annuities. On the other hand, there is the potential concern insurers could have an incentive to take on riskier assets in order to achieve incremental gains. This would result in increased solvency risk. This section presents evidence to show how insurers responded to the negative shock to capital during the financial crisis.

The main findings are as follows:

- The security price occurring during the financial crisis negatively affected capital-to-asset ratios²⁴⁹ of life insurers, annuity providers, and accident and health insurers in 2008. In addition, the capital-to-asset ratios of annuity providers dropped in part because of reduced operating income.
- The capital-to-asset ratios of large and medium-size life insurers and annuity providers rebounded after 2008 as a result of these companies raising new capital and cutting dividends.
- The capital-to-asset ratios of small annuity providers have not rebounded and were lower in 2011 than in 2008.
- The capital-to-asset ratios of accident and health insurers declined in 2008, but less than those of life insurers and annuity providers. Accident and health insurers' capital-to-asset ratios, in general, also rebounded after 2008.
- NAIC risk-based capital (RBC) ratios have trended higher over the past decade.

These findings reinforce the empirical results in Berry-Stolze et al. (2012), which presents similar evidence at the aggregate level, as well as provide an in-depth examination of the capital-raising activities of life insurers and annuity providers at the company level.

The main conclusion is the life and health insurance industry, particularly insurers specializing in annuity sales, experienced capital strain during the financial crisis. However, it should be noted this industry fared better than most other industries and, as a whole, has recovered well. This is

²⁴⁸ The crisis is also associated with an increase in volatility, which increased the value of guarantees provided by life insurers and thus increased the value of the liabilities associated with certain products.

²⁴⁹ Defined later in this section as capital and surplus (C&S) plus Asset Valuation Reserve (AVR) plus Interest Maintenance Reserve (IMR) divided by total general account admitted assets (C&S + AVR + IMR.) / Total Assets

partly due to conservative regulatory requirements placing higher capital charges on riskier investments and use of conservative asset and liability valuations. As previously noted, insurers also took steps to decrease product and asset risk following the financial crisis. The capital markets also provided additional relief with large and medium-size stock companies raising new capital. This last point is elaborated upon later in this section.

The *Life Insurer Balance Sheets* section is organized as follows: In the *Framework, Terminology and Data* subsection, the conceptual framework or lens that is used to organize and interpret the data is described. In addition, a brief description of the data and clarification of terminology is presented. In the *Life and Health Insurance Industry in 2011* subsection, background on the industry structure is provided using 2011 data. More specifically, information is provided on industry concentration ratios, the business mix (between life, annuity and accident and health contracts) of companies in the industry, and the number and percentage of companies with separate account business. *The Capital-to-Asset Ratios Vary with Company Size and Line of Business* subsection shows how capital-to-asset ratios vary with company size and business mix. In addition, information on how capital-to-asset ratios have changed over the past decade is presented. The *NAIC RBC Ratios: 2001-2011* subsection briefly describes how NAIC RBC ratios have varied over the past decade and with line of business and company size. *The Changes in Capital During and After the Financial Crisis* subsection presents information on how the capital components changed during and after the financial crisis. A short summary concludes this section.

Framework, Terminology and Data

The focus of this section is on the amount of capital held by insurers, where capital refers to the value of insurer assets in excess of the value of liabilities. It is useful to think of capital as the amount of “cushion” available (relative to the expected promised payments) to pay policyholders what has been promised. This cushion is critical in case the liabilities increase in value or the assets decrease in value. To facilitate comparisons over time and across companies, capital is usually reported in the form of a ratio. Following this convention, capital is measured in this section as the ratio of capital-to-assets.

In well-functioning product and capital markets, insurers have an incentive to hold enough economic capital to ensure they can fulfill the promises they have made to policyholders. If an insurer failed to do so, then the insurer’s ability to sell policies at prices that cover costs (including the cost of capital) would be severely hampered.²⁵⁰ Thus, the main benefit of holding capital is the present value of the ongoing net income stream associated with selling insurance

²⁵⁰ In other words, there is effective market discipline in the insurance market. For analyses of this issue, see, e.g., Epermanis and Harrington (2006) and Eling and Schmit (2011).

products. It is reasonable to assume at some point the marginal benefit of additional capital declines. This is because the impact of an additional increment in capital on the insurer's probability of insolvency falls as capital increases.

There are, of course, costs associated with holding capital, such as tax and agency costs (see, e.g., Farr et al., 2008). The marginal costs of additional capital are, at best, constant, but likely increase with additional capital. Given the nature of the benefits and costs of capital, an insurer will find a target capital-to-asset ratio that is best for its particular circumstances. There are also transaction costs (e.g., investment banking fees) associated with adjusting capital. Consequently, insurers are likely to gradually adjust capital-to-asset ratios toward their target ratio following capital shocks (both positive and negative).

This framework implies insurers will have different capital-to-asset ratios if they have different target capital-to-asset ratios and/or they are at different stages in their adjustment toward their target capital-to-asset ratio. Both target capital-to-asset ratios and capital adjustment costs (and therefore speed of adjustment) are likely to vary with underlying insurer characteristics, such as firm size, product market focus, and organizational structure (e.g., mutual versus stock). Consequently, actual capital-to-asset ratios are likely to vary with these same characteristics. The *Capital-to-Asset Ratios Vary with Company Size and Line of Business* subsection will present evidence on how capital-to-asset ratios vary with insurer characteristics. The *Changes in Capital During and After the Financial Crisis* subsection will explore how insurers adjusted capital as a result of the negative shock to their capital that occurred during the financial crisis.

Measuring economic capital for a complex financial institution can be difficult and is subject to controversies.²⁵¹ While some adjustments are made to the data used in this section to better reflect economic principles, most of the data presented comes directly from Annual Statement filings by life and health insurers to the NAIC. Thus, for the most part, the data reported here reflect statutory accounting principles. The one major change is reported capital is adjusted by adding the interest maintenance reserve and the asset valuation reserve. One of the purposes of these liability accounts is to smooth the impact of asset valuation changes and changes in the level of interest rates on reported capital. By adding these accounts to statutory reported capital, the capital numbers reported here will better reflect the value of assets.²⁵²

²⁵¹ See, for example, Baronoff and Sager (2002, 2003, 2011), Berry-Stolze, et al. (2012), Cummins and Nini (2002), Froot (2008), and Harrington and Niehaus (2002, 2003).

²⁵² During the financial crisis, the NAIC considered requests to allow insurers to recognize greater capital by altering some statutory accounting rules that arguably were overly conservative. Some of these requests were approved and some were denied. The numbers reported here make no adjustments for these changes; i.e., the numbers are as reported by the insurer in the annual statement.

This section uses data from active companies reporting to the NAIC in at least one of the years from 2001-2011. A company is inactive if it has been or is being liquidated, has combined or merged with another company, has voluntarily left the industry, or is in receivership. In addition, companies having negative or zero capital and surplus, or negative or zero assets, are dropped from the analysis.

With respect to terminology, insurance accounting sometimes distinguishes the terms capital and surplus. This distinction generally is not used in this section of the study; instead, capital and surplus, adjusted for the interest maintenance and asset valuation reserves, is referred to as capital.

The Life and Health Insurance Industry in 2011

In this subsection, some basic characteristics of the companies operating in the life and health insurance industry are described. For 2011, there are 806 active companies, but many of the companies are part of a group of companies owned by a parent corporation. There are 186 stand-alone companies and 250 groups of companies with an average number of companies in a group equal to 2.48. Consistent with regulatory oversight, most of the analysis in this section is conducted using company-level data, as opposed to group-level data.

High Concentration of Assets in a Relatively Small Number of Companies (Groups)

Firm size, as measured by the value of assets, is likely to be related to insurer capital decisions for at least two reasons. First, firm size is often used as a proxy for a firm's ability to raise funds in the capital market.²⁵³ The greater a firm's capability of accessing additional capital when it is needed, the lower is the need to hold high levels of capital internally. Second, larger firms are likely to be more diversified in their activities and therefore, all else being equal, have lower volatility per dollar of assets in the value of assets, liabilities, and cash flows. The lower the volatility, the lower is the amount of internal capital (per dollar of assets) is needed to ensure that policyholders will be paid what was promised.

Table 4 illustrates the bulk of the industry's assets are concentrated in a relatively small number of companies and groups of companies. Panel A, which presents company data, indicates the largest 300 companies in terms of total assets hold 99 percent of industry assets, the largest 100 companies hold 90 percent of industry assets, and the largest 30 companies hold 60 percent of industry assets. Because the largest companies hold a significant percentage of the industry's assets, and capital decisions of large companies are likely to differ from those of companies with much lower asset values, distinctions between the largest companies and the

²⁵³ For example, Hadlock and Pierce (2010) show capital constraints generally decline as firm size increases. One explanation is there is likely to be less information asymmetry between managers and investors at larger companies, in part because larger companies are more likely to be followed by analysts.

smaller companies will be highlighted throughout the analysis.²⁵⁴ Panel B of Table 4 illustrates concentration at the group level. The largest 25 groups control almost 80 percent of industry assets, and the largest 50 groups control over 92 percent of industry assets.

Table 4 – Company Size in 2011

Table 4 reports the mean, standard deviation, and sum of the value of total assets in millions for 2011 (line 28, column 1 on the 2011 Life Blank). The last column is the aggregate value in the row divided by the aggregate value for all companies.

Panel A: Company Data

	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>Aggregate (Sum)</u>	<u>% of Total</u>
All companies	806	6,838	25,538	5,511,408	100.0
Largest 300	300	18,215	41,100	5,464,614	99.2
Largest 100	100	49,620	59,991	4,962,031	90.0
Largest 25	25	132,832	67,674	3,320,803	60.3
Smallest 706	706	778	1,545	549,376	10.0

Panel B: Group Data

All groups	436	12,640	50,458	5,511,408	100.0
Largest 50 groups	50	101,481	115,948	5,074,059	92.1
Largest 25 groups	25	174,726	127,125	4,368,139	79.3

Variety of Business Mixes

Table 5 presents information on the proportion of net premiums generated in 2011 from annuity, life insurance, and accident and health insurance contracts. An insurer's business mix determines, in part, the volatility of an insurer's cash flows and liabilities, which in turn is likely to influence capital structure decisions. For example, Baranoff and Sager (2002, 2003, 2011) argue and present evidence consistent with life insurer capital structure decisions varying with the underlying business mix. More specifically, they argue the claims associated with accident and health contracts exhibit greater volatility and, therefore, companies specializing in accident and health contracts are likely to hold more capital (per dollar of assets) than companies specializing in life and annuities, all else being equal.

As indicated by Panel A of Table 5, most companies specialize in either (1) annuity, (2) life insurance, or (3) accident and health contracts. For example, 110 (13.6 percent) of the 806 companies in 2011 received over 75 percent of their net premiums from selling annuities; 255 companies (31.6 percent) received over 75 percent of their net premiums from selling life

²⁵⁴ Instead of using the largest 100 companies, large insurers are defined as having general account assets in excess of \$5 billion in 2011 dollars.

insurance; and 178 companies (22.1 percent) received over 75 percent of the net premiums from selling accident and health policies.

Panel A of Table 5 also indicates the largest 100 companies are more likely than the smallest 706 companies to specialize in the annuity business, and less likely to specialize in life or accident and health insurance. This is consistent with greater economies of scale in the annuity business, in part because of the importance of reputation and expertise needed to manage the risks associated with complex annuity products.

Panel B of Table 5 reports the number of companies that have the bulk (more than 90 percent) of their premiums derived from two lines of business, but do not specialize in any one line of business (not more than 75 percent from one line). This combination is rare among the largest 100 companies. Also, very few companies obtain the bulk of their premiums by combining annuity business with accident and health business.²⁵⁵ Panel C of Table 5 indicates some companies, although not a large number, have a more diversified portfolio of business. For example, only 22 of the 806 companies (2.7 percent) obtain more than 12.5 percent of their net premium from each of the three lines of insurance.

²⁵⁵ These data do not reflect that annuity providers can include accident and health riders with their annuity products.

Table 5 – Mix of Business in 2011

Number and percentage of companies with the business mix described in column 1 as measured by 2011 net premiums from annuities, life and accident and health insurance

Business Mix	Among all 806 companies		Among largest 100 companies		Among smallest 706 companies	
	N	%	N	%	N	%
Panel A: Insurers with						
> 75% from Annuities	110	13.6	43	43.0	67	9.5
> 75% from Life	255	31.2	16	16.0	239	33.9
> 75% from A&H	178	22.1	8	8.0	170	24.1
Panel B: Insurers with						
> 90% from Annuities and Life, but not 75% from Annuities or Life alone	64	7.9	16	3.0	48	6.8
> 90% from Annuities and A&H but not 75% from Annuities or A&H alone	4	0.5	1	1.0	3	0.4
> 90% from Life and A&H, but not 75% from Life or A&H alone	92	11.4	3	3.0	89	12.6
Panel C: Insurers with						
> 12.5% from each line	22	2.7	9	9.0	13	1.8
Panel D:						
All other insurers	81	10.0	4	4.0	77	10.9

For the subsequent analysis, insurers will be divided into four categories. The first three categories consist of insurers that specialize in one line of business—i.e., have at least 75 percent of net premiums from one line of business. These three groupings are depicted in Panel A of Table 5. The fourth category is all other insurers, and thus includes insurers in Panels B through D of Table 5.

Separate Account Business is Concentrated in the Largest Companies

With some products, like variable annuity and variable life insurance, the consumer bears most of the investment risk associated with the funds invested with the life insurance company. These funds are held in separate accounts, and are not available to meet the claims of other policyholders. Table 6 reports 177 (22 percent) of the 806 companies have separate account assets.

Of the largest 100 companies, 84 have separate account assets, but of the 706 smallest companies, only 93 (13.2 percent) have separate account assets.²⁵⁶ The average ratio of separate account assets to total assets for all of the companies is 31.2 percent. Because separate account business is segregated from the other business, capital-to-asset ratios will be measured using the value of assets and liabilities in insurers' general accounts.

Table 6 – Separate Account Business in 2011

The table reports the number of companies reporting separate account assets (row 27, column 1 on the 2011 Life Blank) and the average of the ratio of separate account assets to total assets.

	Among all 806 <u>companies</u>	Among largest <u>100</u> <u>companies</u>	Among smallest <u>706</u> <u>companies</u>
Number (%) of companies with separate account assets	177 (22.0%)	84 (84.0%)	93 (13.2%)
Among those with separate account assets, average ratio of separate account assets to total assets	31.2%	34.8%	28.1%

Mutual Insurers Compose a Small Proportion of the Industry

Most life and accident and health insurers currently are organized as stock companies (as opposed to mutual companies), which in part reflects the large number of de-mutualizations in the mid to late 1990s. Erhemjamts and Leverty (2010) report that between 1995 and 2004, 33 percent of life mutual companies converted to stock companies, and the percentage of total assets held by mutual companies declined from 36 percent to 10 percent. Figure 10 illustrates the number and percentage of mutual companies and the percentage of industry assets held by mutual companies over the past decade. While the percentage of mutual companies in the industry has declined slightly over the past decade, the percentage of assets held by mutual companies has remained relatively stable at about 13 percent.

Stock companies can raise capital by issuing equity or debt securities. In contrast, mutual insurers can raise external capital primarily by issuing surplus notes (subordinated debt). Consistent with stock companies having an advantage in raising capital, Erhemjamts and Leverty (2010), Erhemjamts and Phillips (2012), and Viswanathan and Cummins (2003) present

²⁵⁶ The high proportion of large insurers with separate account business is a reflection of large insurers being more likely to be in the annuity business.

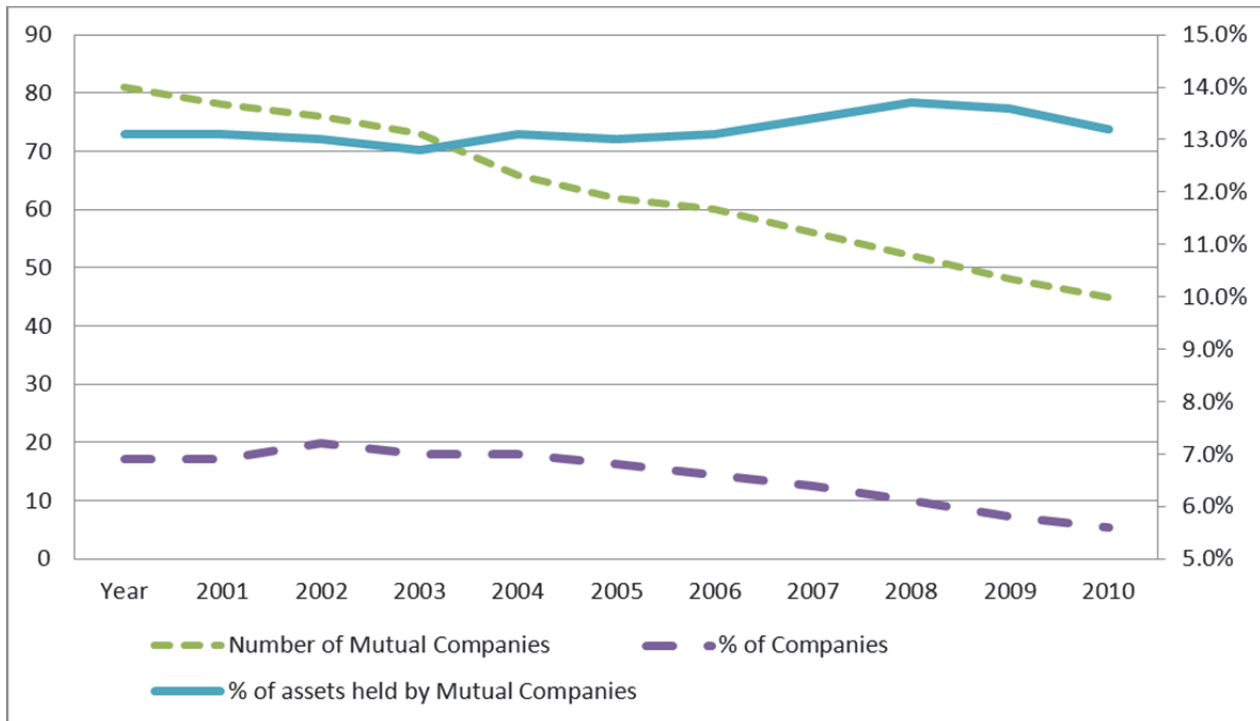
evidence that access to capital was a major motivation for the mutual conversions over the past two decades.²⁵⁷

If mutual insurers face higher costs of raising new capital than stock insurers, then mutual insurers can be expected to have an incentive to hold more capital as protection against unexpected losses than stock insurers, all else being equal. In addition, mutual insurer capital-to-asset ratios tend to be more sensitive to cash flows because they depend on their policyholders as their main source of capital. Therefore, mutual insurers adjust more slowly toward target capital levels. Harrington and Niehaus (2002) report evidence consistent with these predictions in their comparison of mutual and stock companies' capital decisions in the property-liability industry.

In general, mutual insurers tend to have higher capital levels than stock insurers. They also may tend to focus more on long-term stability because they are free of the pressures to maximize short-term profits to please shareholders. As an executive from one mutual insurer pointed out during an interview with CIPR staff, "As a mutual company, our focus is on long-term financial strength. We always had a focus on the importance of substantial capital buffer, but in a world of even more uncertainty, which we have seen since 2008, we keep even higher levels of capital."

²⁵⁷ More specifically, Erhemjamts and Leverty (2010) and Erhemjamts and Phillips (2012) show access to capital is an important motivation for full de-mutualizations, but not for mutuals that convert using a mutual holding company. The latter are motivated primarily by tax savings, which arise because a 1999 IRS ruling exempted mutual holding companies from a provision in the Deficit Reduction Act of 1984 that increased the tax burden of mutual companies. With a mutual holding company structure, a mutual insurer is converted to a stock insurer and a holding company is created. The policyholders' ownership rights in the original company are transferred to rights in the holding company, and new shares in the stock company can be issued if capital is needed.

Figure 10: Number of Mutual Companies, Percentage of Mutual Companies and Percentage of Assets Held by Mutual Companies



Capital-to-Asset Ratios Vary with Company Size and Line of Business

The capitalization of an insurer is measured by the ratio of reported capital plus surplus plus the asset valuation reserve plus the interest maintenance reserve divided by total general account admitted assets²⁵⁸, which from here forward will be referred to as the capital-to-asset ratio.²⁵⁹

Larger Companies Have Lower Capital-to-Asset Ratios

Table 7 presents information about capital-to-asset ratios for the largest insurers in Panel A and all other insurers in Panel B, where the largest insurers are defined as having total general account assets exceeding \$5 billion in 2011 dollars. Each reported capital-to-asset ratio measure in Table 7 (mean, 10th percentile value, median, 90th percentile value, and aggregate value) for the largest insurers is considerably lower than for the other insurers. For example, the median capital-to-asset ratio of large insurers ranges from 8.8 percent to 10.7 percent across the years, whereas the corresponding range for smaller insurers is 31.4 percent to 36.6 percent.

²⁵⁸ $(C\&S + AVR + IMR.) / \text{Total Assets}$

²⁵⁹ The asset valuation reserve is a liability account used to smooth changes in realized and unrealized credit-related capital gains and losses on corporate bonds, equities, and mortgage loans. The interest maintenance reserve is a liability account used to smooth changes in realized interest rate-related capital gains and losses on fixed income securities. Analysts often add these values to reported capital and surplus to obtain a measure of capital closer to economic capital (see, e.g., Berry-Stolze et al., 2012).

For each year and for both the largest insurers and all other insurers, the aggregate capital-to-asset ratio (the last column in Table 7) is lower than the mean capital-to-asset ratio. This reflects the mean values give equal weight to each insurer in the sample, whereas the aggregate capital-to-asset ratio gives greater weight to larger insurers. Thus, even within the subsamples, larger insurers generally hold less capital per dollar of assets.

The lower capital-to-asset ratios of large insurers do not imply these insurers have greater insolvency risk than smaller insurers. Instead, the lower capital-to-asset ratios likely reflect that the larger insurers (1) are more diversified and therefore subject to less volatility, (2) have greater ability (lower costs) to access capital markets in case a negative shock to capital occurs,²⁶⁰ and (3) are more likely to be publicly traded, which is associated with greater pressure to pay dividends and thereby maintain lower capital-to-asset ratios. As a consequence, larger insurers tend to hold less capital to ensure their ability to pay claims.

Capital-to-Asset Ratios Hit Their Lowest Levels in 2008

Now consider the time series variation in the capital-to-asset ratios reported in Table 7. While there is not a large variation over time in the mean, median, or aggregate capital-to-asset ratios, the lowest value of each of these measures occurs in 2008. As will be documented in the subsection *Changes in Capital during and after the Financial Crisis*, the drop in capital-to-asset ratios in 2008 largely reflects capital losses on assets (due to the decline in the carrying values of equities and credit-sensitive fixed income securities) that occurred during the financial crisis and the reduction in operating income for annuity providers. After 2008, the capital-to-asset ratio measures for the largest insurers recover to the pre-crisis levels. For all other insurers, the capital-to-asset ratio measures bounce back somewhat after 2008, but then drop again in 2011. Indeed, the second lowest value of the mean, median, and aggregate capital-to-asset ratio for the other insurers occurs in 2011.

²⁶⁰ Large insurers also exhibit much lower cross-sectional variation in their capital ratios as indicated by the standard deviations reported in Table 7. The standard deviation of large insurers is about one-third the standard deviation of small insurers.

Table 7 – Capital-to-Asset Ratios Over Time: Large versus Small Insurers

The table reports descriptive statistics for capital-to-asset ratios (defined as capital and surplus plus the asset valuation reserve plus the interest maintenance reserve divided by general account total admitted assets) over time. The columns are the number of insurers in the analysis (N), the average value of the capital-to-asset ratio (Mean), the cross-sectional standard deviation of the capital-to-asset ratio (Stdev), and the 10th, 50th, and 90th-percentile value of the capital-to-asset ratio (p10, p50, p90), and the aggregate capital-to-assets ratio (Aggregate), which is defined as the sum of the insurers' capital and surplus divided by the sum of general account total admitted assets.

Panel A: Insurers with total general account assets > \$5 billion in 2011 dollars

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	109	12.4	10.8	5.4	9.5	21.2	10.6
2002	109	11.5	10.7	5.1	8.8	19.8	9.9
2003	116	12.2	10.6	5.9	9.4	19.0	10.5
2004	118	12.9	10.3	6.5	10.0	20.0	10.9
2005	113	12.7	9.3	6.9	10.2	19.2	10.8
2006	111	12.9	8.9	6.1	10.7	19.8	11.0
2007	113	13.0	9.0	6.6	10.5	19.9	11.2
2008	109	11.5	8.3	5.9	8.8	18.1	9.6
2009	106	13.0	9.6	6.5	10.4	23.6	10.8
2010	108	13.8	10.7	6.8	10.7	22.8	11.5
2011	109	13.4	10.1	6.8	10.1	21.7	11.5

Panel B: Insurers with total general account assets < \$5 billion in 2011dollars

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	1061	43.9	31.1	9.4	34.6	95.4	20.8
2002	987	42.7	30.9	8.8	34.2	93.9	19.1
2003	963	43.8	31.0	8.9	36.6	94.6	20.7
2004	925	43.0	30.8	8.8	34.2	94.3	21.1
2005	835	42.3	30.9	9.1	33.1	94.4	20.3
2006	801	42.1	30.8	9.2	33.3	94.1	20.3
2007	794	42.3	30.8	9.1	33.8	94.7	20.6
2008	765	41.3	31.5	7.8	31.4	95.6	18.5
2009	741	42.2	31.2	8.8	33.6	95.6	19.9
2010	714	42.8	31.0	9.3	35.3	94.8	20.1
2011	697	41.9	31.3	9.0	32.5	95.0	18.9

Capital-to-Assets Ratios Vary with Line of Business

Figure 11 illustrates how capital-to-asset ratios vary based on the insurer's business focus. Each graph illustrates a capital-to-asset ratio measure (either the mean or the aggregate value) for three types of companies: those specializing in life insurance, those specializing in annuities, and those specializing in accident and health insurance. Thus, not all insurers are included in these graphs; only those specializing (having more than 75 percent of premium revenue from one line of business) in a particular line of business are included. The mean capital-to-asset ratio is illustrated in the left column of graphs and the aggregate capital-to-asset ratio in the right column of graphs.

Given the evidence in the previous section that capital-to-asset ratios tend to vary inversely with company size, companies are also divided into three size categories. The first row of graphs only includes insurers with inflation-adjusted general account assets in excess of \$5 billion. The second row only includes insurers with inflation-adjusted general account assets between \$1 and \$5 billion. The third row includes insurers with inflation-adjusted general account assets less than \$1 billion.

One cautionary note in interpreting the graphs is the number of insurers in each category can vary substantially. For example, the number of small insurers specializing in life insurance ranges from 198 to 315 over the sample period, but the number of small insurers specializing in annuities is never greater than 54 during the sample period. The data underlying these graphs, including the number of observations in each category and additional characteristics of the distribution of capital-to-asset ratios, are presented in Appendix A.

The most prominent pattern in Figure 11 is the capital-to-asset ratios of insurers specializing in accident and health insurance is higher than for life insurers and for annuity insurers in each size category. The higher capital-to-asset ratios are consistent with accident and health insurance underwriting results having greater volatility than the life and annuity businesses, and therefore insurers specializing in accident and health insurance hold more capital, all else being equal, to make their promises to pay claims credible.

Medium Size Accident and Health Capital-to-Asset Ratios Trend Lower

Figure 11 suggests the capital-to-asset ratios of large and medium-size insurers specializing in accident and health insurance have trended down over the past decade. Smaller accident and health insurers, however, do not exhibit the same trend. Given the relatively small number of large insurers specializing in accident and health insurance, it is important to check whether the apparent trend is due to one or two companies skewing the results. Indeed, this is the case for the large company category, which has less than 11 companies throughout the sample period. However, the number of medium-size insurers specializing in accident and health insurance

ranges from 17 to 27 over the sample period, and the downward trend is not the result of one or two companies with high capital-to-asset ratios at the beginning of the century.

Capital-to-Asset Ratios of Small Annuity Providers Exhibit Volatility Over Time

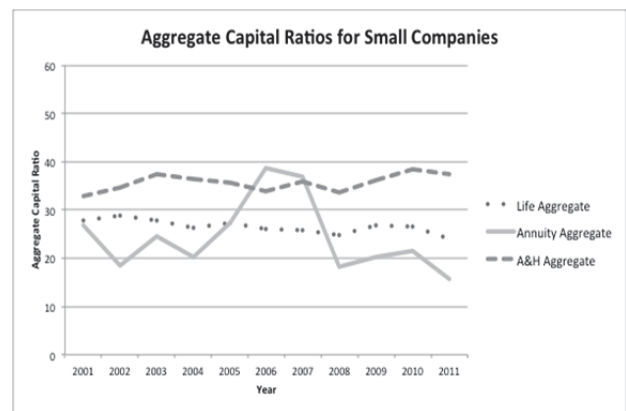
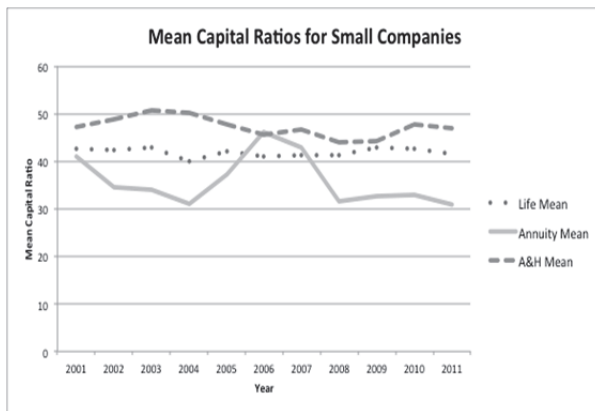
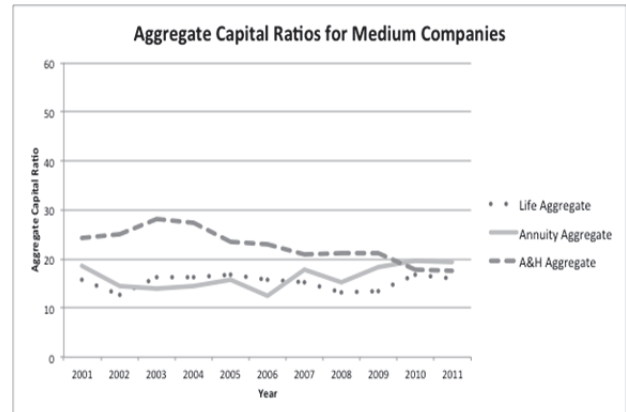
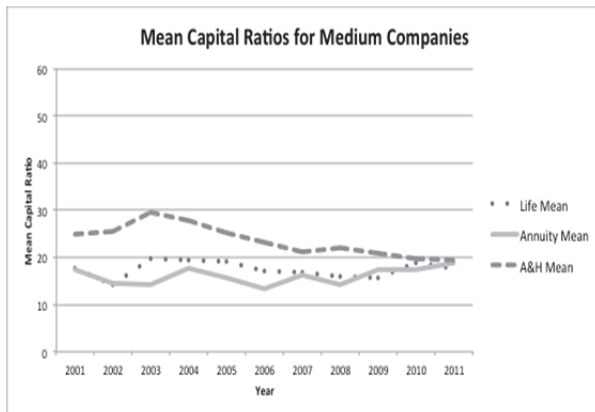
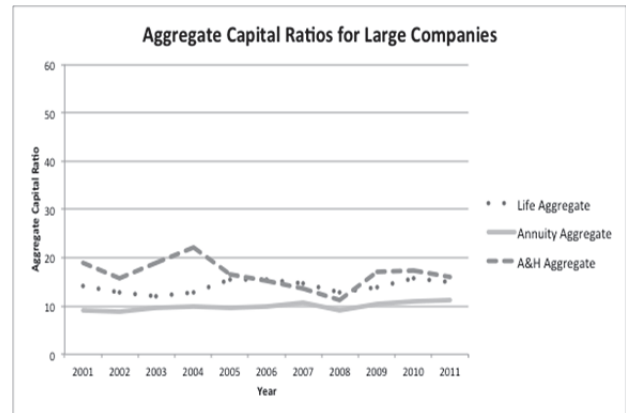
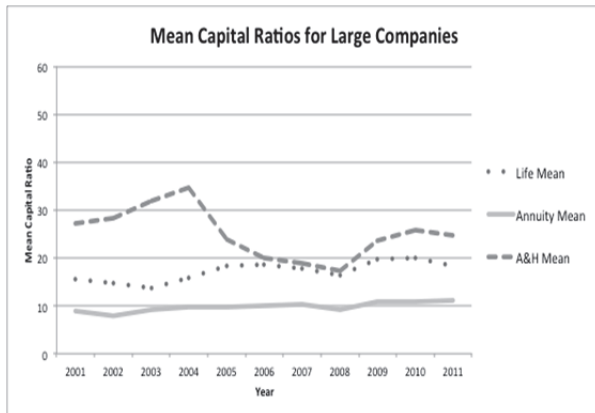
Among small companies (bottom panel), an interesting observation is the mean and aggregate capital-to-asset ratios of annuity providers exhibit large fluctuations over time, whereas the mean and aggregate capital ratios of small life insurers remain relatively constant over time. Part of the reason for the greater volatility in the capital-to-asset ratios of small annuity providers is the smaller number of companies in the category. Nevertheless, the capital-to-asset ratio measures for small annuity providers jump above those for small life insurers during the middle part of the time period, but fall well below those of small life insurers during the end of the time period.

Capital-to-Asset Ratios of Small Annuity Providers Remain Low in the Post-Crisis Period

An important observation from Figure 11 is the capital-to-asset ratios of small annuity providers have not rebounded from their 2008 drop. Indeed, the lower capital-to-asset ratios of small annuity providers have persisted in the post-crisis period. In contrast, the drop in capital-to-asset ratios experienced in 2008 by the other size classifications of annuity and life insurers illustrated in Figure 11 has been reversed in the post-crisis period. While lower capital-to-asset ratios could suggest greater insolvency risk, another explanation is that these insurers reduced their risk during the post-crisis period so a lower level of capital is needed.

Figure 11: Mean and Aggregate Capital-to-Asset Ratios

Mean and Aggregate Capital-to-Asset Ratios over time for companies specializing in life insurance, annuities, or accident and health insurance for three size categories: Large companies have inflation adjusted general account assets in excess of \$5 billion. Medium-size companies have assets between \$1 billion and \$5 billion. Small companies have assets less than \$1 billion. The underlying data are reported in Appendix A.



NAIC RBC Ratios: 2001-2011

As mentioned above, variation in capital-to-asset ratios across insurers (e.g., small versus large or life insurers versus accident and health insurers) does not imply one group has greater insolvency risk than the other. This is because the group with the higher NAIC RBC ratios could have greater risk. Insolvency risk depends on the amount of capital relative to the risk undertaken. Therefore, the RBC results reported by insurers to the NAIC are examined in this subsection. The risk-based capital ratio is calculated using these results by dividing the Total Adjusted Capital (TAC) by the Authorized Control Level Risk-Based Capital (ACL RBC). Asset risks generate more than half of the ACL RBC.

While most insurers have NAIC RBC ratios in the 4-25 range, some companies have much higher ratios, including ratios in the hundreds and even thousands. Because such high NAIC RBC ratios skew averages, for this analysis, companies with ratios greater than 100 are eliminated. Figure 12 illustrates how the mean and aggregate NAIC RBC ratios have varied over time for companies specializing in different lines of business and in different size categories.

Risk-Based Capital Ratios Have Generally Been Stable

For most of the insurer categories depicted in Figure 12, the mean and aggregate NAIC RBC ratio is remarkably stable over time. There are small drops in the NAIC RBC ratios in 2008, but they tend to rebound after 2008. If anything, the graphs in Figure 12 suggest a slight upward trend over the past decade.

Small Annuity Providers are an Exception

One exception to these generalizations is the NAIC RBC ratios for small annuity providers. Both the mean and aggregate values exhibit more volatility than the NAIC RBC ratios of the other insurer categories, and while the NAIC RBC ratios rebound in 2009 and 2010, they drop again in 2011. Medium-size annuity providers' NAIC RBC ratios also exhibit volatility over time, but the 2011 average and aggregate values are close to their highest level in the past decade.

Percentage of Companies with Low RBC Ratios

The mean and aggregate numbers reported above do not reflect what is happening in the companies that are of most concern, those with very low NAIC RBC ratios. Figure 13, therefore, presents the percentage of companies with NAIC RBC ratios below three by line of business. For each category of companies, the percentage of companies with NAIC RBC ratios below three increases in 2008, but for each group the percentage declines after 2008. Moreover, in 2011 the percentage of companies with NAIC RBC ratios below three is at or near the lowest level over the past decade.

Figure 12: Mean and Aggregate NAIC RBC Ratios

Mean and Aggregate NAIC RBC Ratios over time for companies specializing in life insurance, annuities, or accident and health insurance for three size categories: Large companies have inflation adjusted general account assets in excess of \$5 billion. Medium-size companies have assets between \$1 billion and \$5 billion. Small companies have assets less than \$1 billion. The underlying data are reported in the Appendix B.

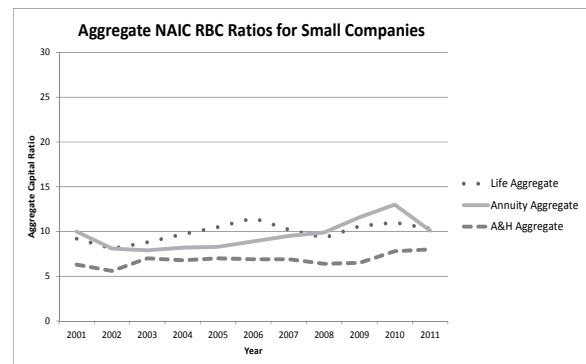
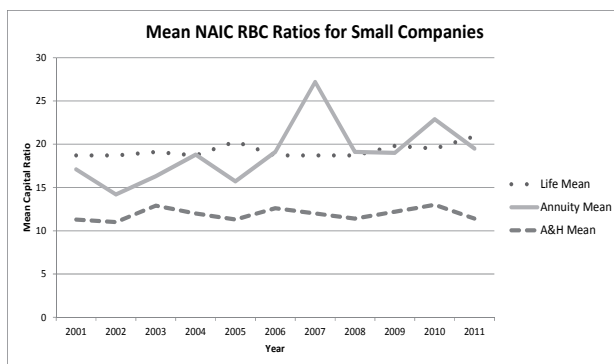
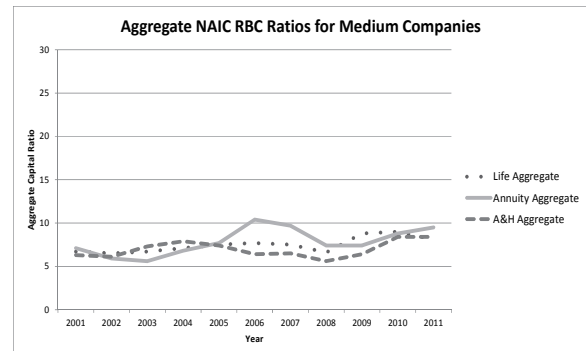
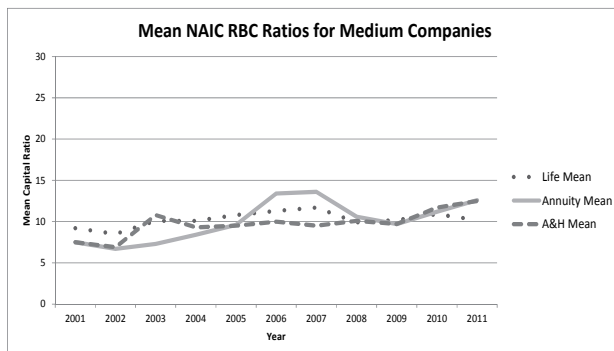
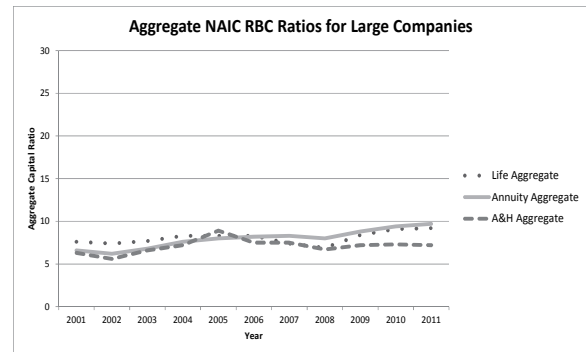
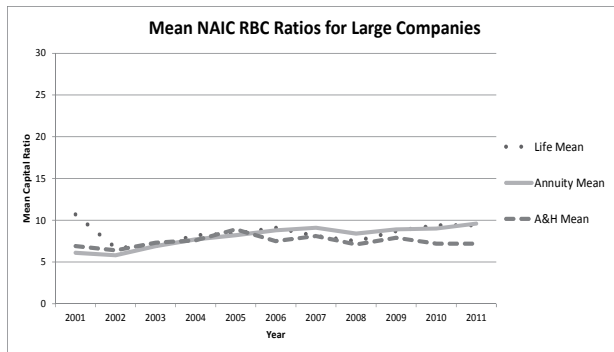
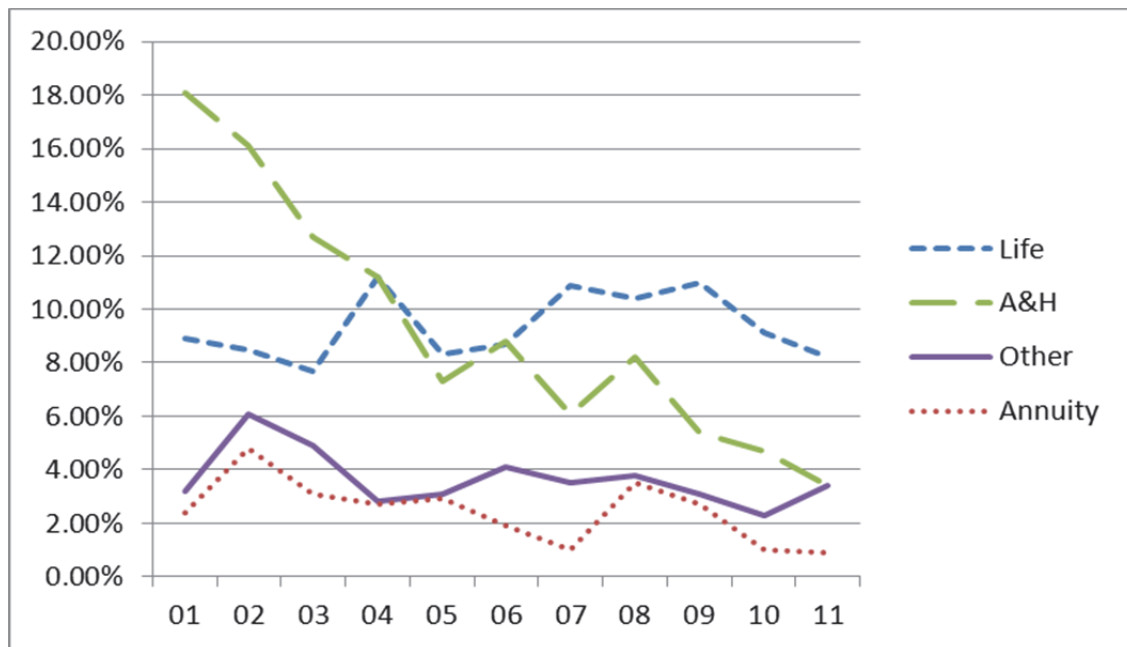


Figure 13: Percentage of Companies with NAIC RBC Ratios less than Three



Changes in Capital During and After the Financial Crisis

In an interesting paper, Berry-Stolze, et al. (2012) documents a drop in the return on assets in the years 2002 and 2008 for annuity providers. They show that, despite these large operating losses, insurers were able to replenish capital by raising new capital and by reducing dividends. Their evidence suggests life and annuity insurers’ ability to raise capital was not impaired during the financial crisis. Indeed, according to Berry-Stolze, et al. (2012), life insurers raised about \$32 billion of capital between 2008-2009—almost three times as much as in the previous five years. The bulk of the new capital was raised by insurers specializing in variable annuities. The finding that insurers could access new capital during the financial crisis calls into question the argument the financial crisis disrupted the supply of capital and therefore necessitated government involvement. The Berry-Stolze, et al., evidence suggests capital was available, at least for the life and annuity industry.

To illustrate how insurers adjusted capital during the past decade, with a particular emphasis on the financial crisis period, Table 8 presents information on the annual components of aggregate capital changes as a percentage of prior-year capital.²⁶¹ Columns 3-13 describe the various components of the change in capital and the last column provides the net change. One company is dropped from the analysis because its extreme variance in some components of the change in capital would lead to reporting results not representative of the sample. Since the

²⁶¹ As with the analysis of capital ratios presented earlier, capital and surplus is adjusted by adding the asset valuation reserve and the interest maintenance reserve.

focus is on the financial crisis and the subsequent years, only data for 2007 -2011 are presented; the data for prior years is available upon request. The table is divided into four panels—A, B and C are for insurers specializing in life insurance, annuities, and accident and health insurance, respectively, where specialization is defined as having at least 75 percent of premiums from one line of business. Panel D is for all other insurers (i.e., those that do not specialize). For each panel, insurers are placed in three size categories based on inflation-adjusted general account assets greater than \$5 billion, between \$1 and \$5 billion, and less than \$1 billion.

Capital Declines in 2008 (Especially for Larger Insurers), but Rebounds Afterwards

Consistent with the evidence presented earlier on capital-to-asset ratios, the last column in Table 8 indicates insurers as a group experienced substantial declines in capital in 2008. The change in capital across the categories ranges from a 0.4 percent increase for small accident and health insurers to a 17.6 percent decrease for large life insurers. For each line of business, large insurers experienced a larger decline in capital in 2008 than medium insurers, which in turn is larger than for small insurers. Importantly, the capital declines in 2008 are generally offset by increases in capital in the subsequent years, consistent with the earlier evidence that capital ratios increased after 2008. The remainder of this section will focus on the changes in the various components of capital during and after the financial crisis.

Large Life Insurers Had Large Unrealized Capital Losses, but Raised Substantial Capital in 2008

Panel A1 in Table 8 indicates large insurers specializing in life insurance had large unrealized capital losses in 2008. The effect of these unrealized losses was to decrease capital by 15.7 percent, which largely explains the net change in capital of -17.6 percent. The drop in capital in 2008 was recouped in the subsequent two years by accessing additional capital, reducing stockholder dividends, and experiencing unrealized capital gains.

Large Life and Annuity Insurers Have Larger Capital Losses than Medium and Small Carriers

In contrast to large life insurers, medium and small life insurers had much lower combined realized and unrealized capital losses in 2008. Medium-size life insurers had a combined realized and unrealized capital loss of 14.3 percent (-22.9 + 8.6) and small life insurers had a combined realized and unrealized capital loss of 9.7 percent (-3.4 + -6.3). This contrasts with large life insurers having a combined realized and unrealized capital loss of 19.3 percent.

Although less extreme, a similar pattern existed for annuity providers. Medium annuity providers had a combined realized and unrealized capital loss of 12.5 percent and small annuity providers had a combined realized and unrealized capital loss of only 4.5 percent. This contrasts

with large annuity providers with a combined realized and unrealized capital loss of 30.6 percent.

Operating Return on Equity Drops for Annuity Providers

The column labeled “Op Inc” is the operating return on equity. An important contributing factor to the drop in capital for annuity providers in 2008 was the negative operating income generated that year. Large, medium, and small annuity providers had -9.5 percent, -20.8 percent, and -4.8 percent operating return, respectively, on equity in 2008. The reverse occurred in 2009, with 24.6 percent, 23.7 percent, and 4.3 percent return on equity, respectively, for the three size groups. The main reason for the negative operating return in 2008 was that reserves increased substantially.²⁶²

Annuity Providers Issue Surplus Notes

Large and medium annuity providers increased the amount of surplus notes outstanding in 2008 and 2009 relative to the other years. Large life insurers also raised capital in 2010 by increasing the outstanding value of surplus notes. Accident and health insurers and small life and annuity companies did not increase the use of surplus notes during the crisis or post-crisis period.²⁶³

Mutual Companies versus Stock Companies

Table 9 presents a comparison of stock companies versus mutual companies with respect to capital-raising activities during and after the financial crisis. Since there are so few mutual companies, broader size and business mix categories are used more than in the previous analyses. More specifically, Panels A and B combine medium and large companies and all business mixes, and Panels C and D examine small companies of all business mixes. Even after this consolidation, there are only 21 large or medium-size mutual companies and 24 small mutual companies. Nevertheless, the difference in the change in paid-in capital between the stock companies and the mutual companies is substantial for both size categories. On the other hand, the increase in surplus notes is greater for large and medium mutual companies than for large and medium stock companies, but this difference is not apparent for small companies. Thus, it appears that larger mutual companies are better able to access capital through surplus notes than smaller mutual companies.

²⁶² For large annuity providers, the change in aggregate reserves in 2008 was 53.5 percent of beginning-of-year capital. In contrast, during the three-year period prior to (after) 2008 the change in aggregate reserves scaled by beginning-of-year capital averaged 15.2 (36.6) percent. For medium annuity providers, the change in aggregate reserves in 2008 was 56.0 percent of beginning-of-year capital. In contrast, during the three-year period prior to (after) 2008 the change in aggregate reserves scaled by beginning-of-year-capital averaged -25.3 (36.6) percent.

²⁶³ Also, the percentage of firms that increased outstanding surplus notes (as opposed to the aggregate value of surplus notes, which is reported in Table 8) is higher in the crisis and post-crisis period for large and medium annuity providers and large life insurers, but not for the other groups.

Conclusions on Life Insurer Balance Sheets

During the financial crisis, major asset classes experienced significant drops in carrying value. Because life insurers held many of these assets, the capital of many life insurers dropped as well. The evidence presented in this section indicates, in general, insurers responded quickly to replenish their capital. The recovery following the financial crisis in many securities certainly helped insurers replenish their capital. However, insurers also actively accessed additional capital and cut dividends. The capital replenishment activities of insurers were not required by regulation, but instead largely reflect efforts by insurers to maintain customer confidence. The evidence therefore supports the view that, in general, the companies in the industry are managed as if consumers are sensitive to insolvency risk.

Table 8 – Changes in Capital by Business Focus and Company Size

This table reports the aggregate change in capital as a percentage of the prior year's capital (last column) and various components of the changes in aggregate capital (columns 3-13) for insurers categorized by size and line of business. "Large" indicates the insurers have inflation-adjusted general account assets in excess of \$5 billion; "Medium" between \$1 and \$5 billion; "Small" less than \$1 billion. "Life Insurers" have at least 75 percent of their premium from life insurance, "Annuity Providers" have at least 75 percent of premiums from annuities, "A&H Insurers" have at least 75 percent of their premiums from accident and health insurance, and "Other Insurers" are insurers without 75 percent of premiums from one line of business. Column titles are defined as operating income (OP Inc), realized capital gains and losses (Rlzd Cap G/L), net unrealized capital gains and losses (Unrlzd Cap G/L), change in the interest maintenance reserve (ΔIMR), change in net deferred income tax (ΔDef Inc Taxes), change in nonadmitted assets (ΔNonadm Assets), change in surplus notes (ΔSurp Notes), change in paid in capital plus paid in surplus (ΔPaid in C/S), stockholder dividends (Stkhdr Div), aggregate write-ins for gains and losses in surplus (Write-ins Surp), all other changes in capital and surplus reported in the summary of operations exhibit in the annual statement except the asset valuation reserve, and the net change in capital and surplus (Net chg Cap/Surp). All reported numbers are in percents (i.e., 2.7 = 2.7%).

Year	N	Op Inc	Rlzd Cap G/L	UnRlzd Cap G/L	Δ IMR	ΔDef Inc Tax	ΔNonadm Assets	ΔSurp Notes	ΔPaid in Cap/Surp	Stkhdr Div	Write in Surp	Other Δ's	Net Δ in Cap/Surp
Large Life													
2007	18	6.3	1.6	(1.2)	(0.1)	1.5	(0.5)	(0.2)	(0.7)	(3.0)	(0.3)	0.2	3.5
2008	14	10.4	(3.6)	(15.7)	(1.7)	1.0	(2.5)	0.0	0.3	(6.0)	(0.3)	0.6	(17.6)
2009	12	3.8	(2.2)	0.4	1.4	(1.0)	(1.6)	(0.0)	7.0	(0.8)	1.2	0.6	8.7
2010	14	5.3	(0.6)	4.4	1.2	0.1	2.7	4.4	(2.2)	(6.0)	0.1	0.4	9.8
2011	14	4.3	(2.1)	0.3	1.1	0.9	(0.1)	(0.0)	0.6	(2.2)	(1.1)	0.3	2.2
Medium Life													
2007	40	2.2	0.2	(3.0)	(0.5)	0.5	(1.0)	(0.0)	3.7	(6.1)	4.5	0.0	0.6
2008	35	7.5	(22.9)	8.6	(0.5)	3.1	(3.6)	(0.1)	3.9	(12.8)	(0.1)	0.3	(16.6)
2009	35	12.9	(5.7)	1.9	1.0	(11.6)	14.2	(0.0)	11.4	(7.6)	0.9	5.2	22.6
2010	44	(12.8)	6.9	(2.5)	0.8	(5.4)	6.3	(0.0)	3.2	(20.3)	1.4	22.6	0.3
2011	42	9.1	(2.3)	1.8	0.9	(0.1)	(0.0)	(0.0)	(0.9)	(12.0)	0.2	(0.8)	(4.2)
Small Life													
2007	243	4.6	0.3	(0.9)	(0.2)	1.7	(1.2)	(0.2)	2.9	(9.2)	0.3	(0.5)	(2.4)
2008	239	7.9	(3.4)	(6.3)	(0.3)	1.5	(0.9)	0.1	1.2	(8.3)	(1.0)	0.7	(8.7)
2009	224	4.9	(0.9)	3.4	0.2	(1.4)	2.2	(0.9)	4.4	(5.7)	1.6	0.0	7.8
2010	206	3.1	3.0	1.6	0.7	(1.1)	0.2	(0.5)	3.8	(8.4)	(0.6)	0.8	2.7
2011	198	5.4	(0.1)	(0.6)	0.4	0.8	(0.6)	(0.1)	1.3	(5.5)	(0.9)	(0.2)	(0.0)

Table 8 – Continued

Year	N	Op Inc	Rlzd Cap G/L	UnRlzd Cap G/L	ΔIMR	ΔDef Inc Tax	ΔNonad m Assets	ΔSurp Notes	Paid in Cap/Surp	Stkhdr Div	Write in Surp	Other Δ's	Net Δ in Cap/Surp
Large Annuity													
2007	43	9.6	(1.1)	0.8	(0.9)	1.4	(0.7)	0.2	2.1	(7.0)	1.2	0.6	6.2
2008	46	(9.5)	(23.1)	(7.5)	(1.6)	21.4	(19.4)	1.9	24.3	(3.2)	1.3	2.3	(13.2)
2009	42	24.6	(17.0)	(4.8)	0.3	(6.3)	4.2	2.9	11.5	(1.0)	3.0	2.3	19.7
2010	39	10.8	(2.8)	2.7	3.2	(2.7)	4.4	(0.2)	(14.0)	(3.8)	15.2	0.0	12.7
2011	40	3.4	(1.9)	4.1	0.9	(0.3)	1.7	(0.0)	(0.3)	(4.9)	0.5	2.7	5.9
Medium Annuity													
2007	22	8.7	(2.7)	5.0	0.1	3.5	(3.5)	0.0	2.4	(7.6)	0.2	1.1	7.1
2008	26	(20.8)	(7.7)	(4.8)	(0.4)	10.6	(9.7)	2.5	24.2	(4.0)	(0.2)	0.2	(10.2)
2009	27	23.7	(9.9)	(12.0)	0.6	(5.6)	3.9	0.0	20.5	(1.6)	2.6	0.1	22.3
2010	24	16.3	(3.7)	4.7	0.6	(3.1)	3.9	0.0	(1.6)	(5.2)	3.7	(0.6)	15.1
2011	24	6.8	(0.7)	(4.7)	1.2	1.7	(0.4)	0.0	2.1	(9.4)	(0.5)	1.2	(2.7)
Small Annuity													
2007	39	11.1	(2.6)	(0.2)	(1.2)	3.4	(4.4)	0.0	7.9	(4.9)	(0.8)	(0.3)	8.0
2008	42	(4.8)	(3.3)	(1.2)	0.1	2.7	(1.9)	(0.3)	14.6	(1.4)	(2.9)	(5.3)	(3.8)
2009	44	4.3	(1.5)	0.8	1.3	(2.0)	3.2	0.3	4.7	(0.4)	3.1	8.3	21.9
2010	41	4.1	1.2	0.5	1.0	(0.2)	0.4	0.0	1.9	(1.5)	1.2	0.1	8.7
2011	46	2.5	(1.6)	(1.0)	0.6	0.6	(1.5)	0.0	(14.5)	(7.3)	0.8	0.1	(21.4)

Table 9 – Change in Capital for Stock versus Mutual Companies

This table reports the aggregate change in capital as a percentage of the prior year's capital (last column) and two components of the changes in aggregate capital for insurers categorized by size and ownership structure. "Large and Medium" ("Small") indicates the insurers have inflation adjusted general account assets greater (less) than \$1 billion. Column titles are defined as change in surplus notes (Δ Surp Notes), change in paid in capital plus paid in surplus (Δ Paid in Cap/Surp), and the net change in capital and surplus (Net chg Cap/Surp). All reported numbers are in percentages (i.e., 2.7 = 2.7%).

Year	N	Δ Surp Notes	Δ Paid in Cap/Surp	Net Δ in Cap/Surp
Panel A: Large and Medium Stock Companies				
2007	206	0.2	2.1	5.7
2008	199	1.0	19.2	(12.4)
2009	202	1.4	9.5	15.8
2010	202	(0.1)	(8.5)	8.8
2011	208	(0.2)	0.3	4.0
Panel A: Large and Medium Mutual Companies				
2007	28	0.8	0.4	5.9
2008	26	0.5	0.3	(12.4)
2009	25	5.6	1.4	14.1
2010	25	4.3	0.1	15.2
2011	24	(0.0)	0.1	6.3
Panel A: Small Stock Companies				
2007	637	0.2	4.4	4.1
2008	617	0.1	5.2	(5.5)
2009	591	(0.5)	4.1	8.2
2010	569	(0.2)	3.3	4.8
2011	550	(0.0)	2.3	0.4
Panel A: Small Mutual Companies				
2007	32	(0.1)	0.0	2.8
2008	30	(0.6)	1.5	(6.4)
2009	26	(0.2)	0.0	(1.8)
2010	23	(0.2)	0.0	8.0
2011	21	0.0	0.0	3.2

Implications of Economic and Market Changes on Life Insurers



Implications of Economic and Market Changes on Life Insurers **By NAIC Staff**

Insurers' Place and Key Role in the Economy

The life insurance industry plays a prominent role in the economy and is responsible for a substantial share of the financial sector. Life insurers, as of the first quarter of 2012, held \$5.5 trillion in financial assets, nearly one-third of the size of the \$14.5 trillion banking sector.²⁶⁴ The industry makes up a vital source of funding for corporations, as well as for state and municipal governments. Furthermore, mainly via the capital markets, the life insurance industry mobilizes domestic household savings that are fed into productive investments, thereby greatly stimulating economic growth. In the first quarter of 2012, life insurers held about \$2.2 trillion (18.4%) of the total corporate and foreign bonds, nearly \$1.6 trillion (6.2%) of the total corporate equities market, and \$267 billion (12.0%) of the total commercial mortgage loans outstanding.²⁶⁵

The more rewarding investment opportunities available to life insurers in the capital market, the more attractive terms they are able to offer to their consumers. This dynamic interaction between life insurance companies and the capital market mediated by consumer investment choices suggest the existence of an almost symbiotic relationship with both sides evolving and growing by assisting each other.

Life insurance companies help foster economic activity in their roles as financial intermediaries and providers of risk transfer and indemnification. It has been shown a healthy and robust life insurance industry is one of the key ingredients for sustained economic growth, especially in mature high-income economies.²⁶⁶ Conversely, a strong and prosperous economy provides the best setting for a highly solvent and profitable life insurance industry. However, this interdependence existing between the macroeconomy and life insurers exposes them, especially in periods of protracted economic weakness, to a number of vulnerabilities and risks that can impact their capital structure, profitability and market position.

U.S. life insurance is a large, fairly concentrated, relatively low-growth industry, operating in a mature, highly developed, service-driven market economy. By its very design and structure, the life insurance industry, with its long-term investment horizon and risk absorption role, helps promote economic stability. As the recent crisis showed, major shocks are mostly transmitted from the economy to the life insurance industry, rather than the other way around. The core

²⁶⁴ Flow of Funds Accounts of the United States

²⁶⁵ Flow of Funds Accounts of the United States

²⁶⁶ Arena, M. 2006. "Does Insurance Market Activity Promote Economic Growth? A Cross-Country Study for Industrialized and Developing Countries" World Bank Policy Research Working Paper 4098.

activities of life insurance companies function more as economic stabilizers and do not pose any risks for the economy as a whole. Only life insurers' quasi-banking or non-core activities, such as derivatives trading and mortgage lending, could potentially be systemically risky at times of generalized economic fragility. At the same time, the Investments of Insurers Model Act, which a majority of states have adopted, sets limits on insurers' investment activities. Under the Act, insurers must demonstrate the intended hedging characteristics and effectiveness of hedging transactions through cash flow or other analysis to its regulators. It also sets regulatory restrictions on the aggregate derivatives exposures as a percentage of insurers' admitted assets²⁶⁷ to help limit any potential systemic implications of insurers' derivatives trading. The same applies to mortgage lending, with regulatory restrictions regarding loan-to-value ratios helping to contain risk with over 99 percent of insurers' outstanding commercial mortgage loans in good standing.²⁶⁸

New markets and opportunities, as well as new challenges and risks, have emerged as life insurers moved into the investment and wealth management product market to fill the growing gap between public and private provision of retirement benefits. Many insurers have responded to the rising demand for savings and income-oriented products by shifting their business mix toward annuities and deposit-type contracts. Although this shift toward interest-sensitive products opens new growth opportunities, it also increases the life insurance industry's exposure to macroeconomic weaknesses, uncertainty, and market volatility.

Impact of Financial Crisis

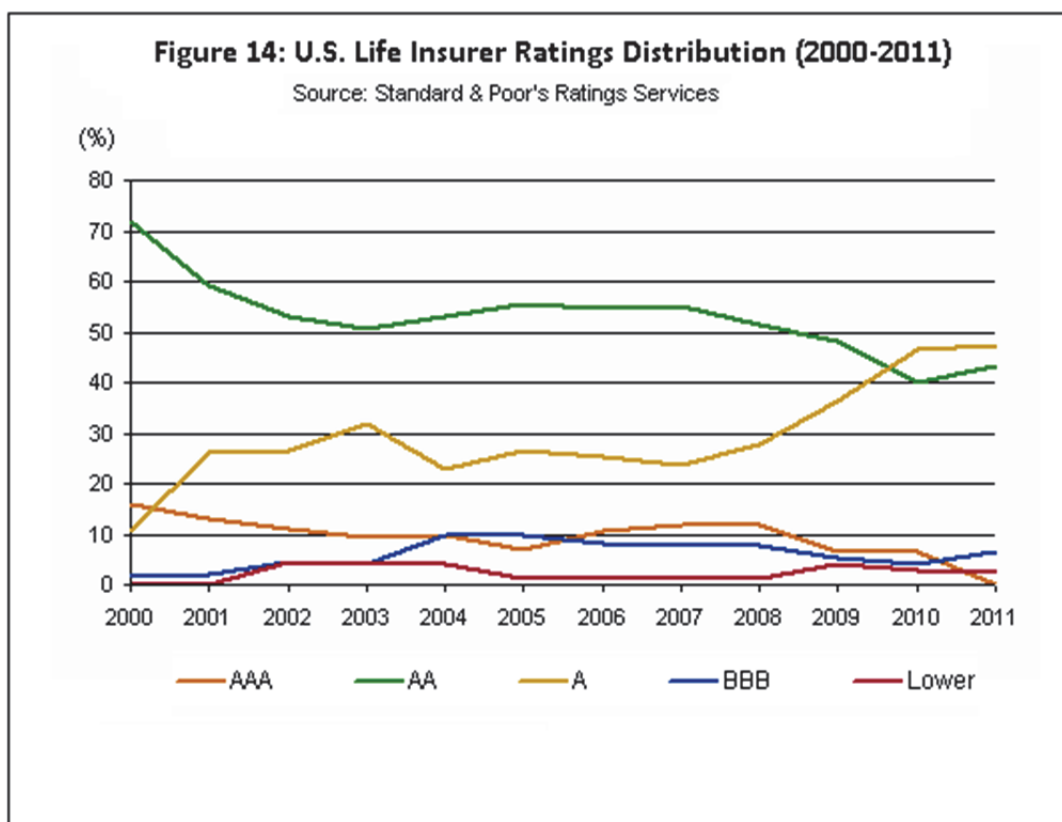
Life insurers' evolving product portfolio toward investment and wealth management business has linked their performance more closely to macroeconomic cycles and investment market unpredictability. An observed strong correlation between insurers' credit rating history and economic and market trends seems to confirm that link. Life insurers' credit ratings have noticeably declined during economic downturns, including the 2007-2010 period that spanned the great financial crisis. Since 2007, the average life insurer financial strength rating²⁶⁹ has

²⁶⁷ NAIC Model Law 280, Section 18 limits derivative purchases for hedging to 7.5 percent of admitted assets, derivatives written in hedging transactions to 3 percent of admitted assets, and derivative transactions for income generation to 10 percent of admitted assets.

²⁶⁸ NAIC Capital Markets Bureau. 2012. "The Insurance Industry's Exposure to Commercial Mortgage Lending and Real Estate: A Detailed Review of the Life Insurance Industry's Commercial Mortgage Loan Holdings." Special Report, December 20, 2012.

²⁶⁹ Financial strength rating is a forward-looking opinion about the financial security characteristics of an insurer and considers quantitative and qualitative factors and future risks. It does not reflect an insurer's ability to meet non-policy (i.e., debt) obligations. An insurer rated 'BBB' or higher is regarded as having financial security characteristics that outweigh any vulnerabilities, and is highly likely to have the ability to meet financial commitments.

dropped from AA to A (Figure 14), according to Standard & Poor's.²⁷⁰ While a further deterioration in average credit quality is not foreseen, a quick recovery of the ratings is also not very likely as long as the economic weakness persists and interest rates remain low. At the same time, despite the recent ratings erosion, the life insurance industry remains one of S&P's highest-rated sectors still enjoying strong capitalization and liquidity.



The capital structure of life companies is different than other companies, especially non-financials, as they have little traditional debt. Life insurers' main obligations stem from the policies they sell. To ensure sufficient funds are available to meet policyholder obligations, premiums collected from policies are invested in assets that match the duration of their corresponding liabilities. Life insurers traditionally sell long-tailed products, meaning that a claim is not expected to be filed on the policy for an extended time after its purchase. For this reason, life insurers primarily invest in longer-term fixed-income investments, such as bonds, as part of their asset/liability management. Improper asset/liability management can increase an insurer's exposure to macroeconomic volatility, making earnings and capital less stable.

²⁷⁰ Standard & Poor's, "More Than Meets The Eye: What Is Behind The Long-Term Credit Erosion In The North American Life-Insurance Sector?" May 25, 2012.

Insurers face more than just risk from asset/liability mismanagement. Interest rate movements pose an increasing risk as insurers continue to grow their investment-oriented products. As is discussed in detail later, the current low-interest rate environment has compressed the margin between the yields insurers are able to earn on their investments and the crediting rates they have promised on current products. This has constrained insurers' ability to innovate and compete.

Investment risk and concentration risk are also a key consideration for life insurers. Investment risk includes the risk of payment default or devaluation of invested assets. Concentration risk refers to the increase in risk that occurs from aggregated exposures to a single geography, investment type or sector, or policy type. The financial crisis showed that life insurers can be vulnerable to both investment and concentration risk. To a great extent, a company's ability to meet its obligations to its policyholders depends on the riskiness and liquidity²⁷¹ of its invested assets. In adverse economic conditions, such as during the acute credit crunch of the recent crisis, there is an increased likelihood of stress liquidity risk among life insurers as a result of rising policy surrenders and lapse rates.

Life insurers' investment portfolios, especially those with relatively high concentrations in securities linked to the mortgage market, were materially impacted during the financial crisis by declining bond values. It is important to note, however, this generalized decline was partially offset by a fall in risk-free interest rates related to monetary easing. Life insurers' holdings of bank-issued money market and debt instruments also presented additional credit risk for the life insurance industry. Fortunately this risk was mostly mitigated by governmental intervention to rescue the banks and arrest the spread of systemic risk.

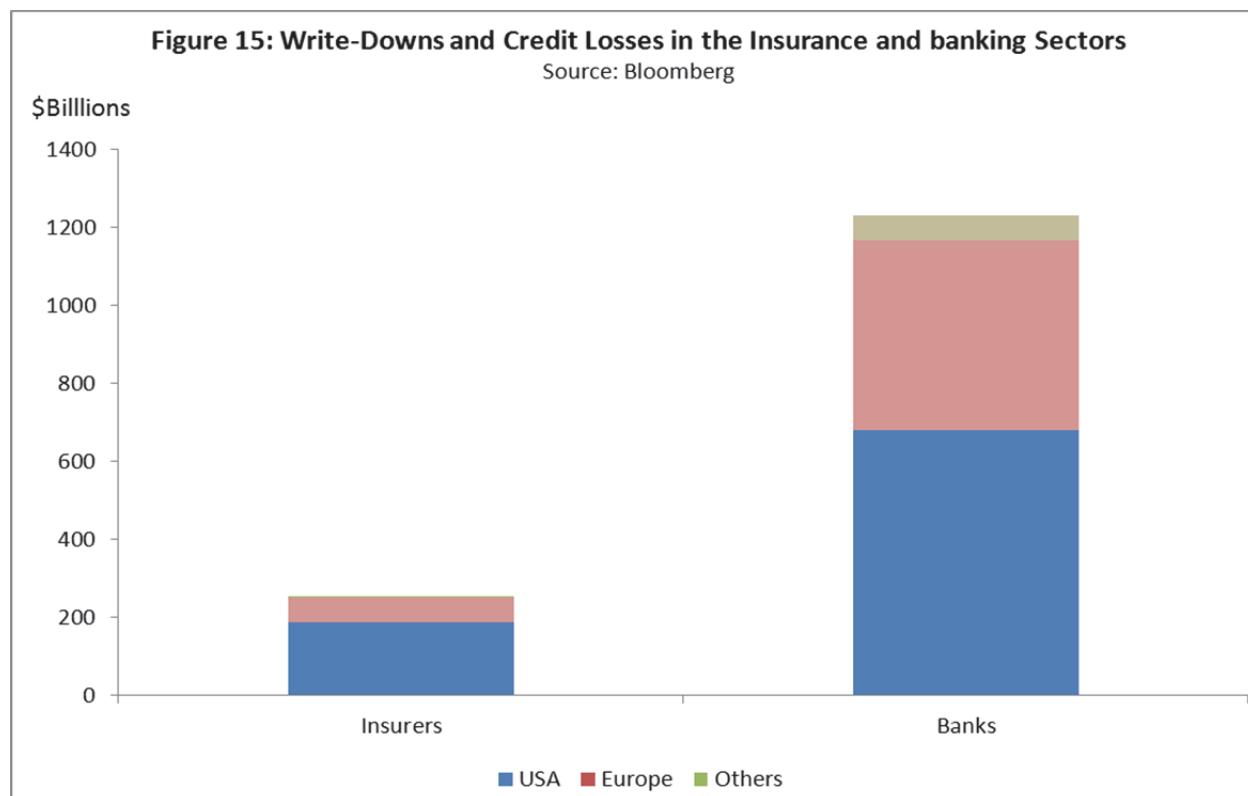
Life insurers were also exposed to macroeconomic financial shock through their equity holdings. However, the overall impact of the sharp drop in equity values on life insurers during the financial crisis was mostly limited, as equities compose a small part of insurers' portfolios.²⁷² The most notable change was a decline in the portfolio weight of equities (from 4.5% to 3.4%) from 2007 to 2008. This was most likely related to a combination of portfolio rebalancing and the fall in values.

At the same time, the impact on life insurers was neither as severe nor debilitating as on other financial sectors. While most life insurers experienced some deterioration in their asset

²⁷¹ The importance of liquidity depends on insurers' liability structure. Life companies have the flexibility of being less liquid due to their mostly long duration liabilities. Life insurers have the ability to endure periods of generalized financial stress and enjoy a greater capacity than other financial institutions to deal with market volatility.

²⁷² Since 2001, common stock holdings averaged about 4.3% of the life insurance industry's aggregate investment portfolio.

valuations, their balance sheets were relatively unscathed by the financial crisis. In contrast, the banking industry ultimately required a massive federal bailout to avoid more calamitous consequences that could extend to the whole economy. According to Bloomberg, in the first two years of the crisis (as of January 2010), U.S. life insurance companies reported total write-downs and credit losses of \$189 billion²⁷³ (a total \$254 billion worldwide) compared to \$679 billion reported by U.S. banks (globally, banks' write-downs totaled \$1.2 trillion) (Figure 15).



The accumulation of risks²⁷⁴ in life insurers' investment portfolios, partly as a result of their real estate-related investments in the run-up of the crisis, strained their capital position. Studies have shown life insurers' capital decisions are interconnected with asset risk considerations, similar to how equity and debt decisions are interconnected for non-financial firms.²⁷⁵ An insurer typically adds capital to counteract rising asset risk and contain its overall risk. A life company is said to conform to the finite risk hypothesis if an increase in risk in one asset category is followed by a corresponding reduction in risk in a different asset category.

²⁷³ Data applies to publicly traded life insurers and based on U.S. Generally Accepted Accounting Principles (U.S. GAAP) where bonds are mostly valued at market price.

²⁷⁴ It was only during and after the crisis that these risks materialized. Prior to the crisis, these investments of life insurers were of the highest credit quality, representing minimal risk.

²⁷⁵ Baranoff, E. and Sager T. W. 2011. "The Interplay between Insurers' Financial and Asset Risks during the Crisis of 2007–2009." *The Geneva Papers*, 2011, 36, (348–379).

Conversely, a life insurer's behavior follows the excessive risk hypothesis if greater risk in one asset category leads to greater risk in another, thereby increasing the firm's overall risk.²⁷⁶

Prior to the crisis, life insurers had increased their investments in mortgage-backed and other related securities, picking up significant risk. Since asset and financial risks are interdependent, life insurers should have responded by increasing capital if they adhered to finite risk or by reducing capital if they adhered to excessive risk.

In the pre-crisis environment, when almost all residential mortgage-backed structured deals were AAA-rated and considered among the safest investments, increasing the exposure to this type of securities was thought to help decrease a company's overall risk. Consequently, it can be argued insurers were following finite risk before the crisis hit, but were pushed toward excessive risk during the crisis-induced credit crunch and generalized capital unavailability. Recognizing the impact of the shock on their portfolios from the financial crisis, life insurers actively bolstered their capital in the post-crisis period, bringing them back well within the boundaries of finite risk behavior. The heightened awareness of the importance of capital adequacy was highlighted during an interview with CIPR, when a CEO of a prominent life insurance company stated, "While we always had a focus on the importance of substantial capital buffer, in a world with even more uncertainty, which we have all seen since 2007 and 2008, we have now even higher levels of capital."

It has been reported that life insurers, faced with declining interest rates, stretched for yield by investing in riskier, less liquid assets, lowering their portfolios' overall asset quality. However, studies conducted by NAIC's Capital Market Bureau show despite adverse economic conditions, life insurers did not seem to compromise the credit quality of their investment portfolios by noticeably investing in riskier assets with higher yields.²⁷⁷ For the most part, life insurance companies continued to find value in corporate bonds, investing mostly in investment-grade bonds. Furthermore, they reduced their net holding of below-investment-grade bonds to effectively reduce their overall portfolio credit risk.

Consistent with life insurers' "buy and hold" investment strategy and asset-liability matching needs, bonds with maturities of more than 20 years composed a big part (around 35 percent) of the acquisitions in the post-crisis period. On the disposition side, life insurers sold about 50 percent of their short-term bonds maturing in less than five years. Life insurers' preference for longer-maturity bonds suggests the crisis did not materially alter their investment behavior toward a more risk-taking approach. Furthermore, the Capital Markets Bureau's studies

²⁷⁶ Baranoff, E. and Sager T. W. 2011. "The Interplay between Insurers' Financial and Asset Risks during the Crisis of 2007–2009." *The Geneva Papers*, 2011, 36, (348–379).

²⁷⁷ NAIC Capital Markets Bureau. 2012. "Insurance Industry Investment Acquisitions and Dispositions – Reaching for Yield? Part 1" *Capital Markets Special Report*. August 24.

examined the coupon rates for bonds acquired by life insurers, both corporate bonds and foreign investments. The study determined insurance companies were not taking on significant additional risks to achieve higher yields in order to compensate for the low interest rates that prevailed in the post-crisis period.²⁷⁸

Current Economic and Market Environment

Life insurance companies faced with macroeconomic challenges in a still uncertain environment focus on managing both capital and risk as they prepare the foundation for future growth. While the U.S. economy has shown signs of recovery, both in terms of employment and GDP, the rate of growth remains well below trend and below a level deemed sufficient to bring about a full recovery in the next few quarters. Moreover, global obstacles, such as the Eurozone debt crisis, still present serious impediments to growth, both in the short and long term.

The slow-growing economy and persistent high unemployment rate continue to strain household finances, impacting life insurance sales. Life insurance is typically a discretionary purchase whose price and income elasticity of demand is relatively high.²⁷⁹ As such, life insurance tends to be affected more adversely during economic downturns than other products and services with more inelastic demand. The recent increases in the tax burden for a number of people as a result of the fiscal cliff negotiations, particularly for working families due to the expiration of the payroll tax holiday, could further contribute to the diminution of their financial resources, which may affect new life insurance sales. Many insurance executives that CIPR interviewed cited the current state of the economy as a primary challenge. As one life insurance executive noted, “Low inflation, low investment income, low interest rates, lower job growth affects premium growth capabilities and also has had an impact of the consuming public tightening discretionary income to be spent on financial protection products.”

According to the Congressional Budget Office (CBO), the extension of a number of expiring tax provisions by Congress on January 1, 2013, somewhat relieved the expected fiscal tightening slightly improved projections for GDP growth in 2013. Instead of projecting negative growth, the CBO called for a modest 1 to 1.25 percent growth for the year.²⁸⁰ The slow economic growth may contribute only a modest improvement in the unemployment rate, which stood at 7.8 percent in December 2012 and is not projected to drop below 6.5 percent until at least mid-

²⁷⁸ NAIC Capital Markets Bureau. 2012. “Insurance Industry Investment Acquisitions and Dispositions – Reaching for Yield? Part 2” *Capital Markets Special Report*. December 7.

²⁷⁹ Price (or income) elasticity of demand measures the change in the quantity of a good or service demanded as a response to the change in its price (or the buyer’s income). The higher the price (income) elasticity, the more sensitive the demand for a good is to changes in its price (or the buyer’s income). A good or service is inelastic if a large change in price (income) is accompanied by a small amount of change in demand.

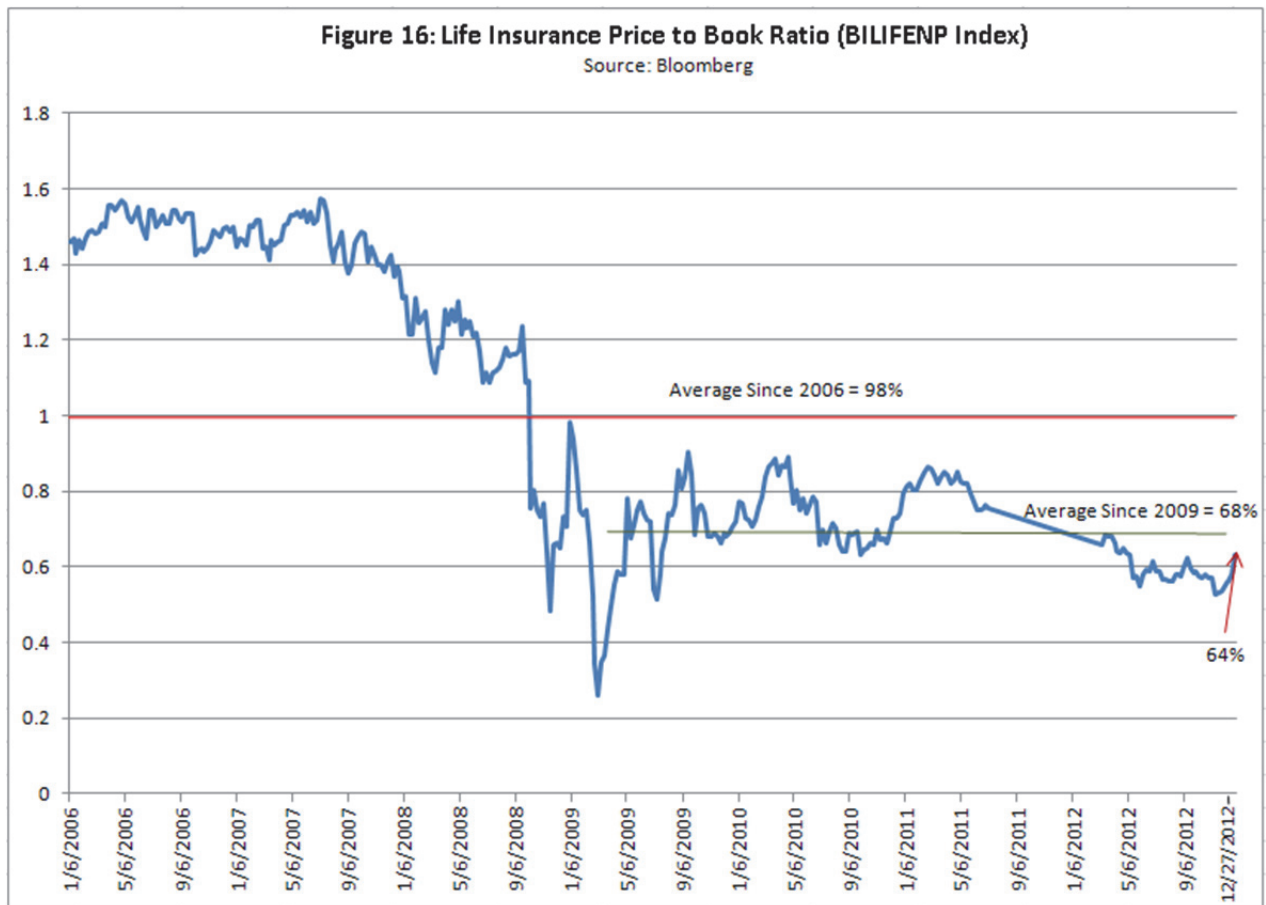
²⁸⁰ Congressional Budget Office. 2013. “The ‘Fiscal Cliff’ Deal.” January 4.

2015.²⁸¹ The unemployment rate of 6.5 percent is significant because it is the target rate at which the Federal Reserve has announced it would start raising interest rates. As long as unemployment remains above that level, the Fed indicated it will maintain its aggressive monetary policy, keeping short-term interest rates near zero, to stimulate the economy.²⁸² The prospect of holding interest rates at these low levels for at least another two years has profound implications for life insurers, as interest rate risk is a key risk for the industry.

This difficult economic environment, in general, as well as the sustained equity market volatility will continue to impact life insurers' performance by potentially weakening their financial flexibility. The challenges faced by life insurers are reflected in their valuations, which have experienced lasting downward pressure since the eruption of the crisis. While most life insurers were relatively unscathed by the financial crisis in terms of their balance sheets and operating fundamentals, their valuations took a big hit. Despite a stock market rally in December 2012, life insurers' valuation (although improved) has not recovered to pre-crisis levels and still remains below historical levels. The Bloomberg Life Insurance Index (BILIFENP) price-to-book ratio ended 2012 at 64 percent, an increase from 56 percent at the beginning of the year, but still below the 68 percent average since 2009 and the 98 percent average since 2006 (Figure 16).

²⁸¹ U.S. Department of Labor: Bureau of Labor Statistics.

²⁸² Federal Reserve Board of Governors. 2012. "Minutes of the Federal Open Market Committee." December 12.



These lower valuations are driven primarily by exogenous factors outside the control of life insurers, such as the low interest rate environment, the European sovereign debt crisis, volatility, and the loss of confidence among investors in financial institutions following the crisis. The disconnect between the real impact on life insurers and investors' view of the crisis as a generalized financial meltdown involving all financial institutions (and not just banks) has been particularly harmful to life insurers' valuations.

In the aftermath of the crisis, life insurers took several actions to counteract market and economic pressures. Among those actions were deleveraging, focusing on liquidity, exiting higher risk non-core business, cutting dividends, repurchasing shares, and de-risking products.²⁸³ Responding to a question by CIPR regarding his company's response to the crisis, a top executive of a large life insurer stated they "have been de-risking products and have been adding capital where it is demanded by the appropriate consideration of risk for products that might particularly have a lot of market content and be more volatile." The executive also emphasized how they now "pay more attention to local balance sheets, local capital, local

²⁸³ Life insurers have been de-risking products, mainly annuities, by raising prices, adjusting benefits and reducing the riskiness and volatility of their investment options.

liquidity in addition to the consolidated view and that has had an impact on product pricing and product delivery and also operationalization of risk management and liquidity management.”

Life insurers’ capital levels and RBC ratios have remained strong. However, the lower return-on-equity (ROE) across the industry—as a result of deleveraging, capital build-up, and higher capital/risk premium—continues to exert downward pressure on share prices. According to Bloomberg, life insurers’ book value per share as of the third quarter of 2012 was about 36 percent higher than it was at the end of 2007. However, during the same period, price-to-book value was nearly 58 percent lower.

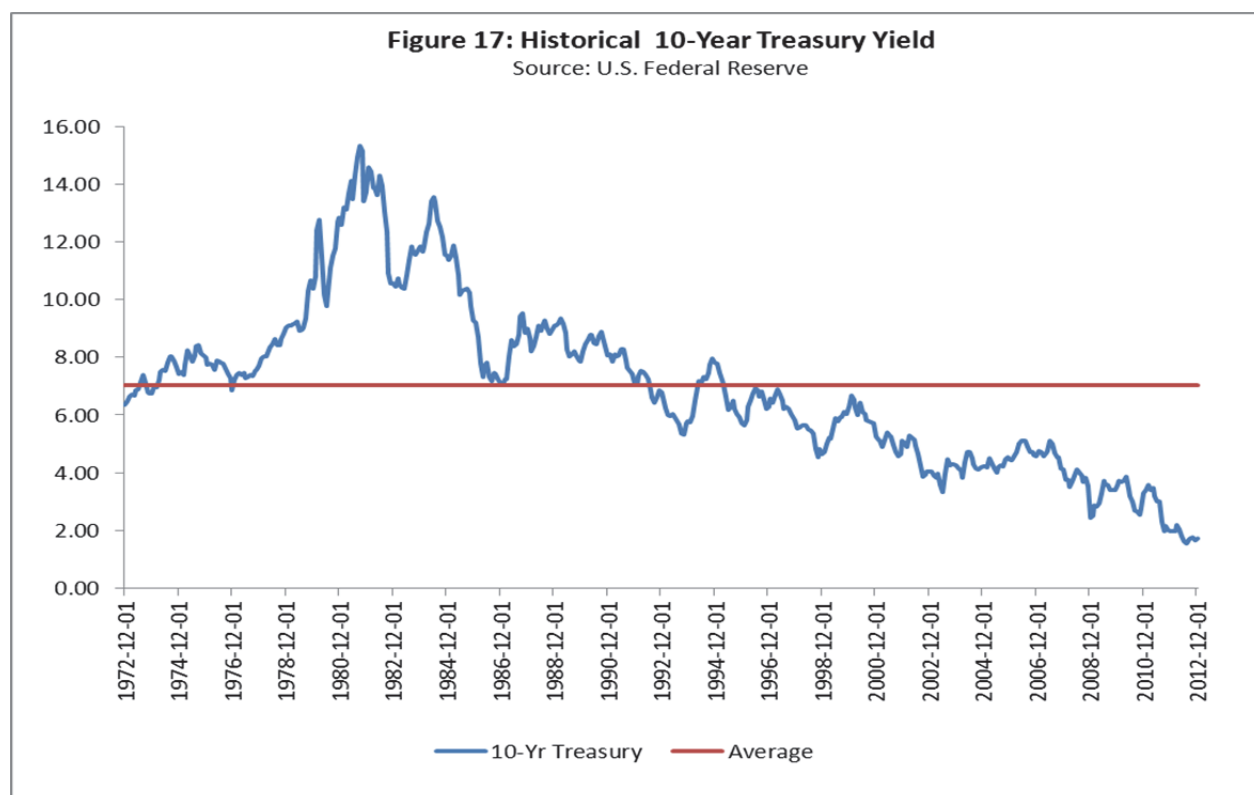
Life insurers posted net income and operating gains in 2011 and the first nine months of 2012. Among the factors driving the improvement in earnings were more fee income, higher investment income boosted by bond and commercial mortgage loan prepayment fees, and lower impairments. However, macroeconomic factors, particularly the low interest environment, constrained both earnings and income growth.²⁸⁴ At the same time, aggregate impairments for life insurers have mostly stabilized. Given life insurers’ limited exposures to risky and problematic assets, such as high-risk sovereign debt, troubled banking credit and structured securities, no significant impairments relative to capital are expected going forward.

The Challenges of the Low Interest Rate Environment

In the last five years interest rates have dropped to unprecedented levels. The Federal Reserve Board began cutting interest rates in 2007 amid signs the economy was slowing and the housing market was under severe stress. The 10-year Treasury yield—which is the reference rate upon which many fixed-rate loans are based—has fallen to levels not seen for more than 50 years. At year-end 2012, the yield on a 10-year Treasury note was 1.78 percent, compared with 4.63 percent in 2007 (Figure 17). As stated earlier, the Federal Reserve has committed to keep short-term interest rates near zero at least until unemployment and inflation rates move to 6.5 and 2.5 percent respectively, which is not anticipated until mid-2015.²⁸⁵

²⁸⁴ Moody’s Investor Service. 2012. “US Life Insurers’ Q3 2012 Results: Operating Earnings Grew; Low Interest Rate Environment Impacts Bottom Line” *Special Comment*. November 21.

²⁸⁵ Federal Reserve Board of Governors. 2012. “Minutes of the Federal Open Market Committee.” December 12.



Managing interest rate risk is critical for life insurers, as it can affect both the asset and liability sides of their business. Interest rate risk can be greatly exacerbated when funds are continuously invested in a low interest rate environment that suppresses life insurers' earnings. Should interest rates continue to hover at low levels, life insurers' earnings could continue to be pressured for some time. At the same time, while it is true life insurers' typical long-duration investments tend to increase their portfolios' duration risk, the steepness of the yield curve suggests a long-duration strategy could produce a comparatively higher yield, compensating for this additional risk.

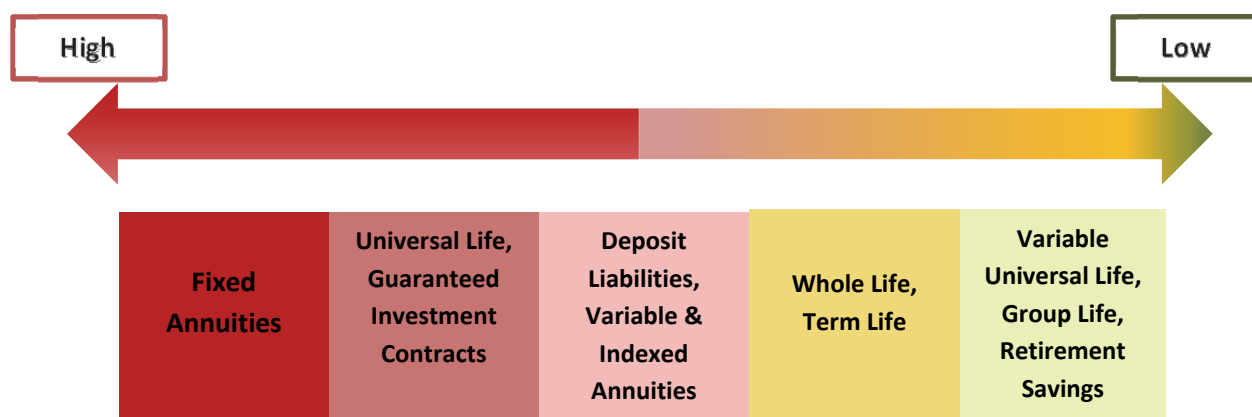
Some life insurers have trended toward reinvesting in assets of shorter duration, as there is little yield gain in longer-term securities. Life insurers with a large proportion of interest-sensitive policies in their product mix (many of which have guarantees and policyholder options) face a considerable amount of interest rate risk. This point was substantiated during a CIPR interview with a COO of a large insurance group active in interest-rate sensitive products, who commented that "low interest rates have had a significant impact on our longer-term products like life insurance, long-term care, and variable annuities." Additionally, the longer interest rates stay low, the greater is the concern investment income could potentially decline to a point where life insurers might not be able to fund guaranteed policy benefits.

Life insurers typically derive their profits from the spread between their portfolio earnings and what they credit as interest on insurance policies. During times of persistent low interest rates,

life insurers' income from investments might be insufficient to meet contractually guaranteed obligations to policyholders. Furthermore, life insurers typically offer products with certain guarantees regarding the level of income over the life of the policy, which could be 30 years or more. Considering a number of these products were written at a time when the economic outlook appeared dramatically different, life insurers are facing a potential mismatch between their assets and liabilities.

Central to a life company's strategy is the goal to match assets and liabilities. As most life insurance contract liabilities are long-duration contracts, it is not always easy to achieve a perfect match of long-duration assets. In a low interest rate environment, it is challenging to find relatively low-risk, high-yield, long-duration assets to match annuities that guarantee a minimum annual return (e.g., four percent). For many policies, low interest rates mean some mismatch with assets is likely. For example, older fixed income insurance products that guarantee rates of around six percent—closely matching or conceivably even surpassing current investment portfolio yields—are likely to put a strain on life insurers as a result of spread compression or possibly negative interest margins.

While there is no straightforward method to aggregate interest rate risk for insurers, relative exposure to interest rate risk could be gauged by considering the type and the proportion of interest rate risk-sensitive products of each insurer. The figure below presents the degree of interest rate sensitivity of each life product type, from high to low.



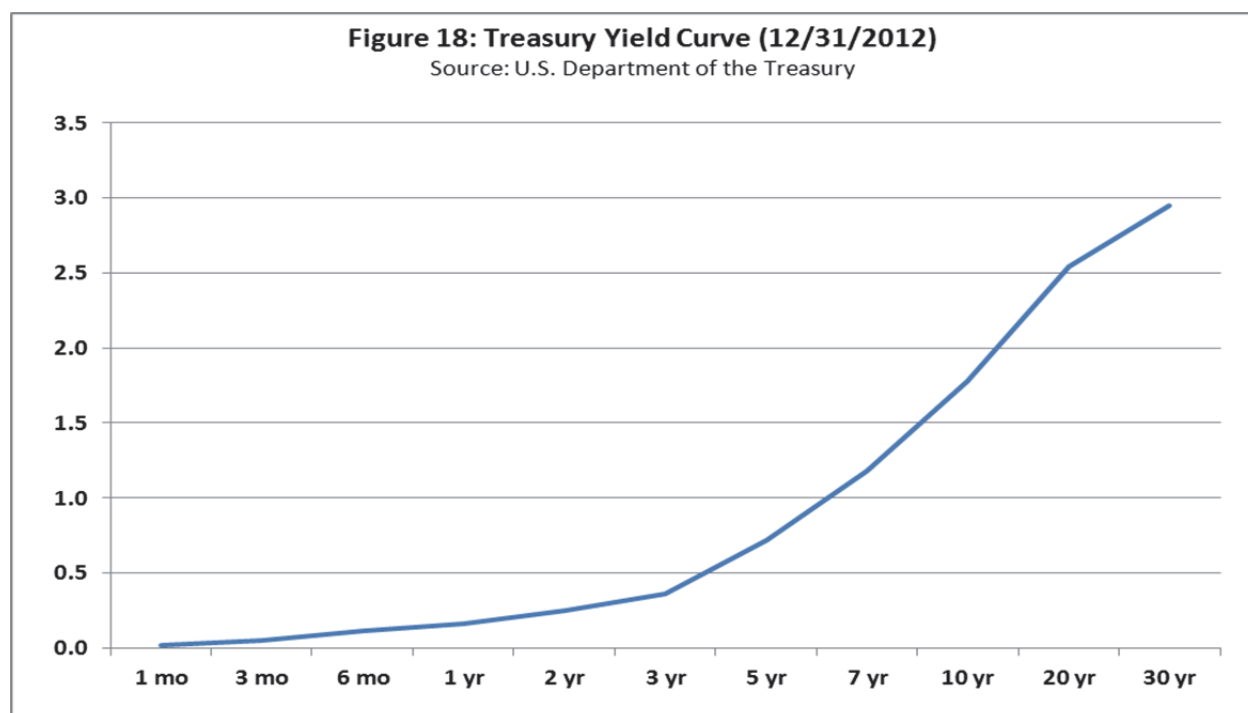
Generally, fixed annuity products are the most sensitive to interest rate risk because they are guaranteed to earn a fixed rate of return throughout the life of the product. Products that combine protection with asset accumulation guaranteeing minimum returns (e.g., universal life) have more interest rate risk than protection-oriented products (e.g., whole and term life). At the same time, companies offering universal life products can offset some of the interest rate risk with built-in non-guaranteed elements, such as fees and charges.

Life insurers depend on their capital and reserves to mitigate risk. A prolonged period of low interest rates would not only negatively impact life companies' investment income (particularly those with more long-term exposure) but could also result in the need to post additional policy reserves.

Persistent low interest rates can also affect earnings and life insurers' liquidity. Liquidity management is critical for life insurers. Asset/liability management (ALM) supports interest rate management for both assets and liabilities. Most life insurance companies strive to match liability cash flows with asset cash flows to avoid setting up an additional asset/liability mismatch reserve. While most life companies essentially employ buy-and-hold strategies with well-matched liabilities and assets, spread volatility risk and prepayment risk can undermine the best asset/liability management strategy if it is grounded entirely on duration. Moreover, adverse economic conditions (e.g., declining credit spreads, low interest rates) can also create a cash flow mismatch, exposing insurers to losses from uneconomic asset sales to meet current obligations.

While it is true that, in a prolonged low interest rate environment, increased pressure on earnings is a significant risk, life insurers' liquidity demands also tend to diminish as policyholders are more likely to keep their money in annuities and other accumulation products due to the scant availability of higher-yielding alternatives.

Furthermore, life insurance companies rely on long-term rates to be competitive and benefit from a steep yield curve because they can offer more attractive returns for their long-term investments (Figure 18). The steepness of the yield curve gives fixed annuities a great advantage over comparable conservative investments, such as certificates of deposit (CDs). This advantage becomes particularly pronounced during volatile and uncertain times, when demand for conservative investments tends to be higher. Fixed annuities registered record sales in 2008 during the peak of the financial crisis before they gradually retreated as the equities markets started to recover and their credit spread over CD rates declined.



Life insurance companies with well-established asset-liability management programs are best prepared to manage through a low interest period. The use of new sophisticated enterprise risk management (ERM) techniques can enhance insurers' ability to monitor their asset/liability positions by employing cash-flow analysis, duration, convexity, earnings and capital at risk and focusing on tail returns and expected shortfall. Also, life insurance companies can take action before rates drop and effectively hedge interest risk through interest rate floors or forward cash flow hedging.

How Do Life Insurers Counter Low Interest Rates

Insurers have various tools to address the risk of persistently low interest rates. Increasing the duration of their assets to ensure better matching between assets and liabilities is at the core of life companies' interest rate risk strategies as part of their overall ALM. Insurers also can lower the terms of new policies (e.g., by lowering guaranteed rates), thereby progressively lowering liabilities.

Generally, in times of low interest rates, the main challenge for insurers' ALM is current lower-yielding investments cannot meet past return assumptions (reinvestment rate risk). As higher-yielding investments mature and roll over into lower-yielding assets, the degree of risk faced by an insurer depends on the extent of the duration mismatch between assets and liabilities. The duration of some life insurers' liabilities exceeds the longest duration assets available for purchase and, as a result, companies could be exposed to reinvestment rate risk.

At the same time, while the strategy of duration match seems straightforward enough in theory, in practice it is much harder to achieve a perfect hedge against interest rate risk. Most life insurance liabilities have been incurred from long-duration contracts and as a result can lead to a less-than-perfect match between asset and liability cash flows. Hence, insurers must take additional steps to mitigate against losses from interest rate fluctuations.

Life insurers also attempt to offset low interest rates by diversifying their products and investment portfolios. Companies with diversified books ordinarily tend to have less overall exposure to interest rate risk if their interest-sensitive product lines are well-balanced with non-interest-sensitive lines. However, companies that specialize in certain products or niche markets will be exposed to greater interest rate risk. Furthermore, an insurer's ability to adjust the pricing and/or the features and terms of its policies (e.g., by lowering guarantees) is paramount in relieving spread compression.

Insurers can also compensate for lower interest rates by investing in higher-yielding assets. Although these higher-yielding assets improve investment income, they also pose more credit risk, and can result in material realized and unrealized losses. It is likely for this reason that, despite the adverse economic conditions, life insurers have not markedly altered their investment strategy.²⁸⁶

Some life insurers implement interest rate hedging strategies based on derivatives that allow them to manage and mitigate risk by "locking in" higher interest rates. However, small insurers with less sophisticated hedging practices will find it more difficult to employ this strategy than large insurers with easy access to capital markets and higher hedging expertise. Additionally, hedging with derivatives could also pose certain risks, such as counterparty risk, which increases substantially with the length of time required for the hedging strategy.

The most common risk hedged by the insurance industry is interest rate risk. According to 2010 year-end NAIC data, about 64 percent of insurers' total notional value of outstanding over-the-counter (OTC) derivatives and futures contracts is used in mitigating risks resulting from volatility in interest rates. Interest rate swaps²⁸⁷ were the most common swaps derivative instrument used by insurers in their hedging strategies, representing approximately 75 percent of the swaps exposure. Furthermore, interest rate swaps composed about 73 percent of the hedges with maturity dates of 2021 and beyond, and 45 percent of the hedges with maturity dates between 2016 and 2020.

²⁸⁶ NAIC Capital Markets Bureau. 2012. "Insurance Industry Investment Acquisitions and Dispositions – Reaching for Yield? Part 1" *Capital Markets Special Report*. August 24.

²⁸⁷ In an interest rate swap, one party typically exchanges a stream of floating rate interest payments for another party's stream of fixed rate interest payments (or vice versa).

Other derivative instruments used by life companies to mitigate interest rate risk are fixed-income futures (which obligate the insurer to sell a specified bond at a specified price to a counterparty at a future date), floors (which entitle the insurer to receive payments from a counterparty if interest rates drop under a specified level) and “swaptions” (which give the insurer an option to enter into a fixed swap with an above-market coupon if rates decline).

The Risk of a Spike in Interest Rates

While interest rates are projected to remain at low levels through the middle of 2015, they could climb rapidly after the current actions of the Federal Reserve come to an end. Such spikes in interest rates occur infrequently, but in the event this occurs, disintermediation risk can be a concern. Disintermediation occurs when policyholders lapse on existing policies in favor of investing in new policies with higher crediting rates. Should this occur, life insurers would incur significant unrealized losses in their bond portfolios, as asset values are inversely related to interest rates.

An environment of rapidly rising interest rates can prove to be even more damaging to life insurers than the prolonged low interest rates, depending on individual companies’ asset and liability mix. During the inflationary 1970s, when interest rates reached 15 percent, life insurance companies were seriously impacted. Life policy surrenders and policy loans rose to previously unanticipated levels. As a result, many insurers were forced to liquidate assets in order to meet surrender demand. When interest rates eventually came down in the late 1980s, the guaranteed crediting interest rates on policies were substantially higher than companies’ investment yields, causing solvency problems and ratings downgrades for a number of life insurers.²⁸⁸

It is projected that if interest rates were to suddenly spike back up to early-2011 levels, representing a 200 basis point increase, the average BBB-rated corporate bond with a 10-year maturity could lose about 15 percent of its value, while a bond with a 30-year maturity could lose up to 26 percent. These potential losses would far exceed the approximate 50 basis-point credit loss suffered by Fitch-rated BBB corporate bonds in 2002, the year with the highest annual default rate for this cohort since 1992. The risks to longer-term corporate bond investors, such as life insurers, are significant enough to suggest that appropriately hedging such risk would be prudent.²⁸⁹

²⁸⁸ Grossman, Robert, Martin Hansen, and Peter Patrino. 2012. “The ‘Bond Bubble’: Risks and Mitigants,” Fitch Ratings. December 19, 2012.

²⁸⁹ Ibid

NAIC Low Interest Rate Study and Methodology²⁹⁰

The NAIC conducted a study of the impact of the low interest rate environment on the life insurance industry in the United States. The data used in the study was gathered from the financial annual statements filed by life insurance companies for the years 2006 through 2011.

The objective of the study was to determine the effect the low interest rate environment has had on the net investment spread²⁹¹ of the life insurance industry during this timeframe. The results of the study include data from 713 life insurance company legal entities submitting data for all five years of the study. Exhibit 1 reserves by year are shown in Table 10. The reserves from these 713 legal entities represented 99.99 percent of the total industry life insurance reserves.

Table 10:
Total Exhibit 1 Reserve by Year

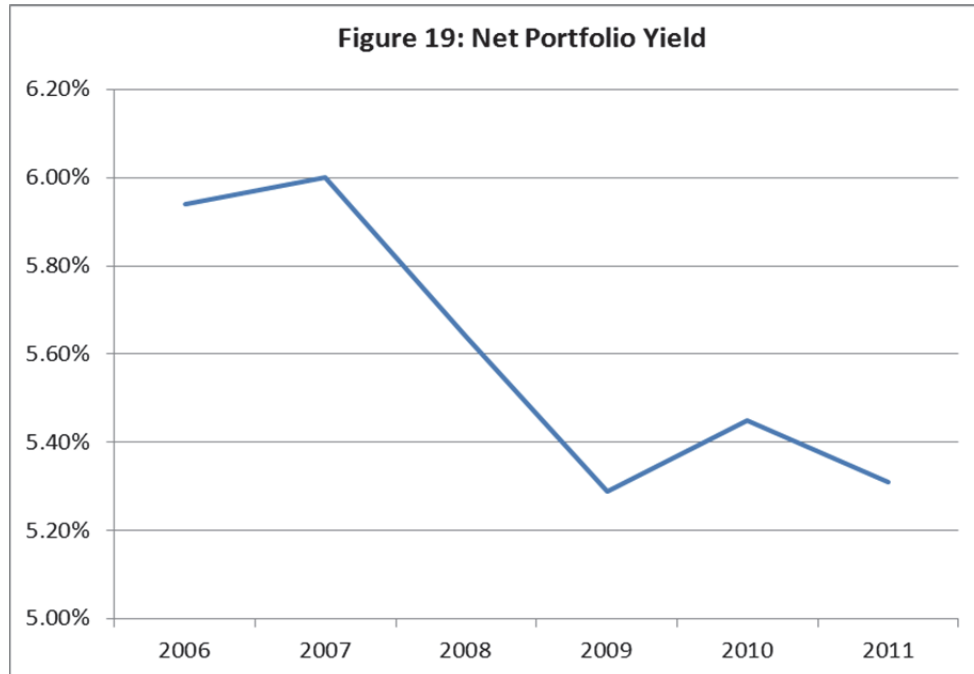
Year	Number of Legal Entities	Total Reserve
2011	713	\$2.74 Trillion
2010	713	\$ 2.57 Trillion
2009	713	\$ 2.46 Trillion
2008	713	\$ 2.30 Trillion
2007	713	\$ 2.10 Trillion
2006	713	\$ 1.98 Trillion

The data in Figure 19 below shows the decline in the life insurance industry's net portfolio yield from 2006 through 2011. This drop in yield reflects the lower interest rate environment within which the industry had to invest any positive cash flows (premiums plus investment income less policy claims). The industry lost 32 basis points of net yield between 2006 and 2011 (71 basis points of net yield between the high in 2007 and the low in 2009).

The drop in net portfolio yield is less than the drop in gross yield, which could be due, in part, to cost-cutting measures companies have taken as spreads have declined, and to a shift to less asset-intensive securities. The difference between the gross and net portfolio yields reflects investment expenses, as well as investment taxes, licenses and fees.

²⁹⁰ Bruning, L., Hall, S., Karapiperis, D. (2012, April). Low Interest Rates and the Implications on Life Insurers. *CIPR Newsletter*, [Updated for inclusion in the study].

²⁹¹ Net portfolio yield less the guaranteed credited rate of interest.



As was stated earlier, a proxy for the guaranteed credited rate of interest was used. The proxy was the weighted average valuation interest rate. Although credited interest rate guarantees may be less than the valuation rate of interest, state insurance law specifies the minimum valuation interest rate to be used in valuing insurance liabilities (policy reserves). This, in effect, means the insurance company must have a net portfolio yield at least as great as the minimum valuation interest rate in order to fund the growth in policy reserves. Valuation interest rates for life insurance are determined each calendar year and apply to business issued in that calendar year. These valuation interest rates are locked in at policy issue and do not change. The calendar-year statutory valuation interest rate IR shall be determined as follows and the results rounded to the nearer one-quarter of 1 percent:²⁹²

$$IR = .03 + W(R_1 - .03) + \frac{W}{2}(R_2 - .09)$$

Where

R_1 is the minimum of R and .09

R_2 is the maximum of R and .09

R is the lesser of the average over a period of 36 months and the average over a period of 12 months, ending on June 30 of the calendar year preceding the year of issue, of the monthly average of the composite yield on seasoned corporate bonds, as published by Moody's Investors Service, Inc.

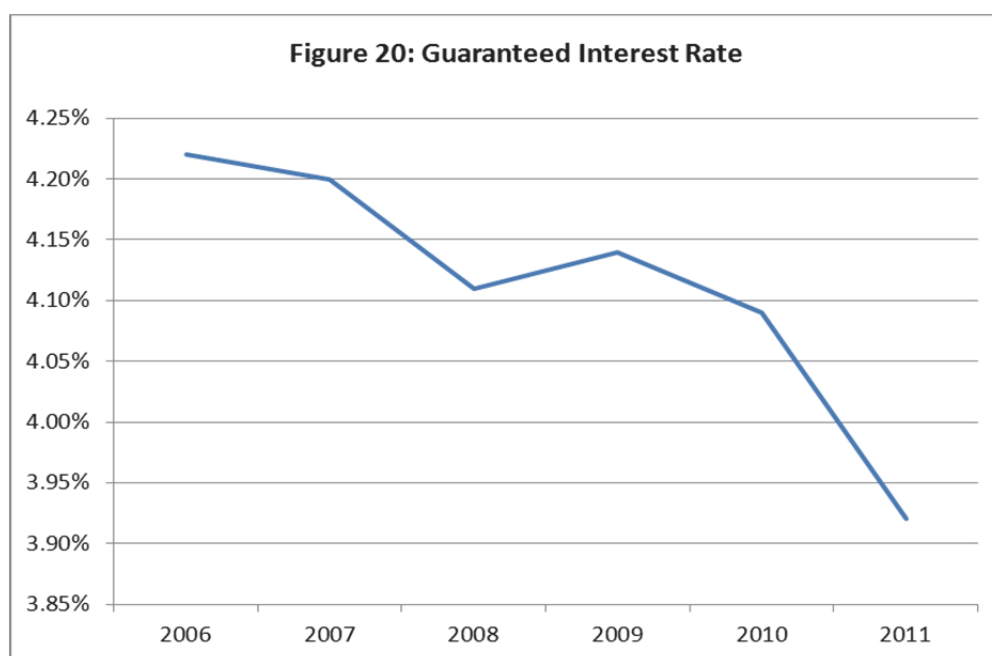
²⁹² Section 4b of the NAIC Standard Valuation Model Law (#820)

W is the weighting factor based on guarantee duration from the chart below:

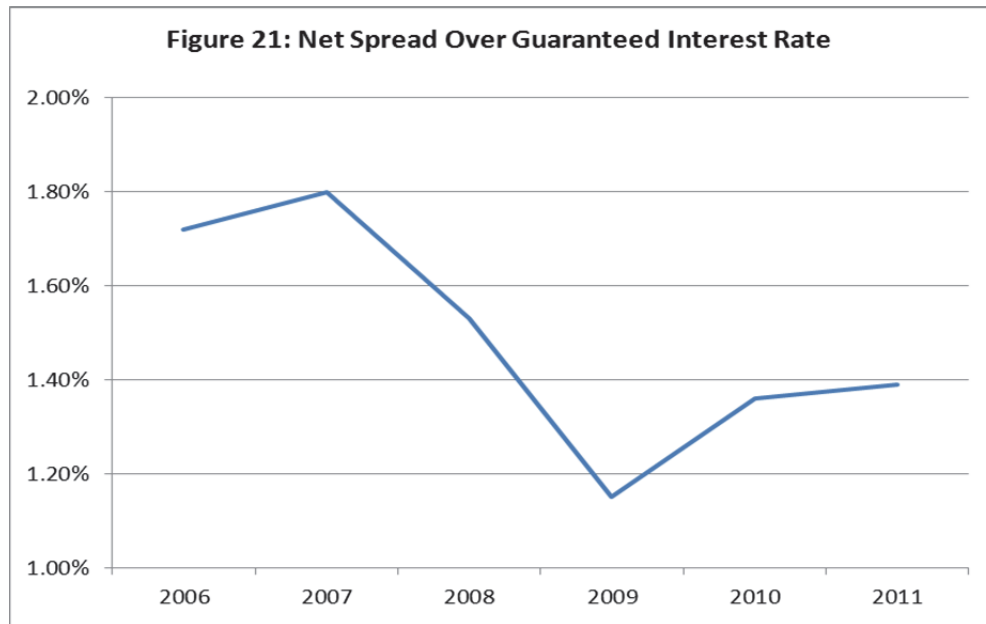
Guarantee Duration in Years	Weighting Factor
10 or less	.50
More than 10 but not more than 20	.45
More than 20	.35

The guarantee duration is the maximum number of years the life insurance can remain in force on a basis guaranteed in the policy or under options to convert to plans of life insurance with premium rates or non-forfeiture values, or both, and that are guaranteed in the original policy.

Figure 20 shows the proxy for the guaranteed interest rate declined by 30 basis points between 2006 and 2011. This is due, in part, to the decline in the composite yield on seasoned corporate bonds as published by Moody’s Investors Service, Inc., and due in part to a change in the mix of new business written by the insurance industry.



Looking at the difference between the net portfolio yield and the guaranteed interest rate, we can see the impact the low interest rate environment has had on the insurance industry (Figure 21). Investment net spreads declined 33 basis points between 2006 and 2011 (65 basis points of spread between the high in 2007 and the low in 2009). This is a significant drop in spread over a six-year period of time, amounting roughly to \$7.8 billion of lost spread revenue over the six-year period on average reserves of \$2.36 trillion.



While this is significant, the life insurance industry is still in a position of positive net investment income spread of around 139 basis points. So, to date, the low interest rate environment has created spread compression on earnings, but has not yet impacted insurance company solvency, which would begin to occur when the spread compression drops below zero. It is important to note the pricing of life insurance products in the United States not only contains an investment spread margin, but also a spread margin built into the mortality rates and the expense component (e.g., contract fees and policy expense charges).

Asset/Liability Management

As previously noted, one tool life insurers use to manage interest rate risk is the matching of asset and liability cash flows. In fact, statutory valuation law requires insurance companies to perform an annual cash flow testing exercise where the life insurance company must build a financial model of their in-force assets and liabilities. The company must run the financial model for a sufficient number of years, such that any remaining in-force liability at the end of the projection period is not material.

At each duration, the financial model calculates the difference between liability and asset cash flows and accumulates this difference forward under a given interest rate scenario. The metric analyzed is typically the ending market value of surplus or the present value of the ending market value of surplus.

At the start of the model, assets are set equal liabilities so surplus is zero. Most companies run both a set of stochastically generated interest rate scenarios (typically 1,000+ scenarios) and a set of seven deterministic interest rate scenarios prescribed by state insurance regulators

(referred to as “the New York 7”). The American Academy of Actuaries (AAA) has developed an economic scenario generator that randomly generates interest rate scenarios as well as market rate scenarios. Companies typically use the AAA’s economic scenario generator to develop the stochastic interest rate scenarios they use in the asset adequacy analysis process.

The deterministic interest rate scenarios prescribed by state insurance regulators are as follows:

- Level Interest Rate Scenario
- Uniformly increasing over 10 years at 0.5 percent per year and then level
- Uniformly increasing over 5 years at 1.0 percent per year and then uniformly decreasing over 5 years at 1.0 percent per year and then level
- An immediate increase of 3 percent and level forever
- Uniformly decreasing over 10 years at 0.5 percent per year and then level
- Uniformly decreasing over 5 years at 1.0 percent per year and then uniformly increasing over 5 years at 1.0 percent per year and then level
- An immediate decrease of 3 percent and level forever

Such interest rate scenarios provide a good set of stress tests to help ensure life insurance companies have both matched asset and liability cash flows well or have established additional reserves available to cover any interest rate or reinvestment rate risk embedded in their balance sheets. The *Standard Valuation Law* (#820) requires life insurance companies to post an additional reserve if the appointed actuary determines a significant amount of mismatch exists between the company’s asset and liability cash flows. As part of this study, the NAIC pulled the additional reserves liabilities established by companies at year-end 2010. The life insurance industry posted an additional asset/liability cash flow risk reserve of \$6.5 billion.

Conclusions on the Implications of Change

Persistent low interest rates are challenging in many ways. The impact of low interest rates on the life insurance industry is something that bears watching. There are policy implications regulators must consider if the low interest rate environment persist over a long period of time. Financial regulators must closely monitor the efforts of life insurers to match assets with corresponding liabilities. The impact of past guarantees must be mitigated in ways that do not create volatility or inordinate risks through aggressive hedging activity. Life insurers and their regulators need to work together to ensure policyholders are protected in the most efficient ways by balancing the challenges brought about by the low interest rate environment with safe and effective risk management solutions.

Meeting the Risks of the New Environment



Introduction

By NAIC Staff

The complex risks in today's financial markets present the need for strategic and tactical measures to protect against potential market failures, drive innovations in risk management, and ensure robust consumer protection. This segment explores regulatory initiatives to strengthen the insurance regulatory framework and improve existing tools and measures, while it also examines insurers' efforts to better manage their risks. An efficient and effective financial regulatory system includes a broad array of prudential and preventative measures and instruments that support and direct supervision, capital adequacy, solvency requirements, transparency, and market conduct regulation.

U.S. state insurance regulators have made significant strides in reshaping the insurance regulatory framework to meet the needs of the environment. Much of this progress has occurred as a result of the SMI, which began in 2008 and is in process of being implemented currently. Through SMI, U.S. insurance regulators incorporated international best practices, as appropriate, into the U.S. insurance system. The SMI focused on capital requirements, governance and risk management, group supervision, statutory accounting and financial reporting, and reinsurance.

U.S. regulators also enhanced the solvency framework in consideration of lessons learned from the financial crisis. Specifically, the contagion effects experienced by U.S. insurers in the AIG holding company system's near collapse caused U.S. insurance regulators to reevaluate their group supervisory framework. The expansion of provisions within models and monitoring practices to provide a more holistic view of the totality of risks facing the industry are covered in *The Importance of Group Supervision Section*. Also discussed is U.S. insurance regulators work towards building a more comprehensive system of group supervision through the IAIS Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame).

The Need for Stronger Corporate Governance section discusses steps the NAIC and state regulators have taken to improve corporate governance requirements, standards, and practices. Through the SMI process, insurance regulators proposed additional annual statement disclosures and interrogatories, supplemental filings, revisions to certain handbooks, and additions to the accreditation standards.

The *Significance of Enterprise Risk Management (ERM)* section examines ERM implementation drivers for insurers and its connection to regulatory initiatives. The growing complexity and interconnectedness of the environment in which insurers operate have required insurers to

reassess how they manage and assess risk. Furthermore, U.S. regulators have taken steps to require insurers to identify, manage, and report on material risks.

A detailed discussion on the risk-based capital (RBC) ratio as a measure of insurance company capital adequacy in the U.S. is included in the *Ensuring Capital Adequacy* section. A special focus is placed on the key C3 component of risk based capital which is used to determine capital requirements related to interest rate and market risks. This component has been subjected to increased scrutiny and transformation due to its centrality in the process of transitioning to a principle-based reserving (PBR) system as part of the SMI. Also, included in this section is discussion on the implications of PBR on insurers' liabilities.

The *Implications of the Interstate Insurance Product Regulation Commission* section discusses how state-based modernization efforts are improving the system of insurance regulation for life insurers doing business in more than one state. Discussion centers on the Interstate Insurance Product Regulation Compact and its role in transforming the product review process within the existing system of insurance regulation.

A brief exploration of the ongoing collaboration of state insurance regulators with federal government and agencies to strengthen the regulatory function follows in the *Opportunities for Better Collaboration between State and Federal Regulators* section. Regulators within the U.S. and abroad continue to work towards strengthening oversight systems. As such, it is important state regulators, Federal authorities, Federal agencies (such as the Federal Reserve), and international insurance regulators, work in close cooperation to improve regulation at the group level.

The *Market Conduct—Better Analytical Tools* explores how the framework for market regulation has evolved over the years, with many recent and anticipated enhancements. Consumer protection is the cornerstone of the national state-based insurance system. Inappropriate market activities can impact both consumer rights and insurer solvency. As such, the strengthening of the U.S. insurance solvency frameworks includes market conduct regulation measures.

The *Legal Entity Identifier (LEI) Improves Financial Transparency* section discusses how the implementation of an LEI tool to track global financial transactions can enhance financial transaction transparency. Lack of counterparty risk transparency proved to be a significant factor in the financial crisis. Regulators can better assess exposure to counterparty risk and risk concentrations by integrating the LEI into their surveillance analysis. The LEI on its own will not measure systemic risk; however, when coupled with transaction information on the risks being exchanged by counterparties, regulators and parties to the transactions will have a more complete picture of risks than before.

The importance of transparency and efforts to create better and more effective disclosure are discussed in the *Enhancing Transparency in Life Insurance Markets* section. Many states have adopted legislation requiring transparency through disclosure for a number of insurance products. However, consumer advocates provide several additional suggestions in this section for enhancing the transparency of life insurance products, as their complexity can be confusing for consumers.

The Importance of Group Supervision²⁹³

By NAIC Staff

The solvency framework of the U.S. system of state-based insurance regulation has included a review of the holding company system for decades, with an emphasis placed on each insurance legal entity. However, in light of the financial crisis and the globalization of the insurance business model, U.S. insurance regulators have begun to modify their group supervisory framework and have been increasingly involved in developing an international group supervisory framework.

History and Overview

Under the national system of state-based insurance regulation in the United States, the need for group supervision was recognized early on, with the first NAIC model law adopted in 1969. During the 1960s, the trend among insurance companies was to form holding companies. Consequently, U.S. insurance regulators adopted the *Holding Company System Regulatory Act* (#440) to ensure holding companies could not circumvent the insurance statutes that regulate the formation, financing, management, investments, operations and reporting required of insurance companies at the legal entity level.

The model was effective without any needed changes until the early 2000s, at which time modifications to the model laws were made; however, the general principles behind the creation of NAIC Model #440—and reaffirmed in the 1978 *Proceedings of the NAIC*—remained as follows:

1. The financial condition of the holding company system's insurers must be protected by an effective and comprehensive regulatory program.
2. The most effective regulatory system is one premised on disclosure and regulation of significant intra-system transactions involving the insurer, and verification by examination when necessary.

²⁹³ Defrain, K. (2012, April). Insurance Group Supervision. *CIPR Newsletter*, [Updated for inclusion in the study].

3. The particular focus of regulation should be on the insurer's financial status, and in order to prevent the draining of insurance company capital, emphasis should be placed on disclosure of dividends and other transfers, service fees and distributions.

The framework for U.S. group supervision continues to be embodied in NAIC Model #440 and the NAIC *Insurance Holding Company System Model Regulation with Reporting Forms and Instructions* (#450). These models apply to groups of two or more affiliated persons/organizations, at least one of which is an insurer. The models include the following holding company requirements:

- Acquisition of an insurer.
- Commissioner approval of certain material transactions (e.g., reinsurance agreements, management agreements, cost sharing, tax-allocation agreements, certain guarantees, intercompany investments and requests for extraordinary dividends).
- Examination authority (of the insurer and affiliates, generally).
- Receivership authority.

These requirements are generally described as the creation of "walls" between the holding company and the insurance entity. Effectively, state insurance commissioner approval is needed for material monetary transactions, thus making sure an insurance company's financial assets cannot be raided by the holding company. Money can still flow between the insurer and the holding company, but regulators are charged to assess the risk of large monetary transactions that take funds out of the insurance company's capital cushion. Regulators assess whether a transaction is fair and reasonable and does not jeopardize the protection of policyholders before approving such transactions.

This approach to group supervision provides "windows" from the insurance entity to the holding company and the other entities within the holding company. These "windows" afford U.S. regulators with the following benefits:

- Access to information via the parent (or other regulated group entities) about activities or transactions within the group involving other regulated or non-regulated entities.
- Financial information of the ultimate controlling person.
- Fit and proper requirements.
- Rights of inspection (examination).

Regulators perform group supervision utilizing documents required to be filed with the NAIC and/or state, as well as publicly available information. The NAIC Schedule Y includes a holding company organizational chart and a listing of affiliated transactions of a non-routine nature.

NAIC risk-based capital (RBC) information and total available capital is available for each insurance legal entity and can be supplemented with company values of public, non-insurance companies for a view of the financial assistance available within the group.

The U.S. Securities and Exchange Commission (SEC) requires every publicly traded company to file a 10K form, which contains a comprehensive overview of the company's business and financial condition, and include audited consolidated financial statements. NAIC Model #450 requires numerous forms, including the Annual Registration Statement (Form B), which contains significant group information, such as the capital structure, financial condition, ownership and management of the insurer and any person controlling the insurer, among others. All of this gathered information is assessed along with information learned in discussions with key leaders, employees of the group, and other financial regulators, as is other gathered information.

The Resilience of State-Based Insurance Regulation

The U.S. group supervisory framework was tested during the financial crisis when American International Group (AIG) faced financial uncertainty. In 2008, AIG financial holding company was composed of 71 U.S.-based insurance entities and 176 other financial services companies throughout the world. The problems leading to the U.S. government's bailout of AIG arose from the non-insurance AIG Financial Products unit based in London, which Federal Reserve Chairman Ben Bernanke described as making "huge numbers of irresponsible bets" with risky investments and taking on "huge losses."

The OTS (which has since been eliminated and the duties redistributed to the Office of the Comptroller of the Currency and the Federal Reserve) was the body charged with supervising the AIG holding company. State insurance regulators were charged with supervising the AIG insurance companies. However, state insurance regulators were heavily involved in federal discussions on AIG because of the potential need for funds from the AIG insurance subsidiaries to rectify the liquidity problem faced by the holding company.

AIG's need for a federal bailout was initially perceived by some as a failure of insurance regulation. Although AIG insurers did have some financial issues involving securities lending, this situation was in course of correction. Despite the federal bailout of AIG, it quickly became apparent U.S. insurance regulation effectively protected insurance policyholders, despite the federal bailout of AIG. Had it not been for the "walls" established in the United States, it is likely the funds protecting policyholders in the AIG insurance companies in the United States could have been raided by the AIG holding company, thereby threatening insurance policyholder protection. Additionally, as insurance commissioners coordinated with bank regulators to sale

AIG insurance assets, the “walls” provided them with the ability to evaluate each transaction to ensure policyholders’ claims would continue to be paid.

Enhancing the Regulatory Framework

One of the main lessons learned from the financial crisis was the need to further consider any contagion risk from the holding company system upon the insurers within the group. Although this was also a part of the framework within model 440, further emphasis on this risk was deemed appropriate. Therefore, U.S. insurance regulators chose to enhance certain prudential features of group supervision within the models and monitoring practices, providing clearer “windows” into group operations, while building upon the existing “walls” that provide solvency protection for insurers. The concepts addressed in the enhanced “windows and walls” approach include communication between regulators and supervisory colleges²⁹⁴, access to and collection of information from groups, enforcement measures and group capital assessment.

In December 2010, the NAIC adopted changes to Model #440 and Model #450 to strengthen and clarify states’ authority to gather information from the holding company and to require new disclosure. Regulators have adopted an expansion of the Insurance Holding Company System Annual Registration Statement (Form B) which will broaden the requirements to include financial statements of all affiliates, further consider governance and internal controls of the group, and a catch-all for the commissioner to open the “windows” to obtain other information. Regulators also are introducing a new Enterprise Risk Report (Form F) to allow regulators to more clearly identify and report their enterprise risks.

In addition to changes to NAIC Model #440 and NAIC Model #450, U.S. insurance regulators are promoting the international concept of the Own Risk and Solvency Assessment (ORSA). In essence, an ORSA is an internal process undertaken by an insurer or insurance group to assess the adequacy of its risk management and current and prospective solvency positions under normal and severe stress scenarios. An ORSA will require insurers to analyze all reasonably foreseeable and relevant material risks (e.g., underwriting, credit, market, operational, liquidity risks, etc.) impacting an insurer’s ability to meet its policyholder obligations.

As part of the SMI, the NAIC reevaluated RBC in the United States and determined RBC will continue to form the backstop function for insurer solvency to: 1) guarantee regulator action; and 2) provide the legal authority to intervene without extensive litigation. RBC models are

²⁹⁴ Supervisory colleges are intended to facilitate over-sight of internationally active insurance companies at the group level. The International Association of Insurance Supervisors (IAIS) defines a supervisory college as “a forum for cooperation and communication between the involved supervisors established for the fundamental purpose of facilitating the effectiveness of supervision of entities which belong to an insurance group; facilitating both the supervision of the group as a whole on a group-wide basis and improving the legal entity supervision of the entities within the insurance group.” For more information, visit: www.naic.org/cipr_topics/topic_supervisory_college.htm

among multiple tools available to evaluate an insurer's ability to fulfill its obligations to policyholders. However, regulators decided an additional capital assessment at the group level will be added to the supervisory process through information obtained through the ORSA; this is intended to complement RBC as a financial regulatory safeguard. RBC provides a legal-entity view of required capital and a group capital view in some situations (e.g., for parent insurance companies), whereas the ORSA will more often provide a group view of capital.

A View to Global Supervision: IAIS Supervisory Forum and ComFrame

In recognition of the changing nature of how insurers are structured, along with the fact insurance markets are becoming increasingly global and interconnected, supervisors around the world are strengthening their approaches to group supervision. U.S. insurance regulators are working at the International Association of Insurance Supervisors (IAIS) in a variety of work streams, including one to create a Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame). The IAIS has been focused on improving group supervision internationally through three main initiatives: standard setting, the Supervisory Forum, and ComFrame; U.S. regulators have been, and will continue to be, actively engaged in all of these initiatives.

Insurance supervisors around the world work together at the IAIS to develop international standards, also known as Insurance Core Principles (ICPs). The IAIS adopted its revised and updated set of the ICPs in October 2011; the ICPs are written to apply at the legal entity and group level, unless specified otherwise. The ICPs are used for the Financial Sector Assessment Program (FSAP) conducted by the International Monetary Fund (IMF) and the World Bank where financial sector regulatory frameworks of a jurisdiction are assessed against the appropriate international standards; for the insurance sector, the ICPs are used.

To move from the overarching theory to the practical, the IAIS has established the Supervisory Forum to provide input to IAIS activities related to standard-setting, standard implementation, and financial stability from a real-world, supervisory practice perspective. The aim of the Supervisory Forum is to bring front-line, senior regulators together, engaging financial analysis experts from various jurisdictions on a variety of emerging risk issues and the supervisory responses and techniques that can be used in practice to identify and respond to those issues. The concept of the Supervisory Forum stemmed from a U.S. proposal based on the U.S. multi-jurisdictional approach of dealing with emerging risks, industry trends and troubled companies, similar to the NAIC Financial Analysis Working Group.

U.S. insurance regulators also have been heavily engaged in the development of ComFrame since it officially began in July 2010. While ComFrame is not intended to create prescriptive means of regulation, the exact nature of ComFrame remains under discussion and

development. The intent is for supervisors around the globe to work together to supervise internationally active insurance groups (IAIGs). ComFrame has three main objectives:

- 1) Developing methods of operating group-wide supervision of IAIGs in order to make group-wide supervision more effective and more reflective of actual business practices.
- 2) Establishing a comprehensive framework for supervisors to address group-wide activities and risks and set the grounds for better supervisory cooperation.
- 3) Fostering global convergence of regulatory and supervisory measures and approaches.

The Need for Stronger Corporate Governance

By NAIC Staff

The recent financial crisis also underscored the need for stronger corporate governance oversight. Corporate governance is a “framework of rules and practices by which a board of directors ensures accountability, fairness and transparency in an insurer’s relationship with its stakeholders.”²⁹⁵ Supervisors across the globe have renewed efforts toward establishing a more comprehensive corporate governance framework. The NAIC and state regulators have engaged in their own review of insurer corporate governance requirements, standards, and practices through the SMI initiative.

The scope of the review includes identifying current U.S. insurance corporate governance standards and practices, evaluating them for needed improvement, and then proposing changes to the regulatory process. The review is multi-lateral and takes into account international standards for which the NAIC will be evaluated against (such as the IAIS corporate governance principles). To this effect, the SMI corporate governance review considers comments received from the 2009-2010 Financial Sector Assessment Program (FSAP), conducted by the International Monetary Fund. The FSAP findings were largely favorable, but did include certain recommendations being considered by the NAIC. These recommendations included the establishment of key person suitability criteria and notification, guidance for corporate governance practices, and internal audit and risk management requirements.²⁹⁶

The NAIC began its work by compiling a list of corporate governance requirements and practices impacting U.S. insurers. The findings were detailed in the “Existing Corporate Governance Requirements” document, released at the end of 2011. This document included recent regulatory reforms and was outlined against the seven core principles used to regulate financial solvency. These core principals reflect the mission of U.S. insurance regulation and

²⁹⁵ NAIC Solvency Modernization Initiative (E) Task Force. (2012). *The U.S. National State-Based System of Insurance Financial Regulation and the Solvency Modernization Initiative* [White Paper].

²⁹⁶ NAIC Corporate Governance Working Group. (2011). *Proposed Responses to a Comparative Analysis of Existing U.S. Corporate Governance Requirements* [Committee Document].

serve as the foundation for the regulatory process. The findings were then compared against international standards, best practices, and regulatory needs to identify areas for improvement.

Regulators then proposed a variety of recommendations, including additional annual statement disclosures and interrogatories, supplemental filings, revisions to the NAIC *Financial Condition Examiners Handbook* (Exam Handbook) and the NAIC *Financial Analysis Handbook* (Analysis Handbook), and additions to the accreditation standards. A more expansive review of the comparative analysis findings and proposals for improvements follow.²⁹⁷

Comparative Analysis Findings and Corrective Proposals

Annual Reporting

Corporate governance information is disclosed through the annual reporting process and financial exams.²⁹⁸ Insurers are required to file standardized annual and quarterly financial statements with their insurance regulator and the NAIC. These statements include:

- Disclosures.
- Interrogatories.
- Notes to financial statements.
- Management's discussion and analysis.
- An actuarial opinion.
- An annual audit opinion from an independent certified public accountant.

Additional supplemental filings covering specific issues are also required. These filings are used by regulators (including financial analysts and examiners) to monitor insurer activity for solvency, market conduct, corporate governance, and organization concerns.²⁹⁹

However, annual statement disclosures involving corporate governance are usually general in nature, dealing mostly with organizational structure and non-aggregated employee compensation amounts. The need for more information on the corporate governance framework and practices was identified during the comparative review. Furthermore, while on-site examinations are more comprehensive and detailed, they are only performed every three to five years and are dealt with indirectly since there is no uniform set of standards for examiners to use in assessing an insurer's performance.³⁰⁰ As such, U.S. regulators proposed the creation of a new annual confidential supplemental filing in which insurers would be

²⁹⁷ Ibid

²⁹⁸ Ibid

²⁹⁹ NAIC Solvency Modernization Initiative (E) Task Force. (2012). *The U.S. National State-Based System of Insurance Financial Regulation and the Solvency Modernization Initiative* [White Paper].

³⁰⁰ Ibid

required to report corporate governance information. To gain more insight on remuneration practices, regulators also proposed amending an existing compensation supplemental filing to include aggregated compensation data and discussion of an insurer's compensations policies.³⁰¹

Internal Audit

The comparative analysis also looked at the internal audit controls over financial reporting by examining the NAIC's *Annual Financial Reporting Model Regulation (#205)* (the Model Audit Rule). The Model Audit Rule provides legislative guidance to states on requirements for insurers to file annual audited financial statement filings, communicate internal control-related matters noted in an audit, and file a report with the state insurance department regarding its assessment of internal control over financial reporting. However, it did not require insurers to maintain an internal audit function, separate from management that would assess financial reporting, information technology systems, and internal controls. As such, U.S. insurance regulators proposed adopting revisions to the Model Audit Rule requiring insurers with premiums of more than \$500 million to maintain such an independent internal audit function and report findings to the insurer's Audit Committee or Board of Directors.³⁰²

Suitability of Persons

Suitability of key persons within an organization is a key corporate governance principle. Board members, senior management, and other key professionals must have the appropriate experience, expertise, and competence to perform their role. The suitability of an insurer's officers is first assessed during its initial licensing. Regulators generally make a thorough assessment of an insurer's suitability during the licensing phase. However, the comparative analysis illustrated suitability assessments vary across states, based on state-specific needs. This was also found to be the case during onsite exams, which review the suitability of officers and directors, but only take place once every three to five years. Additionally, suitability reviews are performed annually through off-site analysis, but focus primarily on new personnel. To better develop an understanding of industry practices in this area, regulators proposed the addition of a disclosure requiring insurers to disclose the suitability status of existing and new officers.³⁰³

Off-Site Analysis Procedures

Off-site analysis is done, in part, through financial analysis, which uses annual and supplemental filings and regulatory tools to identify insurer issues. The Analysis Handbook provides guidance, including checklists and questions, to assist the analyst through the financial analysis process. In their review of corporate governance practices, financial analysts examine governance information received through the annual filings. In comparing current U.S. analysis procedures

³⁰¹ NAIC Corporate Governance Working Group. (2011). *Proposed Responses to a Comparative Analysis of Existing U.S. Corporate Governance Requirements* [Committee Document].

³⁰² Ibid

³⁰³ Ibid

against international standards and U.S. regulatory needs, regulators discovered the procedures called for a review of biographical affidavits, but lacked clarity that the intent of the reviews was to establish if directors and officers have a sufficient background for their job.

Proposals to remedy these findings include revising the Analysis Handbook to clarify the intent and procedures of suitability analysis and require findings to be reported to domestic and international regulators. Revisions would require analysts to consider governance findings on an on-going basis from prior exams, ORSA reports, Management's Report on Internal Controls, and rating agency comments on enterprise risk management. Additionally, the Analysis Handbook would make suitability reviews a standard practice for holding companies.³⁰⁴

On-Site Examination Process

Full-scale on-site examinations are highly detailed and include an overall assessment of a company's corporate governance. The Exam Handbook provides guidance to examiners, who gain much of their information through key personnel interviews and company records. However, in comparing the Exam Handbook's guidance against international standards, regulators found guidance was missing on several topics, including compensation policies and procedures, suitability reviews of personnel in key internal control functions, and coordination of group exams. To bridge these gaps in guidance, regulators proposed the Exam Handbook be revised to incorporate these additional topics.³⁰⁵

Common Assessment Methodology

Regulators also identified inconsistencies in corporate governance reviews between states. The analysis and exam processes were also found to have discrepancies in their review of corporate governance. To facilitate uniformity, regulators suggested developing a standard set of guidance covering best practices and expected outcomes for governance practices. This guidance would be incorporated into both the Analysis and Exam handbooks.³⁰⁶

Reinsurance

Insurers enter reinsurance transactions in order to spread losses among other insurers or reinsurers, thus easing the capital strain of new business, protecting underwriting results from unexpected losses, and increasing writing capacity. In a reinsurance transaction, a reinsurer accepts certain obligations of the primary insurer in exchange for the premium associated with those obligations. Reinsurers must receive regulatory approval and in some cases may be required to post collateral.³⁰⁷

³⁰⁴ Ibid

³⁰⁵ Ibid

³⁰⁶ Ibid

³⁰⁷ Ibid

U.S. regulators believe an insurer's board of directors should be intimately involved in their company's reinsurance strategies. As such, they proposed adding a disclosure question to the suggested corporate governance supplemental filing to gain a better understanding of industry practices in this area before deciding if a regulatory requirement is needed. Additionally, they proposed revising the standard for reviewing collateral reduction applications to emphasize both domestic and international regulatory corporate governance considerations be taken into account during a supervisor's review of collateral reduction applications.³⁰⁸

Risk Management and Compliance Functions

An insurer has an obligation to identify, assess, and control both external and internal risks. Good corporate governance dictates insurers implement risk management systems that include processes and procedures for identifying and managing risks. Risks must be within the appropriate risk boundaries and take into account liability and shareholder obligations, compliance requirements, and capital needs.³⁰⁹ Beginning in 2015, large- and medium-size insurers will be required to evaluate their risk management systems and report material risks through their ORSA filings. U.S. regulators believe an insurer's board should be involved in the development of their company's risk management systems. For this reason, regulators proposed adding disclosure questions to the suggested corporate governance supplemental filing asking insurers to explain a board's involvement with risk management, rather than prescribe it.³¹⁰

Corrective Action Authority for Corporate Government Deficiencies

Regulatory authority to intervene in corporate governance deficiencies stems primarily from the NAIC's *Model Regulation to Define Standards and Commissioner's Authority for Companies Deemed to be in a Hazardous Financial Condition* (Model #385).³¹¹ Insurance departments that meet minimum solvency regulation, legal, financial, and organizational standards receive a certificate of accreditation from the NAIC.³¹² To be accredited by the NAIC, states must adopt certain provisions of this model law. However, regulators noted during their review of corrective action authority certain of the more critical provisions are not included in the current accreditation standards. Regulators proposed these missing provisions of NAIC Model #385 be

³⁰⁸ Ibid

³⁰⁹ NAIC Corporate Governance Working Group. (2011). *High-Level Corporate Governance Principles for Use in U.S. Insurance Regulation* [White Paper].

³¹⁰ NAIC Corporate Governance Working Group. (2011). *Proposed Responses to a Comparative Analysis of Existing U.S. Corporate Governance Requirements* [Committee Document].

³¹¹ Ibid

³¹² NAIC Solvency Modernization Initiative (E) Task Force. (2012). *The U.S. National State-Based System of Insurance Financial Regulation and the Solvency Modernization Initiative* [White Paper].

added to the accreditation standard, thus promoting uniform adoption of corrective action authority for commissioners who identify gross corporate governance deficiencies.³¹³

Looking Ahead

In the wake of the financial crisis, supervisors across jurisdictions and industries have increased their commitment to corporate governance. U.S. insurance regulators have been proactive in identifying principles that will set the framework for corporate governance oversight. However, work toward implementing a uniform set of corporate governance standards is still in progress.

Additionally, regulators identified needed enhancements through a comparative analysis of U.S. and international corporate governance standards and regulatory needs. Regulators responded to these findings by proposing additional disclosure filings, financial statement interrogatories, revision of its Analysis and Exam Handbooks and accreditation standards. Although these proposals are still being considered within the regulatory process, the final enhancements will undoubtedly strengthen insurers' corporate governance standards and regulators' review of these standards.

The Significance of Enterprise Risk Management

By NAIC Staff

Enterprise risk management (ERM) has attracted much attention in the last several years, particularly following the financial crisis. In today's uncertain world of complex and interrelated risks, an increasing number of financial institutions, including life insurers, have implemented or are further enhancing or developing their ERM systems.

Internal ERM Drivers

The decision to implement ERM is partly driven by the recognition risks are interrelated and interdependent. Relying on the traditional approach of managing individual risks separately in their own risk silos tends to often lead to serious and systematic errors in risk identification and assessment. A missing or incomplete picture of how diverse risks emerge and build on each other can hinder the ability to make risk-sensitive decisions and cause more serious problems. ERM can allow for the holistic enterprise-wide management of a wide array of risks that cannot be accurately assessed when considered separately and in isolation.

Managing risks is paramount for life insurers since they are "in the risk business," as one Chief Operating Officer (COO) of a life company pointed out during a personal interview with CIPR. He also argued life insurers "need to understand the risks they take and the appetite they have for those risks."

³¹³ NAIC Corporate Governance Working Group. (2011). *Proposed Responses to a Comparative Analysis of Existing U.S. Corporate Governance Requirements* [Committee Document].

All departments within a life insurance company including finance, actuarial, strategy, etc., are critical in the implementation of ERM, first mainly within their departments by embedding ERM into their daily operations, and then by connecting across the organization risk management infrastructure to become part of the overall calculus of decision-making.

Insurers may also decide to employ ERM to benefit from improved risk management to gain competitive advantage over their competitors. In this context, ERM can function as a mechanism for growth. The accurate and deeper understanding of the extent and composition of risk-taking and the greater risk control gained by ERM can deliver significant strategic advantages. These advantages can be translated as increased efficiencies and ultimately as important tangibles as reduced earnings volatility, stronger capital position and higher profitability.

Company size and complexity are among the key determinants for ERM adoption.³¹⁴ Larger insurance companies facing multiple existing and emerging risks are more likely to develop a holistic framework to manage all the risks. Insurers active in a number of markets offering complex products have a need for specialists to deal with different risks, and they predictably move toward developing strong ERM systems.

Also, an insurer's organizational form (e.g., mutual or stock company) determines to a great extent the prioritization of relevant risks, if not the company's mindset and implementation of an ERM framework. As a Chief Executive Officer (CEO) of a large mutual life insurer noted in a personal interview with CIPR, "the first order of issue is have an objective and not all insurance companies have the same objective. Our objective is to be able first and foremost to honor all of our obligations and as a mutual company our main focus is on long-term financial strength." Reflecting a more conservative approach to risk management as a mutual, he also argued "at the end of the day, just like reserves should be conservative, so should our judgment of the risks and therefore deliver a deliberate decision-making process and avoid being over-confident in our ability to hedge things that in many ways are not hedgeable and do our best to avoid systemic kinds of risks where everybody is likely to be facing the same challenges at the same time."

External ERM Drivers

External institutional pressures, particularly from the regulatory community, have also been driving ERM implementation by life insurers. SMI calls for an integrated system for risk assessment. The regulators' intent is to foster an effective level of risk management at the enterprise (group) level for all life insurers. Life insurers should maintain a risk management framework to help them identify, assess, monitor and manage all their material and relevant

³¹⁴ Hoyt, Robert E., 2011, The Value of Enterprise Risk Management, *The Journal of Risk and Insurance*, Vol. 78, No. 4, 795-822

risks. A COO of a life insurer recognizing the need for ERM noted, “We have to invest in making sure we can identify and report on those risks and assess our abilities to absorb the same risks.”

Other external factors for ERM adoption originate from the market whose signals are expressed through the stock market and credit ratings agencies, which have added ERM as a criterion in their credit analysis and their overall assessment of life insurance companies’ financial strength. Rating agencies give credit to life insurers implementing ERM and to robust internal capital models used in ERM.

The ERM Concept

The ERM structure, an information processing and modeling paradigm conceptually similar to an artificial neural network,³¹⁵ effectively connects all risk management activities from the business unit level into an integrated system at the whole enterprise level. Such comprehensive risk management framework enables the identification of different risk interdependencies and can proactively manage risks instead of reactively attempting to mitigate them.

The process of ERM is designed to remove any barriers to communication across the organization and to promote sharing of ideas and best practices. ERM is not meant to be a command-driven top-down approach but rather a bottom-up and horizontally integrated process spreading ownership of risk management across all departments and levels of the organization. The consideration of each distinct individual risk by business line and unit management, instead of being done in isolation, feeds into a methodical risk evaluation and management system at the enterprise level. The product of a well-designed ERM framework, combining all risk management activities is the optimization of risk-adjusted strategic decision-making that flows back to all levels of the company.

The success of ERM depends on how well it integrates into its framework already proven and effective risk management tools, such as Asset Liability Management (ALM), which cuts across different risk categories (underwriting, asset and operational risks). ERM builds upon the success of ALM and it is meant to supplement and enhance, not substitute existing tools that have worked well. As the COO of one life insurance company remarked, an ERM framework “encompasses a fairly broad risk universe” and it should look “at all of the investments and counterparty risks. It should consider credit, equity volatility, liquidity, mismatch in terms of interest rates and interest rate volatility and the typical underwriting risk for mortality, morbidity, lapsed policyholder behavior and operational risk for a much more formalized review of the business including legal compliance, tax processing systems, personnel.”

³¹⁵ Artificial neural network is an information processing and management system whose structure and function are modeled after the cognitive processes of the human brain with its web of neural connections. In risk management, information and resources can be fully shared in a network-based open environment with each processing unit working in parallel in an interconnected synergistic system.

ERM in Insurance Regulation

Companies in industries taking on and managing risk as a core function are among the earliest adopters of ERM. Regulatory disclosures requirements help foster an organizational culture of risk management. The resulting greater accountability and transparency permeates all departments and levels of a company and further improves the internal processes of how risk is identified, quantified and managed.

For life insurers, the current solvency surveillance framework includes examination and analysis of their ERM as outlined in the Exam and Analysis Handbooks. In October 2011, the IAIS adopted an Insurance Core Principle (ICP 8)³¹⁶ on Risk Management and Internal Controls, which heightens the need for standards and provides guidance on ERM. During 2011, the Group Solvency Issues (E) Working Group determined that ERM, as well as ORSA requirements, were appropriate and beneficial for inclusion in the U.S. solvency framework. In 2012, the NAIC *ORSA Guidance Manual* and the *Risk Management and Own Risk and Solvency Assessment (ORSA) Model Act (Model #505)* was adopted.

The NAIC *ORSA Guidance Manual* provides information for insurers on performing its ORSA and documenting risk policies and procedures. NAIC Model #505 requires insurers to maintain a framework for identifying, assessing, monitoring, managing and reporting on the “material and relevant risks” associated with the insurer’s (or insurance group’s) current business plans. Pursuant to the NAIC *ORSA Guidance Manual* and NAIC Model #505, an insurer and/or the insurance group of which the insurer is a member will be required to complete an ORSA “at least annually to assess the adequacy of its risk management and current, and likely future, solvency position.” Large- and medium-size U.S. insurance groups and/or insurers will be required to regularly conduct an ORSA starting in 2015. Additionally, these risk management and ORSA requirements will be included in the 2014 Financial Sector Assessment Program (FSAP) review.³¹⁷

Ensuring Capital Adequacy in the New Environment

By NAIC Staff

RBC Changes Designed to Better Account for Interest Sensitive Products

Like many other financial products in our increasingly complex global economy, product offerings in the insurance marketplace are constantly evolving. The development of new products designed to give policyholders access to equity markets, while providing a safety net

³¹⁶ ICP-8 states: The supervisor requires the insurer to have an effective Risk management function capable of assisting the insurer to identify, assess, monitor, manage and report on its key risks in a timely way.

³¹⁷ The Financial Sector Assessment Program (FSAP), jointly established by the International Monetary Fund (IMF) and the World Bank in 1999, is a comprehensive and in-depth analysis of a country's financial regulatory sector. In 2009, as part of this FSAP process, the NAIC completed a Self-Assessment, evaluating the extent to which U.S. insurance regulatory practices are in observance of the IAIS Insurance Core Principles.

of underlying guarantees in a less stable economic environment, has necessitated new regulations, as well as modifications to existing regulations. An area receiving significant attention from regulatory authorities is the determination and maintenance of the appropriate levels of capital necessary to ensure solvency. One of the primary measures of insurance company capital adequacy in the US, the risk based capital (RBC) ratio, has endured a number of changes since its initial introduction almost 20 years ago.

The initial RBC formula was implemented in the early 1990s as a risk-based measure of capital adequacy relative to the products and services provided by insurance organizations and the quality of the underlying assets. Separate formulae were developed for life, health and property and casualty companies in recognition of the specific characteristics and material risks encountered in each of these major insurance lines. For life insurance companies, the interest rate and market risk (C3) component of the RBC formula has been persistently adapting as the need for strengthened solvency requirements has continued to grow in response to economic volatility and increasingly risky product offerings.

Each formula generates capital ratios that can lead to stepped levels of regulatory intervention. Under the formula, five levels of action that can be triggered. The Authorized Control Level (ACL) is used as the base level, and the other regulatory intervention levels are defined relative to the ACL. If a company's capital dips below its ACL, the state insurance regulator has the authority to place the company under regulatory control.

The five action levels are:

- a) No Action, indicating a company's total adjusted capital (TAC) is at least twice its ACL.
- b) Company Action Level, indicating a company's TAC is at least 1.5 times its ACL but less than twice its ACL.
- c) Regulatory Action Level, indicating the company's TAC is at least equal to its ACL but less than 1.5 times its ACL.
- d) Authorized Control Level, indicating a company's TAC is at least 0.70 times its ACL but less than its ACL.
- e) Mandatory Control Level, indicating the company's TAC is less than 0.70 times its Authorized Control Level RBC.

As shown in Table 11, 97 to 98 percent of companies typically fall into the No Action level. This level does not necessarily mean the company is in strong financial condition. It simply means the company has not triggered one of the regulatory intervention levels. A company can be in a weakened financial condition and still generate an RBC ratio in the No Action category.

Similarly, while the insurance department can take control of an insurer whose capital level triggers the Authorized Control Level, the company may still be technically solvent at that point.

Table 11
Industry Results By Action Level, 2007-2011

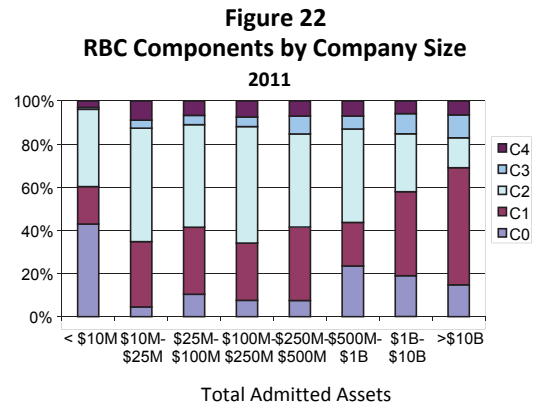
	2007	2008	2009	2010	2011
No Action	861	823	801	789	775
Company Action Level	6	10	6	5	6
Regulatory Action Level	3	5	3	1	1
Authorized Control Level	2	2	2	1	0
Mandatory Control Level	2	7	9	7	6
Total	874	847	821	803	788
Percent At 'No Action' Level	98.51%	97.17%	97.56%	98.26%	98.35%

The process of developing the RBC formula starts with the identification of material risks specific to the particular line of business. Each material risk is categorized as defined by the relevant statistics related to its behavior. For example, annuity reserves are categorized as low-, medium- or high-risk, depending on whether they are adjusted to fair market value, are adjusted for surrender charges or are not adjusted at all. For each category a factor corresponding to its degree of risk is calculated and applied to the statement value of the item deemed material to determine a risk charge, the amount of capital the company must hold in support of the risk.

Historically, the RBC formula for life insurance has separated material risks into four major components: asset risk (C1), insurance risk (C2), interest rate risk (C3), and business risk (C4). As the formula continued to change in response to the shifting business environment, each component has adapted to keep pace. Examples of component changes are the segregation of assets related to affiliate investments from the C1 component to form a new C0 component;

the breaking out of material risk associated with product guarantees within the C2 component; and current discussions related to the separation of operational risk from the C4 risk component into its own component.

Figure 22 shows the percentage breakdown of the aggregate RBC by component for life insurers in 2011. For most companies, the C1 (other asset risk) and C2 (insurance risk) components constitute the bulk of the aggregate RBC, with the insurance risk component being more prominent in the smaller companies and the other asset risk component being more influential in the larger companies. For example, insurance risk is 52 percent of the total RBC for companies with between \$10 million and \$25 million in total admitted assets, while other asset risk contributes 32 percent. On the other hand, companies with more than \$10 billion in assets have only 14 percent of their RBC coming from insurance risk and 54 percent of the RBC is contributed by other asset risk.³¹⁸



While components will continue to undergo significant change, no risk seems to have been subjected to more scrutiny and transformation than the C3 risk. The C3 component of risk-based capital is used to determine capital requirements related to interest rate and market risks. Several years after the initiation of risk-based capital, the NAIC Life Risk-Based Capital (E) Working Group requested the American Academy of Actuaries (AAA) Life Risk Based Capital Task Force review the C3 risk. The AAA concluded the C3 risk did not properly address the uncertainty related to aspects of companies’ asset/liability mismatches. Their recommendation to use cash flow testing to demonstrate asset adequacy for deferred and immediate annuities, structured settlements, guaranteed separate accounts, GICs and single premium life products was implemented in December 2000 with C3 Phase I. With the introduction of scenario testing

³¹⁸ “Recommended Approach for Setting Regulatory Risk-Based capital Requirements for Variable Annuities and Similar Products”, AAA Life Capital Adequacy Subcommittee, June 2005

into the C3 risk determination, asset/liability mismatch issues were addressed more effectively.³¹⁹

The next step in the transformation of the C3 risk, labeled Phase II, came a few years later. Phase II addressed required capital for certain products with equity related risks. Products such as variable annuities, group annuities with death benefit or living benefit guarantees, and equity-backed insurance contracts providing death benefit floors are covered under Phase II. The calculation method for this phase also uses scenario testing and allows the use of credible company experience in developing prudent best estimates for modeling, a significant step toward the introduction of the principle-based approach (PBA) to RBC.

In 2008 the AAA formed the C3 Life and Annuity Capital Work Group (C3WG) to consider C3 Phase III, the application of PBA to the calculation of interest rate risk and market risk portion of RBC. Using the PBA and focusing on the tail risks, low probability and high-impact loss events more likely to lead to insolvency, Phase III provides a more conservative measure of the C3 component required to ensure adequacy of the company's capital. The scope of C3 Phase III includes all life insurance products.

There is some discussion the next change for the C3 risk will be the incorporation of operational risk as Phase IV. Operational risk refers to those uncertainties resulting from shortfalls or inadequacies in the management of otherwise quantifiable risks, and from unforeseen external events impacting the insurer. Thus, failure of senior management to establish or follow a plan matching and monitoring risk appetite with core insurance business, profit targets and capital needs (management ERM risk), creates risk to the organization. A failure by management to implement and assess adequate controls over delegated decision-making and business activities (governance risks) can also present operational risks. Similarly, such failures with regard to non-insurance affiliates within a holding company structure can ultimately impact the insurer (contagion and reputational risk). External events like terrorist attacks (including computer hacking), natural disasters or pandemics preventing a company from operating effectively or from accessing its staff or facilities, also present operational risk, as do legal actions and fraud.

Operational risks are extremely difficult to quantify or model and, where included in regulatory capital requirements internationally, have mostly been captured using formulaic approaches (i.e., a factor applied to a base number such as annual premiums revenue or defined assets or liabilities). Other approaches include scoring or evaluating internal risk management and governance performance as means to modify or adjust regulatory capital based on qualitative

³¹⁹ Life Industry RBC Results for 2010, NAIC Staff, 2011

rather than quantitative inputs. The proposed Solvency II in Europe uses this approach, but also incorporates a formulaic methodology.

Currently, RBC includes a post-tax factor of 2 percent applied to annual statement Schedule T premium revenue for life and annuity business and 0.5 percent multiplied by accident and health premiums revenue. This risk charge is included within the Business Risk section of the Life RBC formula to capture “other business risk” and is viewed as a surrogate for operational risks. The property and casualty and health RBC formulas do not currently capture operational risk.

NAIC initiatives have resulted in adoption of an Own Risk and Solvency Assessment (ORSA) reporting, and development of corporate governance standards as qualitative means for considering internal operational risk and some aspects of external risk via a group-wide assessment. Consistent with the relative roles of RBC, alongside reporting, analysis and examinations in U.S. solvency regulation, these initiatives will most likely remain within the analysis and examination tracks as tools for earlier intervention with companies, but the “jury” may still be out.

State regulators via the NAIC Solvency Modernization Initiative RBC (E) Subgroup are looking at whether and how best to incorporate these and other external aspects of operational risk more explicitly into the RBC formulas and may start with a formulaic approach in all the formulas. The implementation of a factor based approach could be completed as early as 2014.³²⁰

While the final outcome of this initiative is unclear, what is clear is that within the U.S. insurance industry, as in the rest of the world, efforts to ensure company solvency are a high priority for regulators. The insurance industry also places a high level of concern on solvency matters, as evidenced by their willingness to collaborate on the C3 modifications, ORSA and other solvency initiatives. Additionally, the partnership has continued as the entities work feverishly for compromise and consensus on standards for the rapidly approaching principle-based reserves for life insurance.

Implications and Risks of Principles-Based Reserving

The NAIC is actively engaged through its Solvency Modernization Initiative in the incorporation of related initiatives into its guidance to state regulators. Principle-based reserving (PBR) stands as a cornerstone of this initiative, leading to a more complete identification of insurers’ policy obligations and the related reserve and capital levels needed to be maintained. Through PBR, the method insurers use to calculate their policy reserves is transitioning from a formula-based

³²⁰ Operational Risks, Lou Felice, September 2012

static approach to a dynamic model-based approach, allowing for the consideration of individual company experience in the reserve calculation. In many cases the current one-size-fits-all approach to reserving has resulted in redundant reserves. The implementation of PBR will address this issue. Allowable calculations under PBR are defined in the NAIC Valuation Manual prescribed by the Standard Valuation Law under the guidance of the Life Insurance and Annuity (A) Task Force.

PBR represents a substantial shift in how risk and reserving levels are determined. Insurers are allowed the flexibility to reflect their mortality, expense, lapse and interest experience in the reserve calculation to the extent the experience is credible and relevant. It also allows companies to more effectively capture the identifiable, quantifiable, and material risk-related cash flows, benefits and guarantees associated with specific products.

Companies unable to demonstrate their assumptions are based on sufficiently credible levels of data will be forced to rely on industry data in the development of their principle-based reserves. To ensure the continuing development of industry data, the Valuation Manual requires companies to submit their experience data to a statistical agent. The statistical agent will have the responsibility of compiling the data and developing future industry tables.

Companies will be able to use risk analysis and risk management techniques, consistent with the evolving practice and knowledge, to quantify the risks. PBR allows the use of stochastic models or other means of analysis to properly reflect the risks of the underlying contracts. Among those risks are the risks inherent in the growing number of policy guarantees offered to address the economic security of increasingly sophisticated, risk-averse policyholders in an uncertain economic environment.

The Standard Valuation Law (SVL), adopted in 2009, prescribes a Valuation Manual as the source of PBR implementation guidance. The Valuation Manual, which also addresses non-PBR standards, sets forth the minimum reserve and related requirements in keeping with the Standard Valuation Law. The Valuation Manual will facilitate the uniform implementation of PBR across states and insurance departments as it lays out the methodologies and standards to use in determining appropriate reserves. The NAIC adopted the Manual at its 2012 Fall National Meeting. States can now begin to consider adoption of the amended Standard Valuation Law, including the Valuation Manual, in their 2013 and future legislative sessions. The operative date of the Valuation Manual will be the January 1 of the year following the July 1 when the SVL, has been enacted by at least 42 states representing more than 75% of the direct premiums written as reported in the following annual statements submitted for 2008: life, accident and health annual statements; health annual statements; or fraternal annual statements.

Once the Valuation Manual is operative, PBR will apply to policies issued on or after that date. Companies will have three years from the operative date of the Valuation Manual to prepare for full compliance. During that period companies can choose to apply PBR to some or all of their policies covered by the Valuation Manual. Once the regulations are applied to a set of policies, those policies must continue to adhere to the new standard for future valuation periods.

The scope of the Valuation Manual includes life insurance, annuity and health insurance policies. VM-20, the section of the Valuation Manual providing the PBR requirements for individual life policies, applies to universal life insurance policies, variable life and variable universal life insurance policies, term life insurance policies, traditional whole life insurance policies, and indexed life and indexed universal life insurance policies. It also applies to individual life policies and individually underwritten certificates issued under a group life insurance contract and combination policies including other benefits such as annuity benefits or long-term care benefits in addition to life insurance benefits, but are filed as individual life insurance policies.

The flexibility allowed by PBR necessitates the actuarial and financial assumptions used in the calculation of sufficient reserves are the responsibility of the company. The Valuation Manual also sets corporate governance requirements for companies implementing PBR. The requirements include descriptions of the role of the board of directors, senior management and the qualified actuaries in dispensing their duties related to PBR. Oversight of PBR calculations is the responsibility of the qualified actuaries. The responsibility includes providing a summary report to the board of directors and senior management on the processes used to determine the principle-based reserves.

The board of directors and senior management are responsible for oversight of the principle-based actuarial function. This includes ensuring the establishment of an adequate infrastructure, review of the principle-based reserve elements and their consistency with other company risk assessment processes, review of principle-based reserving results for consistency with the company's established risk tolerances and the addressing of any significant and unusual issues in the results of the valuation processes, and applicable sensitivity tests. VM-G, the section of the Valuation Manual focusing on corporate governance, details numerous other corporate responsibilities for the board of directors, senior management and qualified actuaries.

It is expected, for most companies, the implementation of PBR will result in lower reserves than if reserves for newly issued policies were calculated using the current formulaic methodology. Within company product portfolios, some products will experience lower reserves, while other products will exhibit higher reserves. The most consistent lowering of reserves is expected to

be seen among term insurance products. Overall, as PBR allows companies to use their own experience in the reserve determination process, reserve redundancies will be reduced. Capital that would have been committed to fund reserves will be available for companies to use as they choose. While there is no provision in PBR requiring companies to set aside, for the benefit of consumers, amounts no longer needed to fund reserve redundancies, competitive market forces should compel companies to use a portion of the newly available capital to lower premiums.

While companies will benefit from not having to put up overly conservative reserves, the benefit might be initially tempered by the expenses related to the development of their stochastic model and the building of modeling expertise. While large companies appear to be better suited to embrace PBR, smaller companies, who have yet to invest in stochastic processing for risk management or asset adequacy, may be less prepared for the expenses involved. These companies tend to have smaller staffs and limited budgets. Accommodating PBR may not only require investments in hardware and software but also additional staff or consultants with modeling expertise. In an effort to minimize the impact, those companies, and others unwilling to incur the costs, may choose to simplify their product portfolio by offering fewer policies and riders with guarantees, leaving the larger players to lead the market.

As the PBR approach provides companies flexibility in determining their reserve assumptions, the regulatory community is faced with a number of challenges. While moving away from “one-size-fits-all,” regulators must find ways to ensure products with relatively similar designs will not generate reserves substantially different for reasons other than the underlying company experience. Regulators must be prepared to audit and review companies’ stochastic modeling results. Companies will be required to demonstrate, upon request, the mortality, lapse, expense, policyholder behavior, and other data used as model input are credible and relevant to their experience. Modeling and scenario generation techniques must pass the scrutiny of state regulators, who will seek to verify statement reserves are accurate and consistent with model assumptions. Depending on the complexity of the products modeled and the intricacy of the model, verification may not be a trivial exercise. The NAIC is currently working with regulators, actuarial organizations and industry representatives to foster uniformity in the understanding and application of PBR, as well as developing strategies for reviewing company assumptions and consistency of modeling techniques.

Principles-based reserving has also had an impact on the Standard Nonforfeiture Law (SNFL) for Life Insurance. The SNFL defines the interest rate and mortality table used in calculation of minimum nonforfeiture values. Under current practice, the standard nonforfeiture interest rate is based on the valuation interest defined in the SVL and changes to the mortality table are accomplished by statute. In 2012, the SNFL for Life was modified in recognition of the changes

made in 2009 to the SVL to accommodate PBR. The modifications to the SNFL specify the Valuation Manual, once operative, determines the interest rate and mortality table to be used in calculation of the minimum nonforfeiture values.

Implications of the Interstate Insurance Product Regulation Commission By Karen Schutter (Insurance Compact)

The Interstate Insurance Product Regulation Compact (Insurance Compact) and its Commission are significant examples of the ongoing state-based modernization efforts to continually improve the system of insurance regulation for life insurance companies doing business in more than one state. Today, 41 member states representing 70 percent of the nationwide asset-based premium volume have enacted the Insurance Compact and more than 150 insurance companies are currently using it to make one product filing under one set of uniform standards for one approval to sell the product in participating states.

The Insurance Compact is an agreement, which is enacted by law, amongst member states to participate in a multi-state regulatory system for filing, review and approval of asset-based insurance products, including individual and group life insurance, annuities, long-term care insurance and disability insurance. The Insurance Compact is transforming the product review process within the existing system of insurance regulation by delivering speed-to-market through uniformity, reducing duplicative paperwork, processes and systems implementation for companies and removing state-by-state content variations thereby allowing insurance products to be rolled out in a manner and timeframe commensurate and competitive with other financial products while not sacrificing thoroughness in the review and compliance with strong state-based consumer protections.

For the Commission, speed-to-market has many aspects. Compacting States work together and develop strong and detailed uniform standards for the content of asset-based products protecting consumers equally across the Compacting States. Companies use these uniform standards to submit a set of standard forms in a product filing to the Commission. The Commission reviews these product filings working with the filer toward compliance and approval in an average review time of much less than the required 60 day turnaround time. With this approval, companies are able to roll out standard product forms throughout their distribution network in 41 Compacting States for individual life, annuity and disability income products and in 37 Compacting States for individual long-term care insurance products.

Companies filing with the Commission dramatically reduce the number of forms and filings made for a product they want to sell across the Compacting States. Today, companies can file a wide variety of products for review and approval under 82 adopted uniform standards for

individual life, annuities, long-term care and disability income as well as combination or linked-benefit products. Approval through the Commission provides companies the ability to implement and use uniform forms across Compacting States. Companies continuing to file Compact-eligible products state-by-state may have 40+ different filings per one Insurance Compact filing with a significant multiplier in the number of forms required to handle state-specific variations in content requirements. At a recent industry conference, one company calculated one of their Insurance Compact individual long-term care product filings with 38 forms would have translated into 1,254 forms if filed separately in 34 Compacting States where authorized to do business.

The Commission and its members are committed to continuing this forward progress by continuing to address questions and issues to allow all states to enact the Insurance Compact legislation, developing and adopting Uniform Standards for group products with an ever-vigilant eye on strong consumer protections, and increasing industry utilization as companies make the necessary changes in their processes to use the Commission's speed-to-market mechanism as their chosen filing method for asset-based insurance product approval. When combined with SERFF, the Insurance Compact offers the ultimate speed-to-market for life insurers.

Opportunities for Better Collaboration between State and Federal Regulators By NAIC Staff

The state-based national regulatory system has been successful in providing the critical safeguards to policyholders and ensuring the overall financial strength and solvency of the life insurance industry. A direct federal role in insurance regulation, especially in light of the experience of the financial crisis, is not required and may even be counterproductive and disruptive. On the other hand, better collaboration of state insurance regulators and federal government and financial services regulatory bodies, such as the Federal Reserve, the Federal Deposit Insurance Corporation (FDIC) and the Department of the Treasury, can only strengthen the regulatory function.

Given the failings in the banking sector during the turmoil of the financial crisis that necessitated a massive bailout and the minimal, by comparison, impact of the crisis on the insurance sector, any new framework of regulatory cooperation must build on the strengths of the current state-based regulatory system.

A Federal Insurance Office (FIO) was established by the Dodd-Frank Wall Street Reform and Consumer Protection Act. While the Act makes it explicitly clear the FIO is not a regulatory body with supervisory authority over the insurance industry, the agency has been charged with monitoring developments in the insurance industry and identifying contributing issues to systemic risk. In order to carry out these functions, the FIO is authorized to collect data and

information on the insurance industry, and it can enter into information-sharing agreements with state regulators. The FIO also contributes to the work of the Financial Stability Oversight Council (FSOC), which is working on identifying potentially systemically important financial institutions, potentially including some insurers. In the event a life insurer is designated as systemically important by the FSOC—in which both the FIO and state regulators are represented (by non-voting members)—it will be subject to enhanced prudential standards by the Federal Reserve, potentially including higher capital requirements and stress tests.

Systemically risky behavior by life insurers as a result of their core insurance activities is improbable. However, in the event an insurer designated as systemically important becomes insolvent, the FIO could be involved in triggering its resolution under new requirements. Title II of the Dodd Frank Act empowers the FIO to determine if an insurer should be liquidated under the Orderly Liquidation Authority with the FDIC carrying out the liquidation. Nonetheless, insurer resolution is to be conducted pursuant to state law, with the FDIC stepping in only if no action is taken by state regulatory authorities within 60 days.

Furthermore, the FIO is authorized to assist the Treasury Secretary and U.S. Trade Representatives in negotiating international bilateral and multilateral agreements regarding prudential measures with respect to the business of insurance. In the process of developing federal policy on international insurance matters, the FIO coordinates and consults with other federal agencies and with state insurance regulators. In the interest of protecting policyholders, these agreements must provide the same level of consumer protection as those contained in state laws and regulations.

The FIO cannot preempt state laws and regulations unless they are inconsistent with the terms of a “covered” agreement and result in less favorable treatment of a non-U.S. insurer than a U.S. insurer subject to the same law or regulation. At the same time, state regulators can contest the determination a state law or regulation is inconsistent.

Because the role of the FIO both domestically and internationally affects ongoing work of state regulators and the NAIC, coordination and cooperation is critical. To that end, state regulators communicate frequently on a wide range of issues affecting life insurers and consumers.

The regulation of insurance companies and affiliates on a consolidated basis has garnered a lot of attention following the financial crisis. State regulators, in close cooperation with Federal authorities, Federal agencies (such as the Federal Reserve), and international insurance regulators, work toward improving regulation at the group level. Memoranda of Understandings (MOUs) among state, federal, and international regulators are critical to facilitate the sharing of information about insurers and their non-insurance affiliates domestically and across borders.

Market Conduct–Better Analytical Tools

By Director Bruce R. Ramage (Nebraska Department of Insurance)

In light of the recent global financial crisis, regulators and legislators are examining the structure and protections of the financial regulatory system. Increased attention has been on the efficiency and effectiveness of financial or prudential supervision. However, equal attention should also be given to consumer protection, encompassing not just financial supervision but also market regulation and oversight of company conduct.

An essential component of insurance regulation is the appropriate oversight of the ways insurance companies distribute their products in the marketplace, namely, market conduct regulation (or market regulation). Market conduct—a term commonly used in the insurance industry to describe problems associated with the distribution and sale of insurance—has become a key insurance regulatory focus over the last decade. Insurance regulators view market conduct as critical to ensuring the welfare of consumers and maintaining public confidence in the insurance industry. Market regulation attempts to ensure consumers are charged fair and reasonable insurance prices. It also strives to ensure consumers have access to beneficial and compliant insurance products, and are protected against insurers that fail to operate in ways legal and fair to consumers.

Broadly defined, market regulation is regulatory oversight focusing on regulated entities' compliance with laws and regulations other than those related to financial solvency. Market regulation complements financial solvency regulation. Problems spotted during a market conduct review can be a precursor to financial solvency concerns. Market regulation also evaluates companies' fulfillment of contractual obligations to their policyholders and claimants. In a broad sense, market regulation encompasses functions historically performed both within the various state insurance departments, such as rate and form review, producer licensing, and consumer assistance, and those functions historically performed outside of the departments through market conduct examinations and investigations.

History of Market Conduct Regulation

The history of market conduct regulation dates back to the 1970s. In 1971, the NAIC commissioned McKinsey and Company, Inc., to evaluate and make recommendations concerning both financial and market conduct surveillance systems. Working closely with NAIC committees and task forces, McKinsey developed and implemented a rigorous study plan which

included extensive interviews with regulators, insurers and other experts to solicit their views and suggestions on state practices in this area.³²¹

In April 1974, McKinsey submitted a final report recommending insurance regulators separate market conduct surveillance from financial surveillance. It also recommended market conduct examinations be separate from financial examinations and be administered by different examination personnel. The report also concluded some states had been struggling with market conduct regulatory problems for many years, but few states had developed comprehensive, organized oversight systems to respond to these problems. A few states were already performing some market conduct regulatory functions as part of the financial examinations; however, these functions were limited in scope (they largely consisted of “rate examinations” which verified insurers were charging the rates approved by regulators and the premium calculations were correct).³²² The report’s attention to market conduct reflected the increasing recognition of the importance of this function. It also reflected a philosophy that insurers’ financial condition and market conduct were intertwined, and problems in one area might indicate problems in another.

Moreover, in the 1970s, Illinois introduced market conduct examinations in coordination with its move to competitive rating for property/casualty lines. The Illinois Legislature could not agree on what type of rate regulatory environment it wished to enact to replace its current law, which contained a sunset provision. Following the legislative session, the Illinois Department of Insurance was left with several staff members knowledgeable about rate regulation, but with no rating law to enforce. It was decided to send them out to conduct on-site examinations of how insurers were treating policyholders and claimants and to look at the prices they were charging. The Illinois Department of Insurance found the market conduct examination to be an effective alternative method to regulate the insurer market practices in place of prior approval rate regulation. Gradually the Department convinced other states to give it a try.³²³

The McKinsey study and subsequent NAIC activities provided the first model system for market conduct surveillance and it led to substantial work on the first NAIC *Market Conduct Examiners Handbook*, which the NAIC developed in 1975. Since this time, the insurance markets and the industry have evolved significantly and the NAIC has taken a variety of steps to improve the consistency and quality of on-site market conduct examinations. Today all states have some form of market conduct oversight as part of their comprehensive regulatory framework.

³²¹ Rationale and History of Market Conduct Surveillance, NCOIL.

³²² Ibid.

³²³ NAIC/FIO Meeting on Market Conduct. See http://www.naic.org/documents/index_financial_reform_fio_111207_agenda.pdf

Life Insurance Products and Market Conduct

Insurance markets have changed significantly since market conduct regulation was established in the 1970s. The number of insurance companies has increased substantially and new types of risk-bearing entities have emerged. The Gramm-Leach-Bliley Act (GLBA) called for state reform to allow insurance companies to compete more effectively in the newly integrated financial service marketplace and to respond with innovation and flexibility to ever-more demanding consumer needs. As a result, a myriad of complex, new insurance products and practices emerged to compete with the offerings of non-insurance financial institutions. Insurance companies of various sizes—selling a vast array of products across state and national boundaries—now populate the industry. As the life insurance products have evolved, there have been fundamental implications for the market conduct regulatory framework.

In the 1980s interest rates were at historic highs. During this time, interest-sensitive products, particularly universal life policies, were extremely popular because of the high interest rate environment. Many of these products were sold through the use of computer-generated sales illustrations employing complex actuarial techniques difficult for consumers to fully understand. These products were driven, in part, by increasingly questionable (and unrealistic) actuarial assumptions which were not disclosed in sales presentations.

Market conduct issues in the sector took center stage in the 1990s after interest rates plummeted from the historical highs reached in the 1980s. Consequently, many policies failed to deliver the returns policyholders had expected. This led to problems in sales representations of expected versus guaranteed returns as well as the practice of “churning,” “twisting,” and the improper replacement of life insurance policies.³²⁴ Consequently, several major class action lawsuits alleging deceptive sales practices were filed against large insurers. This prompted regulatory actions to curb the abuses and restore consumer confidence in the industry.

The Market Regulation of Life Insurers

Since the 1990s, market regulation, as it relates to life insurers, is a dynamic process that has evolved and continues to change in order to respond to evolution in life and annuity products. There has been a significant growth of products designed to accumulate cash values and retirement funds as opposed to simply providing for death benefits. Market regulation adapts to regulation of new products, all the while continuing to protect policyholders of traditional life products. The NAIC *Market Regulation Handbook* provides guidance and encourages uniform market regulation practices. The Handbook is updated annually, keeping current with newly adopted model laws, regulations, bulletins and other relevant materials.

³²⁴ PricewaterhouseCoopers LLP

States have recently added market analysis as an additional tool to enhance market regulation. The purpose of market analysis is to identify, assess and prioritize market conduct problems potentially having a substantial adverse impact on consumers, policyholders and claimants. Regulators increasingly recognize the value of coordinating market regulation activities for life insurers because life insurers frequently have centralized operations and consistent practices across the various states. In addition to the primary goal of protecting policyholders and claimants, sound market regulation also serves as a method of maintaining a level playing field among insurance companies.

Use of Analysis Prioritizes Market Regulation Resources

The framework outlined in the *Market Regulation Handbook* anticipates the use of market analysis by state insurance departments as a way to prioritize resources and to plan for the most appropriate market regulatory response to identified concerns. This approach envisions use of responses fitting into a continuum of methods for addressing the concern and prevents unnecessary use of overly broad or comprehensive and routine on-site examinations.

Baseline Analysis

Market analysis starts with baseline analysis methods, which are used to narrow the field of companies that should undergo more thorough analysis. It is a starting place for analysis. States use a variety of tools for baseline analysis, including NAIC-supported programs such as Market Analysis Prioritization Tool (MAPT), Market Conduct Annual Statement (MCAS) rankings, and Complaint Data System (CDS) complaint indexes. Regulators may consider changes in market share or product offerings and frequently focus on areas or issues of concern or adverse information.

MAPT provides an overall score, national and state scores for companies writing a specified line of business based on both markets, and financial data. The report allows market analysts to compare similar companies on a national and state basis.

MCAS permits comparison of company data for specified lines of insurance, including individual life insurance and individual annuities. Data relating to such factors as complaints, cancellations, replacement activity, denied claims and claim handling time can be broadly evaluated and compared with the applicable companies.

The CDS or Complaint Data System captures complaint numbers and permits reports to be generated on a state, regional or national basis and by line of business. It permits the review of indexes of complaint numbers related to policy counts or premium volume. It also permits the review of complaint trending.

Level One Market Analysis

Once the field of companies is narrowed, a Level One market analysis is performed for each of the companies. A majority of the information used for Level One market analysis is obtained through the NAIC market information systems. Level One analysis is a fairly formulaic approach, consisting of specific questions which the analyst must complete. It also permits analysts to record specific items of concern or issues warranting further review. Part of the analysis includes a review of MCAS results.

Each Level One analysis is eventually approved by the state's market analysis chief (MAC) before being made available for viewing by other member state market analysts in the NAIC Market Analysis Review System pursuant to an information-sharing agreement. Level One analysis reports conclude with a brief explanation of what next steps are contemplated by the state. Examples of next steps are, "no further analysis required," "a Level Two analysis is scheduled," or "we will proceed with the continuum of regulatory responses." Confidential status is necessary in order to preserve the ability of states to share investigatory information.

Level Two Market Analysis

Level Two Analysis is intended to permit a more in-depth review of specific company matters and may include such endeavors as a rigorous review of complaint files, review of information from other insurance departments, a review of electronic rate and form filing, information available on the Internet and other sources. If the analysis indicates a regulatory response is appropriate, the Level Two analysis is intended to assist in determining the appropriate type of response and the scope of the response (issues to be targeted). Like Level One reviews, the completed and approved Level Two reviews are available for review in the Market Analysis Review System.

Continuum of Regulatory Responses

The continuum of regulatory responses is designed to accommodate a flexible method of addressing concerns. States are encouraged to use the least intrusive, yet most effective method in addressing the regulatory matters at hand. Examples of continuum responses include such things as telephoning or meeting with company officials to discuss concerns, issuing an interrogatory, conducting interviews, conducting a policy and procedure review or issuing a data call, performing a desk audit or scheduling an on-site examination. States are encouraged to use standardized data requests when applicable.

Two NAIC systems are used to register continuum-type activities. The examination tracking system (ETS) is used to register on-site examinations and desk-audit examinations. The Market Information Tracking System (MITS) is used to record other types of continuum responses. Copies of examination reports can be uploaded to ETS. These tools help regulators coordinate

and determine whether specific issues or concerns have already been addressed by other states.

Market Conduct Examinations

On-site market conduct examinations are considered the traditional approach to market conduct oversight. They are an effective tool when it is desirable to conduct an in-depth transactional review or when interaction with multiple divisions within an insurer is necessary. The NAIC *Market Regulation Handbook* includes chapters related to all examinations and specific product types. The chapters include examination standards based on NAIC Model Laws and Regulations. The specific review standards are followed by applicability and review criteria. A comprehensive examination would typically include all applicable review standards within an examination. A targeted or limited examination would focus on specific standards related to issues identified during the market analysis process.

The Handbook recommends use of an examination audit plan, including time and cost estimates, with periodic evaluation and update. It recommends this document be shared with the company. The most notable change in market conduct examinations is the moved from being primarily comprehensive to becoming targeted reviews designed to evaluate issues noted during market analysis. A primary goal for market conduct examinations in which problems are noted is the remediation of those problems as it relates to policyholders.

Desk Examinations

Desk Examinations typically are used when the materials to be reviewed can be sent in to the department of insurance, either by mail or electronically. One example would be conducting a review of insurers' advertising materials which are requested to be sent in to the department of insurance. The primary advantage relates to saving travel expenses. They may be less disruptive to the company being examined, but some companies prefer the face-to-face interaction allowing them to communicate with examiners and ask questions. The widening use of electronic documents and scanning enhances the ability to conduct desk examinations.

Coordination Among States

Insurance regulators coordinate market regulation oversight through formal and informal channels. Regulators have entered into a global information-sharing agreement to facilitate the confidential treatment of regulator-to-regulator communications. Formal discussion of issues concerning multiple jurisdictions can occur in the NAIC Market Actions (D) Working Group (MAWG). The Working Group reviews referrals and assists with coordinating appropriate courses of action to be taken by those states that would otherwise be addressing the concerns on a state-by-state basis.

Model Laws and Other Support

From time to time, NAIC members find it beneficial to address emerging issues through the development of NAIC model acts, model regulations, bulletins, white papers and consumer education. Recent examples include the Suitability in Annuity Transaction Model Regulation and the Retained Asset Accounts Sample Bulletin. In addition to consumer bulletins distributed by states to the public, the NAIC has developed a Web-based education site titled Insure-U. Insure-U offers insurance tips to small business and to individuals who are within different life circumstances or stages. Finally, the NAIC maintains the Consumer Information Source (CIS) which provides consumers key information about insurance companies, including closed insurance complaints, licensing information and key financial data before purchasing insurance.

Future Enhancement of Market Regulation

Being responsive to the needs of its members, the NAIC will continue to facilitate dialogue with regulators, regulated entities, consumers and other interested parties. Over time, it will no doubt expand the tools necessary to support market regulation processes. Recent modernization of financial regulation includes enhanced risk-focused reviews, enterprise risk management and group supervision. These concepts may likely also impact market regulation in the future.

The Legal Entity Identifier (LEI) Improves Financial Transparency

By NAIC Staff

The financial crisis brought heightened awareness of the need for financial transaction transparency in order to accurately assess exposure to counterparty risk. Financial regulators began discussing the need for a global standard for identifying financial contracts and their participants in 2010. The following year, a standard for Legal Entity Identification (LEI) was developed by the International Organization for Standardization (ISO). In response to this growing movement, the Financial Stability Board (FSB) developed a set of principles and standards covering governance, funding, standards, and validation. It also established an operating model and began coordinating work toward implementing a global legal entity identifier framework. The G20 then moved to endorse the FSB's operating model, setting March 2013 as an implementation target.³²⁵

The NAIC began working on the LEI initiative in 2011. A proposal to add the LEI to its insurance industry regulatory reporting was adopted in 2012. The LEI is a unique 20-digit code assigned to

³²⁵ Legal Entity Identifier (LEI) – Timeline of Major Events. (2011, August 12). *US Treasury Press-Release*, Retrieved from www.treasury.gov/press-center/press-releases/Documents/081211%20LEI%20Major%20Timeline%20of%20Events.pdf

all companies entering into financial transactions.³²⁶ This code allows regulators to track exposures across borders and create aggregate data sets designed to help identify risk concentration. FSB recommendations also specify the maintenance of reference data, including legal entity name and address, LEI assignment, update and expiry dates, and corporate ownership structures.³²⁷ This reference data helps ensure identifiers are compatible across various corporate structures and jurisdictional lines.

The implementation of LEI will have a dramatic impact on the global transparency of financial transactions. Regulators will be able to incorporate LEI into their surveillance analysis to assist them in identifying entity, group, business line, or geographical risk concentrations. However, the implementation of LEI into systems will require extensive leveraging of technology, which could impact costs for regulators and reporting entities. Despite the potential implementation costs, most industry experts point out there are significant benefits for companies effectively integrating LEI into their risk management activities. For companies embracing LEI, experts cite the benefits include reduced operational risk, increased cross-selling, better pricing, and streamlined financial functions.³²⁸

While the LEI on its own will not measure systemic risk, when combined with transaction information on the risks being exchanged by counterparties, LEI will allow regulators and parties to the transactions to gain a more complete and accurate picture of risks than ever before.

Enhancing Transparency in Life Insurance Markets

By NAIC Staff

Economists believe for competition to work effectively, an informed and empowered consumer must be present. The informed consumer must have choices among a variety of product offerings from a number of competing entities. The markets must be sufficiently transparent so the consumer can deal with the sellers on a relatively equal basis.

The global financial crisis of 2007-2008 demonstrated consumers of financial products, including certain life insurance products, did not always understand the features of the products they purchased. As a result, regulators and policymakers are paying more attention to making sure consumers have all the tools they need to be effective shoppers. Congress empowered the Consumer Financial Protection Bureau (CFPB) under the Dodd-Frank Act to

³²⁶ NAIC Advances Transparency To Track Risk Globally. (2012, September 11). *NAIC News Release*, Retrieved from www.naic.org/Releases/2012_docs/naic_legal_entity_identifier.htm

³²⁷ Legal Entity Identifiers: A Global Opportunity. (2012). Deloitte LLP, Retrieved from www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/Services/ERS/uk-ers-legal-entity.pdf

³²⁸ Ibid

address non-insurance financial products. The CFPB has developed enhanced consumer disclosures related to mortgages.

Insurance regulators have approached the ability of consumers to shop for insurance products in a variety of ways. Product regulation is sometimes chosen over disclosure. Sometimes regulation of the terms and conditions contained in the insurance product are subject to prior review allowing a regulator to review an insurance contract before it is offered in the marketplace. The regulatory framework for a particular product is enacted by the state legislature. It tells insurers what must be in a policy and what cannot be in a policy, and may also provide standards for pricing and risk classification. This process might be sufficient for some insurance products. In rare cases the legislature promulgates standard policy language. Other products might be regulated with a combination of techniques, including disclosure.

Insurance products sold to consumers are generally contracts of adhesion. According to the Free Dictionary,³²⁹ a contract of adhesion is “a legally binding agreement between two parties to do a certain thing, in which one side has all the bargaining power and uses it to write the contract primarily to his or her advantage.” Since insurers draft policy language and the consumer has no choice but to accept the terms drafted by the insurer’s attorneys, any ambiguities are interpreted by the courts in favor of the policyholder. While this is an important concept, it does not necessarily help the consumer when she is seeking coverage.

There are other ways insurance regulators protect consumers. While not strictly dealing with transparency, important consumer protections come from imposing suitability standards on insurers and insurance producers. The industry is held accountable if they do not seek information from the customer and sell a suitable product based on facts disclosed by the consumer about investments, other insurance products, and the consumer’s financial situation and needs. State laws also protect consumers from misleading and fraudulent marketing practices with respect to the use of senior-specific certifications and professional designations in the solicitation, sale or purchase of—or advice made in connection with—a life insurance or annuity product.

Transparency is about having a robust competitive insurance market where consumers have access to important coverage and pricing information. This allows them to make informed choices about the insurance products they buy. One of the key ways regulators and legislators have approached consumer education on insurance products is the concept of disclosure.

Legislation has been adopted in many states requiring transparency through disclosure for a number of insurance products. Other legislation attempts to monitor information provided by

³²⁹ <http://legal-dictionary.thefreedictionary.com/Adhesion+Contract>.

insurance producers to prospective customers by requiring the filing and sometimes approval of advertising materials and illustrations of potential investment returns. For purposes of this study, discussion on disclosures and illustrations will be limited to life insurance and annuities. The NAIC has model laws or regulations requiring some form of disclosure or filing of advertising or illustration materials for the following insurance products or circumstances:

- Annuities (disclosures and illustrations)
- Charitable gift annuities (disclosures)
- Variable annuities (annual report)
- Modified guaranteed annuities (annual report)
- Variable life insurance (disclosures, illustrations and reports)
- Life Insurance sales to military personnel (disclosures)
- Advertisements for life insurance and annuity contracts (disclosures and specified standards)
- Life insurance (disclosures, prescribed buyer's guide, illustrations, standards and annual report)
- Pre-need funeral contracts (disclosures)
- Universal life insurance (disclosures and standards)
- Small face amount life insurance (disclosures)
- Replacement of a life insurance policy or annuity (disclosures and standards)
- Accelerated death benefits (disclosures and standards)

The various model laws tend to specify the circumstances when disclosure is required. They often detail very specific elements needing disclosure and sometimes specify the format in which the disclosure is to be made. Some of the models have buyer's guides containing the collective wisdom of many in their design and development.

Disclosure is generally used to improve either consumer understanding or access to pertinent product information. Without reliable information, consumers are left to fend for themselves when dealing with a generally more sophisticated insurer or insurance producer. Since insurance products tend to be rather complex, for the average consumer the complexity serves as an additional barrier.

Before regulators and legislators consider imposing a disclosure requirement, it is important to determine the intended outcome of the disclosure. Do we simply want to educate? Are there some complexities to a certain product about which we wish to inform consumers? Are we attempting to enable comparison shopping among available products? Do we want to promote fair dealing in the marketplace?

Three invited consumer authors contribute thoughts on disclosures to this study. The first contribution is from Brenda J. Cude, Professor, University of Georgia and Daniel Schwarcz, Associate Professor, University of Minnesota Law School. Both currently serve as funded consumer representatives for the NAIC. They are frequent contributors to discussion on transparency and disclosure at NAIC meetings and for publications such as the CIPR Newsletter. Their viewpoints on effective consumer disclosures were initially presented in the January 2013 CIPR Newsletter. For the study, their discussion about designing insurance disclosures is presented for the reader.

The third consumer contributor is Brian Fechtel. Mr. Fechtel is an insurance producer and runs a website³³⁰ advocating for changes to the disclosure requirements for cash value life insurance products. Mr. Fechtel's contribution suggests an alternative way for life insurers to make disclosures to consumers. He says the interest-adjusted indices disclosed by insurers are not generally understood by consumers and do not lend themselves to actionable information. In other words, the disclosures do not help people become effective insurance shoppers. The reader should find the consumer observations to be of great interest.

Recommendations to Regulators for Designing Insurance Disclosures³³¹

By Brenda J. Cude (University of Georgia) and Daniel Schwarcz (University of Minnesota)

Insurance regulators who are considering consumer disclosure as a regulatory response can think of the process as having eight steps. Consumer advocates recommend regulators follow these steps when developing consumer disclosures:

1. Confirm disclosure is the appropriate regulatory response.
2. Identify the purpose and expected outcome(s) of the disclosure.
3. Identify the content of the disclosure.
4. Determine whether the disclosure is to be drafted by the regulator or will be drafted by insurers pursuant to specified guidelines and criteria.
5. Ensure the readability of the disclosure.
6. Design the disclosure or, for disclosures to be provided by insurers, provide guidelines and criteria by which to evaluate the design.
7. Determine when and how the disclosure should be delivered for maximum effectiveness.
8. Determine whether testing of the disclosure with consumers is useful.³³²

³³⁰ www.breadwinnersinsurance.com/

³³¹ Cude, B. and Schwarcz, Daniel. (2013, January). Consumer Viewpoints on Effective Disclosure. *CIPR Newsletter*, [Modified for inclusion in the study].

³³² See Perry and Blumenthal (2012) and Kozup, Taylor, Capella and Kees (2012) for a discussion of testing the effectiveness of disclosures.

Further explanations of the recommended steps in developing consumer disclosures follow:

Confirm disclosure is the appropriate regulatory response.

- Considerations to determine whether a disclosure is an appropriate response:
- What is the regulatory issue?
- Will the disclosure help the consumer make better decisions? Do consumers have sufficient experience with the product to use the information? If not, would educational material—such as a brochure or pamphlet (in addition to, or in lieu of, the information disclosure)—improve consumers’ use of the information to achieve the stated purpose of the disclosure?

Identify the purpose and expected outcome(s) of the disclosure.

After determining disclosure is indeed an appropriate regulatory approach, the next step in developing the disclosure should be to identify the purpose of the disclosure. Regulators should carefully consider and specifically articulate what consumer decisions the disclosure is intended to impact. A best practice would be for regulators to be as specific as possible in describing the goals of a disclosure.

Identify the content of the disclosure.

The most crucial issue in designing any summary disclosure is determining what information should be provided in the disclosure. As a rule, it is more difficult to provide effective consumer disclosure for complex products or when the information to be disclosed is more complex. Decisions about content are specific to individual disclosures; however, the following key principles should shape this determination.

First, the purpose of the disclosure, as identified in recommendation #2, should be a guiding force in deciding on the content of the disclosure. All content should be scrutinized to assess the extent to which it advances this goal.

Second, regulators must always bear in mind there is a natural limit to the amount of information capable of being effectively provided to consumers. If disclosures include more than a few pieces of information, those disclosures typically will be ineffective. It is important to remember disclosures are only effective when consumers understand what they mean.

Determine whether the disclosure is to be drafted by the regulator or will be drafted by insurers pursuant to specified guidelines and criteria.

When establishing the information to be disclosed, regulators must also determine how it is to be stated, providing the precise language. Or, they may specify the content to be communicated, leaving the precise language up to the insurers. Writing the disclosure obviously puts an additional burden on the regulator. However, in the long run it has two advantages:

- It creates consistency across companies, which facilitates comparison shopping among consumers by allowing them to easily assess the differences among competing products.
- It eliminates any unnecessary enforcement responsibility on regulators who would otherwise have to determine whether the disclosure actually communicated the required information.

Ensure the readability of the disclosure.

True readability requires disclosures using plain language designed to facilitate consumer understanding. Guidelines for writing plain-language documents are available at the [www.Plain Language.gov](http://www.PlainLanguage.gov). A typical checklist includes most of the items identified below:

- Avoid jargon, technical language, or extraneous information.
- Require an action (signature/initials/checklist).
- Do not repeat information.
- Provide examples.
- Use short sentences.
- Provide a way to get more information online, by phone and/or in person.
- Include a glossary.
- Make the information as specific as possible to the individual consumer; if it is not feasible, make it specific to the product and/or the decision being made.
- Write for the average reader, which requires knowing the intended audience for the disclosure.
- Use “you” and other pronouns the reader can identify with.
- Use active voice.
- Omit excess words. Use concrete, familiar words.
- Use “must” to express requirements; avoid the ambiguous “shall.”

The words in a document are not the only factor determining how readable the document is. The organization of a document has an equal or greater influence. In organizing a disclosure, regulators should:

- Use a title that communicates the value to the consumer of reading the disclosure and headings that help consumers find the information they need.
- Put the most important information near the beginning (i.e., the purpose, action required).
- Break information into sections.
- Consider using a question and answer format.
- Make the disclosure as short and concise as possible.

Design the disclosure or, for disclosures to be provided by insurers, provide guidelines and criteria by which to evaluate the design.

The design of a disclosure influences its usefulness to consumers. Even consumers who are capable of understanding a complex document will often not devote the time and energy to do so, unless it is in an easy to read format. Some design suggestions include:

- Use a readable format (bullet-point items, charts, lists). Lines longer than 65 characters are difficult to read.
- Do not justify the right-hand margin or use all capital letters.
- Use vertical (rather than horizontal) lists.
- Use color and highlighting to emphasize important points and to signal section changes.
- Use a larger font.
- Make the disclosure look important (put it on different color or type of paper; present it separately from other paperwork).
- Highlight any action suggested or required.
- Do not use small sheets of paper (which require small font).
- Make the disclosure as short and concise as possible.

Determine when and how the disclosure should be delivered for maximum effectiveness.

The timing of a disclosure is crucially important in determining its ultimate effectiveness. Consequently, regulators must carefully consider when consumers need the information in the disclosure in light of the disclosure's purpose. Particularly important on this front is to provide consumers with disclosures intended to promote comparison-shopping at a time before the consumer has emotionally committed to a purchase or spent a substantial amount of time and energy learning about or applying for a specific product. Thus, making a disclosure available

early is important. Regulators may also wish to address the need for delivery requirements, such as maintaining a record of delivery of the disclosure.

Determine whether testing of the disclosure with consumers is useful.

Consumer testing of proposed disclosures can assist regulators in evaluating the effectiveness of the disclosures. Consumer testing could be considered a “best practice” in crafting disclosures, but the necessity of utilizing consumer testing must be balanced against the costs, potential delay and efficacy of conducting such evaluation. Consequently, regulators should consider whether resources are available when determining whether testing should be conducted. Consumer testing can range from informal distribution of a proposed disclosure for comment and suggestion up to engaging professionals to test prototype disclosures. This range includes, but is not limited to:

- Presentation of the proposed disclosure to a consumer group, such as a consumer insurance council, for review, comment and suggestions as to effectiveness and clarity.
- Use of structured focus groups of a small number of individuals using open-ended questions to collect information across a spectrum of potential users of the disclosure.
- Cognitive interviewing of a small number of consumers to explore how consumers make sense of the information within a document. Cognitive interviewing is a one-to-one technique allowing the interviewer to explore individual responses to capture the consumer’s thinking process and understanding.
- Online testing may be conducted by asking consumers to choose between various formats, such as mapping how consumers “click through” parts of a disclosure (i.e., a “heat map” displaying graphically which areas were clicked on most).

More complex disclosures may benefit from consumer testing to ensure they are understandable and effective, but consumer testing may not be necessary for more simple disclosures. Regulators must balance the need for consumer testing against the costs and complexity of conducting such testing. If it is determined to be appropriate to do consumer testing, regulators should choose a testing procedure which will produce the highest effectiveness for the resources expended.

Summary

The development and implementation of effective disclosures is an important issue for insurance regulators and the consumers they serve. The authors hope this article provides useful guidance regarding consumer disclosures. Regulators should keep in mind the complexity of insurance information and, therefore, when developing disclosures, seek to communicate in ways increasing consumer understanding.

The Importance of Life Insurance Policy Disclosure By Brian Fechtel, CFA (Breadwinners' Insurance)

The importance of disclosure becomes apparent when one looks at the bundled products collectively known as cash value life insurance. These products, which are a combination of life insurance coverage (mortality) and a savings vehicle (investment), need improved disclosure to better educate consumers on all aspects of mortality and investment risk. The value consumers receive from these policies typically depends upon the actual financial performance of the life insurer over the many years the policy is in-force—that is, it is a multi-year, participating product (to use the word “participating” in its broadest sense, as even guaranteed policies require the continued performance of the insurer).

For nearly 40 years, the interest-adjusted indices (IAIs) have been used as disclosure tools. IAIs consider the time-value-of-money of payments made under policies and are usually reported as cost per \$1,000 of coverage. Consumers have been instructed to use the IAI as a measure of cost comparison between policies. Unfortunately, the use of IAIs presents numerous challenges. They do not provide meaningful or actionable information on the product’s components, and they are not generally understood by consumers. IAIs also do not facilitate comparisons with alternative products (such as term policies) or help evaluate the investment aspects of cash value policies. For example, the IAI is not useful in comparing cash value policies with different size premiums, as it does not take into account the impact of comparative policy bundling (i.e., whether the policy is a more or less intensive savings vehicle).

Variations in assumptions and disclosures within sales illustrations also complicate the use of IAIs. Illustrations are based upon assumptions the future will unfold largely unchanged. Clearly, such illustrations are neither a guarantee of actual future values nor even meant as a credible projection. Additionally, IAIs of different time periods (the 1980s versus the 2010s) and of different durations (15 years versus 25 years) are difficult to compare and use. Measuring the IAIs at two particular policy durations (10 and 20 years) also has created the possibility insurers could structure their policies’ values to “game” the measurements. Moreover, the IAIs are not meaningful with respect to the periodic assessments one makes of a financial product kept over many years.

For any marketplace to reap the full benefits of competition requires well-informed consumers. The necessary information on a cash value life insurance policy should include facts about:

1. Its benefits (its coverage amount, its guaranteed aspects—minimum interest rate, maximum costs, etc.—including its options to be converted into a lifetime annuity).
2. Its contractual obligations/restrictions upon the policyholder (i.e., premium payments, policyholder loan terms).

3. Its costs.

The appropriate and necessary disclosures for such a policy, while somewhat extensive, are rather straightforward. Contrary to some individuals' beliefs, the interactions within a policy occurring as a result of variations in the performance of a policy's different components (its annual costs, its annual growth in cash values, its annual differences in at-risk amounts) can be described, precisely measured, and meaningfully summarized and compared. To date, the deficiencies with the industry's current disclosure practices arise from the failure to appropriately and adequately disclose policy cost/price information—what can be more broadly understood as policy performance measurements.

A related deficiency has been the inadequate disclosure regarding the spectrum of life insurance policies. Sales, marketing, and business textbooks routinely emphasize ways of differentiating one product from another in order to try to obtain more sales and/or a better margin from selling a product seen as different from a basic product or commodity. All life insurance, though, is fundamentally composed of term insurance. Whole life is called whole life because it was originally called "level payment term for your whole life." The ways in which life insurance products have been and still are described in the marketplace not only create confusion for consumers, but also actually impair consumers' inclination and ability to directly and meaningfully compare products. Different policies, in fact, are nothing but slightly different peas from the same pod. The fact all life insurance policies have this core similarity is not to assert these products are simply commodities, but it is to bring about the comprehension that any fundamental differences in the costs of Product A versus Product B need to be matched with benefits consumers find to justify the cost differential.

The NAIC's Life Insurance Buyer's Guide has long noted there is a difference between a cash value policy's annual premium and its annual cost/price, but consumers have needed more explicit information because in the absence of good and sufficient information, inadequate information proliferates and prevails. This battle over appropriate disclosure of life insurance policy costs has actually spanned more than 100 years. In general, opponents of improved disclosure seek to protect two things:

1. The distribution margins/sales compensation provided by cash value policies.
2. The belief such distribution margins must be protected in order to have Americans obtain life insurance because life insurance must be sold.

This view assumes consumers would not voluntarily seek life insurance products. Instead, the agent's efforts to make the consumer address and act upon his needs are essential to the product's success. Further, under this view, current compensation practices are essential to obtain the agent's efforts in selling the product.

The conflict over appropriate disclosure lies in that the product's current compensation practices are irreconcilable with the principles of good disclosure. These current practices also undermine the consumer-agent relationship—one which should be based on trust—and impeding openness, thus facilitating misrepresentations. While in years past the life industry's disclosure problem could be mishandled or ignored, that's no longer possible. The solution is the same as it has always been—good information. Good policy information is now available, and will be increasingly available, in this age of the Internet.

The fundamental “ingredient” distinguishing cash value policies from their natural “homemade” alternative of buying term and investing the difference are the tax privileges of cash value policies. Tax privileges are, however, a free non-proprietary input; and in a competitive marketplace, no business is able to extract value from its consumers for such a costless input. While agents are entitled to some level of compensation on the additional savings dollars paid into cash value policies by consumers, the test of the appropriate level of such compensation is determined by marketplace transactions where consumers have appropriate information.

Many in the industry have also worried candor about the investment nature of cash value policies would jeopardize the product's tax privileges. These worries, however, are unjustified in light of the past 30-year proliferation of tax-advantaged savings vehicles and related tax policy provisions. Additionally, long-recognized public policy principles serve to support life insurance and foster individual and family responsibility.

When the NAIC last visited the issue of cost disclosure in the early 1980s, there were a handful of approaches outside the IAI practitioners used to analyze the cash value of life insurance policies. However, like the IAI, all fell short of actual disclosure. One of the two most popular alternative approaches—the Comparative Interest Rate Method, developed by Albert Linton over his career (1920s-60s)—analyzes a whole life policy by comparing it to decreasing term insurance with assumptions about the cost of such term coverage and calculating a return on the stream of premiums (net of mortality costs) and the illustrated cash values.³³³ In 1975, Joseph Belth published a disclosure approach built upon providing disclosure of a cash value policy's two fundamental components—its annual costs and its annual compounding rate on its savings component.³³⁴ Both approaches use assumptions failing to adequately explain the actual analyzed illustrations or portray actual policy history. In the case of Belth's approach, his use of a consumer-chosen discount rate is more properly classified as analysis rather than disclosure.

³³³ Linton, M. Albert. 1964. “Life Insurance as an Investment” in *Life and Health Insurance Handbook*. 2nd ed. Davis W. Gregg, ed. Homewood, IL: Richard D. Irwin Inc.

³³⁴ Belth, Joseph. 1975. “Information Disclosure to the Life Insurance Consumer.” *Drake Law Review* 24: 727–752.

In the early 1990s, the author developed what he defines as a more intuitive and obvious approach of describing a policy illustration by its underlying assumptions. This approach avoids the problems with Belth's approach by acknowledging an illustration is built upon assumptions about annual costs and an annual compounding rate, and to properly understand the illustration's annual costs, it is imperative to use its compounding rate as its discount rate to essentially reverse-engineer it.³³⁵ It was first published by *Best's Review* in February 1993, then with slight modifications in the *Journal of Insurance Regulation* (Winter 2002), and most recently in much greater detail and clarity in the *Journal of Financial Planning* (September 2012).

When consumers understand a policy illustration is built on nothing but assumptions about such annual costs/prices and compounding rates, and what those specific assumptions are, illustrations will no longer mystify or captivate. This leads directly to the consumer's interest in and search for information about how the products will actually perform. In particular, it leads to natural questions about why one product's first-year costs might be so different than another's, or why one policy's assumed costs in the policyholder's 25th year at age 72 might be illustrated to be so much lower than another policy's. Appropriate disclosure of a policy's total annual cost/price naturally includes the cost of agent compensation, which may or may not be explicitly disclosed, as that is a slightly different question. All parties recognize the most important single piece of information on any product is not the retailer's compensation, but the product's total cost. Appropriate policy disclosure also leads to questions—for example, about how the insurer determines what rate of interest to credit to its cash value policyholders, what rates it has credited in the past, and an insurer's current investments, which will determine its future crediting rates. While there is always uncertainty about future matters, such uncertainty is not a valid objection to disclosure.

Appropriate life insurance policy disclosure will lead to a cornucopia of benefits for both consumers and the life insurance industry as well. In particular, when broadly disseminated with the power and authority regulators can provide, appropriate disclosure will lead to unprecedented:

1. Sales growth.
2. Policyholder persistency.
3. Levels of coverage.
4. Positive impacts upon all other measurements of satisfaction regarding consumers' future life insurance purchases.
5. Perception of life insurance agents as trusted and truly esteemed professionals.

³³⁵ Fecht, R. Brian. 2012. "Bringing Real Clarity and Understanding of Cash-Value Life Insurance to the Marketplace" *Journal of Insurance Regulation*.

Moreover, no longer will the fear of making a mistake, which market research shows is consumers' number one reason for postponing or avoiding making decisions on major purchases, have such a deleterious impact on the life insurance marketplace. And agents will build their businesses squarely on the basis of the value of the service they provide each particular consumer.

Conclusion



Conclusion

By NAIC Staff

The life insurance industry in the U.S. is a constantly changing industry with over 1,000 nimble insurers, as of the date of this paper, competing to secure their unique spot in the marketplace. As the insurance industry changes so must insurance regulators. This study aims to provide insurance regulators and other policymakers with a broad picture of the insurance industry and how it has transformed over time. It covers many of the important evolutionary steps in the history of the life insurance industry. Since its very beginnings the life insurance industry has been resilient--from the formation of mutual insurers resembling what we describe in today's evolving international markets as microinsurance, to the present mature market. Throughout its history the focus on mortality risk and longevity risk have served as cornerstones of the industry.

The primary purpose of traditional life insurance products is to provide a safety net for families when one of the primary breadwinners passes away unexpectedly. In recent years, insurers' have shifted their focus to products addressing longevity risk, as the employer-funded defined benefit pension plan is becoming rare. As the general health of the population improves over time, people are living longer. The blessing of a longer life is accompanied by the need to generate sufficient income in retirement to be able to enjoy the extra years and pay for long-term care when health status declines. Life insurers are increasingly targeting product development to meet this need.

The changing product mix, lessons learned from the 2007-2008 financial crisis, the persistent low interest rate environment and pressures from international forces for regulatory convergence have all influenced the life insurance industry. The movement toward a principle-based approach for measuring the appropriate value for life insurance reserves has caused life insurers and insurance regulators to reevaluate their approach. In the interim, some life insurers set up captive reinsurers to transfer reserves they consider to be redundant under the current rules-based reserving standards.

The soon-to-be-implemented ORSA requirements provide insurers with a regulatory reporting tool to communicate how the insurer has incorporated enterprise risk management processes in its organization. ORSA implementation should allow insurance regulators to better understand how insurers view and manage the multitude of risks they face. This should enhance state regulators' abilities to oversee insurers.

Technology advances and changing consumer preferences are shaping product design and sales. True electronic commerce is becoming a reality with insurers providing quotes, delivering new policies and renewals and even handling some claim activities by electronic means. Mobile-based internet access is also changing the business environment. Insurers are actively exploring how to use social media, such as Facebook and Twitter, to promote and market services. While

Conclusion

this progression offers many advantages, the individualization of the social media experience also presents compliance challenges for insurers and regulators.

The study also examines how life insurers were impacted by the 2007-2008 financial crisis. During the period preceding the financial crisis, insurers growing reliance on annuities and fee income from separate account products increasingly exposed them to equity market and interest rate risk. Additionally, as stock life insurers gradually replaced mutual insurers, the focus of the industry began to shift toward shorter profitability return horizons demanded by stockholders. Insurers in aggregate responded by holding higher levels of common stock, commercial mortgages, and non-investment grade bonds. However, the conservative nature of the life insurance business model and the state-based regulatory framework, constrained many life insurers from investing in risky derivative transactions. As a result, life insurers withstood the financial crisis without too much pain and have recovered to levels exceeding where they were before the crisis.

The root cause of the financial crisis was lack of transparency of complex financial products and a false sense of security about ever increasing real estate prices. As such, the study explores efforts underway to improve financial transaction transparency, including the NAIC's decision in 2012 to add the Legal Entity Identifier (LEI) to its insurance industry regulatory reporting. The implementation of LEI will have a dramatic impact on the global transparency of financial transactions. Regulators and parties to the transactions will be able to track exposures across borders and create aggregate data sets designed to help identify risk concentration. The result will be a more complete and accurate picture of risks than ever before. The study also provides several suggestions for regulators to improve transparency through consumer disclosures.

International considerations are increasing in importance as U.S. life insurers seek to operate in other countries and life insurers from other nations wish to operate in the U.S. The regulatory frameworks for overseeing life insurance industry vary more widely from country to country than do the frameworks from state to state. The U.S. regulatory framework takes a bottom up approach to regulating insurance groups. In many other nations, regulators take a top down approach and tend to rely heavily on a group capital standard for solvency oversight. State insurance regulators recently adopted changes to *Holding Company System Regulatory Act* and the *Insurance Holding Company System Model Regulation with Reporting Forms and Instructions* . The revisions strengthen the “windows and walls” approach to group solvency regulation in the U.S. This approach to group supervision provides “windows” from the insurance entity to the holding company. These “windows” afford U.S. regulators with access to needed financial information impacting the regulated entity. The “walls” provide insurance regulators with safeguards against the regulated entity providing insurer capital to the holding company without regulatory knowledge and approval.

Conclusion

The life insurance industry is robust, well-capitalized and competitive, offering a wide array of desirable products and services to the public. Insurance regulators strive to balance solvency and market regulatory oversight functions to assure consumers have access to many high quality competing products. As the insurance industry changes, so does insurance regulation. This CIPR study provides an in depth overview of the changing life insurance industry landscape. The objective is to provide insurance regulators and other policymakers with a broad picture of the insurance industry and how the industry and the regulatory frameworks have transformed over time.

While this paper presents a broad picture of the insurance industry, including how it has transformed over time, this is only a snapshot in time. The life insurance industry will continue to change. When it does, insurance regulators will adjust to the changing environment.

References

The Growing Need for Retirement Products Provided by Life Insurers and The Growing Need for Long-Term Care Insurance

By Andrew Melnyk (ACLI)

AALTCI (American Association for Long-Term Care Insurance), The Sourcebook for Long-Term Care Insurance Information, various editions.

Alzheimer's Association, "2011 Alzheimer's Disease Facts and Figures," *Alzheimer's and Dementia*, volume 7, issue 2, 2011.

American Council of Life Insurers, *Life Insurer's Fact Book*, various issues.

Basset, William F., "Medicaid's Nursing Home Coverage and Asset Transfers," *Public Finance Review*, vol. 35, no. 3, pp. 414-439, May 2007.

Brown, Jeffrey R. and Finkelstein, "The Interaction of Public and Private Insurance: Medicaid and the Long Term Care Insurance Market," *American Economic Review*, 2008, Vol. 98, no. 3, pp. 1083-1102.

Committee of Annuity Insurers, *Survey of Owners of Non-Qualified Annuity Contracts* (the Gallup Organization; Matthew Greenwald and Associates), 2009.

Coronel, Susan, "The Private Long-Term Care Insurance Market in the United States: Evolution, Market Trends and Future Challenges," *Geneva Association Information Newsletter – Health and Aging*, No. 24, April 2011, pp. 3-8.

Cramer, Anne Theisen and Jensen, Gail A., "Why Don't People Buy Long-Term Care Insurance?" *Journal of Gerontology, Social Sciences*, vol. 61B, No. 4, 2006, pp. S185-S193.

Cutler, David M., "Are We Finally Winning the War on Cancer?" *Journal of Economic Perspectives*, vol. 22, no. 4, pp. 3-26, Fall 2008.

Doty, Pamela; Cohen, Marc A.; Miller, Jessica; and Shi, Xiaomei, "Private Long-Term Care Insurance: Value to Claimants and Implications for Long-Term Care Financing," *The Gerontologist*, vol. 50, no. 5, pp. 613-622.

Douglas, Jennifer, "LTCI: An Industry Subdued," LIMRA International, 2012.

Employment Benefits Research Institute, EBRI Data Book on Employee Benefits, 2010.

Fogel, Robert, "Changes in the Physiology of Aging During the Twentieth Century," *NBER Working Paper 11233*, March 2005.

Fuller-Thompson, E.; Yu, B.; Nuru-Jeter, A.; Guralnik, J. M.; Minkler, M., "Basic ADL Disability and Functional Limitation Rates Among Older Americans from 2000-2005: The End of the Decline?," *Journal of Gerontology: Medical Sciences*, vol. 64, no. 12, pp. 1333-1336, 2009.

References

Gendell, Murray, "Older Workers: Increasing their Labor Force Participation and Hours of Work," *Monthly Labor Review*, pp. 41-54, January 2008.

Genworth Financial, "Genworth Financial Cost of Care Survey: Nursing Homes, Assisted Living Facilities and Home Health Care Providers," *various issues*.

Genworth Financial, "Genworth Long Term Care and Alzheimer's Disease in America: A Retrospective," 2005.

Greenlee, Kathy, *Statement before the Committee on energy and Commerce, Subcommittee on Health, United States House of Representatives*, March 17, 2011.

Health Insurance Association of America (HIAA), "Executive Summary Research Findings: Long-Term Care Insurance in 2000-2001," January 2003.

Helman, Ruth; Copeland, Craig; VanDerhei, Jack, "The 2011 Retirement Confidence Survey: Confidence Drops to Record Lows, Reflecting 'the New Normal'," Employee Benefits Research Institute, EBRI Issue Brief no. 355, March 2011.

International Monetary Fund, "The Financial Impact of Longevity Risk," April 2012.

Johnson, Richard W.; Lo Sasso, Anthony T., "The Impact of Elder Care on Women's Labor Supply," *Inquiry*, Fall 2006, 43, 3., pp. 195-210.

Johnson, Richard W.; Wiener, Joshua M., "A Profile of Frail Older Americans and Their Caregivers," The Retirement Project, Occasional Paper Number 8, February 2006.

Konetzka, R. Tamara; Luo, Ye, "Explaining Lapse in Long-Term Care Insurance Markets," *Health Economics*, 2010.

LIMRA International, "Individual Life Combination Products: Life with Long-Term Care and Life with Chronic Riders," 2011 Annual Review, 2011.

LIMRA International, "The 2010 U.S. Life Ownership Study," 2011.

Mellor, Jennifer M., "Long-Term Care and Nursing Home Coverage: Are Adult Children Substitutes for Insurance Policies?," *Journal of Health Economics*, vol. 20, 2001, pp. 527-547.

MetLife, "Market Survey of Long-Term Care Costs: The MetLife Market Survey of Nursing Home, Assisted Living, Adult Day Services, and Home Care Costs," *various issues*.

Mitchell, Olivia S.; Poterba, James M.; Warshawsky, Mark J.; Brown, Jeffrey R., "New Evidence on the Money's Worth of Individual Annuities," *The American Economic Review*, vol. 89, no. 5, pp. 1299- 1318, December 1999.

Moore, James F.; Mitchell, Olivia S., "Projected Retirement Wealth and Savings Adequacy in the Health and Retirement Study," *NBER Working Paper*, no. 6240, October 1997.

References

Munnell, Alicia H., "What is the Average Retirement Age?," Center for Retirement Research at Boston College, *Issue in Brief*, number 11-11, August 2011.

Munnell, Alicia H.; Wu, April Yanyuan, "Will Delayed Retirement by the Baby Boomers Lead to Higher Unemployment Among Younger Workers?" Center for Retirement Research at Boston College, Working Paper 2012-22, October 2012.

Olshansky, S. Jay; Goldman, Dana P.; Zheng, Yuhui; Rowe, John W., "Aging in America in the Twenty-first Century: Demographic forecasts from the MacArthur Foundation Research Network on an Aging Society," *The Milbank Quarterly*, vol. 87, no. 4, 2009, pp. 842-862.

Pauly, Mark V, "The Rational Nonpurchase of Long-term Care Insurance," *Journal of Political Economy*, vol. 98, no. 1, 1990.

Poterba, James M.; Venti, Steven F.; Wise, David A., "Were they Prepared for Retirement? Financial Status at Advanced Ages in the HRS and AHEAD Cohorts," *NBER Working Paper #17824*, February 2012.

Retzloff, Cheryl D., "Household Trends in U.S. Life Insurance Ownership," LIMRA International, 2010.

Robert Wood Johnson Foundation, "Issue Brief – Long-Term Care Partnership Expansion: A New Opportunity for States," May 2007.

Stone, Robyn I., "Long-Term Care for the Elderly with Disabilities: Current Policy, Emerging Trends, and Implications for the Twenty-First Century," Milbank Memorial Fund, 2000.

Taylor, Donald H.; Hasselbad, Vic; Henley, S. Jane, Thun, Michael J.; Sloan, Frank A, "Benefits of Smoking Cessation for Longevity," *American Journal of Public Health*, 92(6), pp. 990-996, June 2002.

U.S. Census Bureau, Current Population Reports, *various issues*.

U.S. Center for Disease Control, *Health, United States* report, various issues.

U.S. Center for Disease Control and Prevention, National Nursing Home Survey (<http://www.cdc.gov/nchs/nnhs.htm>).

U.S. Census Bureau, "Income, Poverty, and Health Coverage in the United States: 2009," September 2010.

U.S. Census Bureau, "American Community Survey," 2009.

U.S. Department of Commerce, Statistical Abstract of the United States, *various editions*.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, "National Health Statistics Reports: Home Health Care and Discharged Hospice Care Patients: United States, 2000 and 2007," Number 38, April 27, 2011.

References

U.S. Department of Health and Human Services, Center for Disease Control, *National Health Expenditure Projections, 2010-2020*.

U.S. Department of Health and Human Services, National Center for Health Statistics, *National Vital Statistics Reports*, various issues.

U.S. Department of Health and Human Services, National Clearinghouse for Long-Term Care Information (www.longtermcare.gov).

U.S. Federal Reserve, Board of Governors, "Changes in U.S. Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances," June 2012.

U.S. Government Accountability Office, "Medicaid: Transfers of Assets by Elderly Individuals to Obtain Long-Term Care Coverage," GAO-05-968, September 2005.

U.S. Social Security Administration, *Annual Statistical Supplement to the Social Security Bulletin, 2011*, February 2012.

U.S. Social Security Administration, *The 2012 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, April 25, 2012.

VanDerhei, Jack, "A Post-Crisis Assessment of Retirement Income Adequacy for Baby Boomers and Gen Xers," Employee Benefits Research Institute, EBRI Issue Brief No. 354, February 2011.

Waidmann, Timothy; Liu, Korbin, "Asset Transfer and Nursing Home Use: Empirical Evidence and Policy Significance," Kaiser Commission on Medicaid and the Uninsured, Issue Paper, April 2006.

Wiener, Joshua M.; Sullivan, Catherine M.; Skaggs, Jason, "Spending Down to Medicaid: New Data on the Role of Medicaid in Paying for Nursing Home Care," *AARP*, #9607, June 1996.

Barriers to Insurers' Use of the Internet for Product Distribution By Brenda J. Cude (University of Georgia)

Booz, Allen. (2001, August 22). *Booz Allen survey reveals gap between Internet insurance offerings and customer needs* [Press Release].

Brown, J.R., & Goolsbee, A. (2002). "Does the Internet make markets more competitive?" *Journal of Political Economy*, 110(3), 481-507.

Clemons, E.K., & Hitt, L.M. (2000). *The Internet and the future of financial services: Transparency, differential pricing and disintermediation* [Working Paper]. Philadelphia, PA: Wharton School of Business, University of Pennsylvania.

Fairley, J. (2012, May 24). *Consumers are eager for life insurance coverage*. Retrieved from www.financial-planning.com.

References

Goch, L. (2002, May 10). "What works online: Some insurers have found the key to unlocking online sales." *Best's Review*.

Hunter, J.R., & Hunt, J.H. (2001). *Term life insurance on the Internet: An evaluation of on-line quotes*. Washington, D.C.: Consumer Federation of America.

Mayer, R N., Huh, J., Cude, B.J. (2005). "Cues of credibility and price performance of life insurance web sites." *Journal of Consumer Affairs*, 39(1), 71-94.

Mitchel, J.O. (2011). *2011 Insurance Barometer Study*.

Life Insurer Balance Sheets

By Greg Niehaus (University of South Carolina)

American Council of Life Insurers, Fact Book, various years.

Baranoff, Etti and Thomas Sager, 2002, The Relationship between Asset Risk, Product Risk, and Capital in the Life Insurance Industry, *Journal of Banking and Finance* 26: 1181-1197.

Baranoff, Etti and Thomas Sager, 2003, The Relations among Organizational and Distribution Forms and Capital and Asset Risk Structures in the Life Insurance Industry, *Journal of Risk and Insurance* 70: 375-400.

Baranoff, Etti and Thomas Sager, 2011, The Interplay between Insurers' Financial and Asset Risks during the Crisis of 2008-2009, *The Geneva Papers* 36: 348-379.

Cheng, Jiang, Elyas Elyasiani and Jingyi Jia, 2011, Institutional Ownership Stability and Risk Taking: Evidence from the Life-Health Insurance Industry, *Journal of Risk and Insurance* 78, 609-641.

Epermanis, Karen and Scott Harrington, 2006, Market Discipline in Property/Casualty Insurance: Evidence from Premium Growth Surrounding Changes in Financial Strength Ratings, *Journal of Money, Credit, and Banking* 38, 1515-1544.

Erhemjamts, Otgontsetseg and Tyler Leverty, 2010, The Demise of the Mutual Organizational Form: An Investigation of the Life Insurance Industry, *Journal of Money, Credit, and Banking* 42: 1011-1036.

Erhemjamts, Otgontsetseg and Richard Phillips, 2012, Form over Matter: Differences in the Incentives to Convert Using Full Versus Partial Demutualization in the U.S. Life Insurance Industry, *Journal of Risk and Insurance* 79, 305-334.

Farr, Ian, Hubert Mueller, Mark Scanlon, and Simon Stronkhorst, 2008, Economic Capital for Life Insurance Companies, Society of Actuaries, Towers Perrin.

References

Froot, Kenneth, 2008, Risk Management, Capital Budgeting, and Capital Structure Policy for Insurers and Reinsurers, *Journal of Risk and Insurance* 73, 273-299.

Hadlock, C. J. and J. R. Pierce, 2010. New Evidence on Measuring Financial Constraints: Moving Beyond the KZ Index. *Review of Financial Studies* 23, 1909-1940.

Harrington, Scott and Greg Niehaus, 2002, Capital Structure Decisions in the Insurance Industry: Stocks versus Mutuals, *Journal of Financial Services Research* 21: 145-163.

Harrington, Scott and Greg Niehaus, 2003, Capital, Corporate Income Taxes and Catastrophe Insurance, *Journal of Financial Intermediation* 12, 2003, 365-389, with Scott Harrington.

Harrington, Scott, 2009, The Financial Crisis, Systemic Risk, and the Future of Insurance Regulation, *Journal of Risk and Insurance* 76, 785-819.

Jeng, Vivian, Gene Lai, and Michael McNamara, 2007, Efficiency and Demutualization: Evidence from the U.S. Life Insurance Industry in the 1980s and 1990s, *Journal of Risk and Insurance* 74, 683-711.

Koijen, Ralph S. J. and Motohiro Yogo, 2012, The Cost of Financial Frictions for Life Insurers, working paper, University of Chicago.

Lai, Gene, Michael McNamara and Tong Yu, 2008, The Wealth Effect of Demutualization: Evidence from the U.S. Property-Liability and Life Insurance Industries, *Journal of Risk and Insurance* 75, 125-144.

Viswanathan, Krupa and J. David Cummins, 2003, Ownership Structure Changes in the Insurance Industry: An Analysis of Demutualization, *Journal of Risk and Insurance* 70, 401-437.

Appendices

Life Insurer Balance Sheets

By Greg Niehaus (University of South Carolina)

Appendix A

Data for Figure 11 – Capital Ratios for Insurers with Different Business Focus and Size

Table reports descriptive statistics for capital ratios (defined as capital and surplus plus the asset valuation reserve plus the interest maintenance reserve divided by general account total admitted assets) over time. The columns are the number of insurers in the analysis (N), the average value of the capital ratio (Mean), the cross-sectional standard deviation of the capital ratio (Stdev), the 10th, 25th, 50th, 75th, and 90th-percentile value of the capital ratio (p10, p25, p50, p75, p90), and the aggregate capital ratio (Aggregate), which is defined as the sum of the insurers' capital and surplus divided by the sum of general account total admitted assets.

Panel A1: Large - Life: Insurers with 75% of their net premiums from Life Insurance and total general account assets > \$5 billion in 2011 dollars

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	16	15.5	11.9	5.3	10.4	36.6	14.1
2002	17	14.6	11.0	4.5	11.0	34.3	12.8
2003	14	13.7	11.9	3.7	10.3	34.0	11.9
2004	14	15.7	11.9	5.7	12.0	35.7	12.8
2005	16	18.3	18.8	5.6	11.3	45.9	15.4
2006	16	18.7	16.8	7.1	12.4	47.4	15.5
2007	19	17.7	14.9	6.6	12.8	49.1	14.6
2008	15	16.5	14.5	6.4	11.7	47.2	12.7
2009	13	19.8	19.0	4.7	13.1	49.9	14.0
2010	15	20.0	19.1	6.3	13.7	49.3	15.8
2011	15	18.2	18.3	5.8	11.3	50.3	15.0

Panel A2: Large- Annuity: Insurers with 75% of their net premiums from Annuities and total general account assets > \$5 billion in 2011 dollars

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	40	8.8	3.9	5.0	8.0	15.0	9.0
2002	39	7.9	2.7	5.1	7.1	10.7	8.7
2003	48	9.3	3.5	5.8	8.5	13.6	9.6
2004	44	9.8	2.9	6.9	9.0	12.8	9.9
2005	46	9.8	3.1	6.4	9.3	13.8	9.6
2006	44	10.0	3.7	6.1	9.5	13.1	10.0
2007	43	10.4	4.9	6.3	9.7	15.1	10.6
2008	46	9.3	3.8	5.9	8.5	13.3	9.1
2009	42	10.8	4.3	6.9	10.2	14.0	10.4
2010	39	10.9	4.0	6.4	9.9	15.3	11.0
2011	40	11.1	4.3	6.6	10.5	16.1	11.2

Panel A3: Large – A&H: Insurers with 75% of their net premiums from A&H Insurance and total general account assets > \$5 billion in 2011 dollars

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	8	27.3	27.7	7.6	16.7	92.9	19.0
2002	7	28.4	31.1	6.3	18.9	95.0	15.7
2003	8	31.8	27.1	5.9	23.1	88.4	19.0
2004	7	34.8	25.2	5.9	22.3	80.4	22.0
2005	6	24.0	11.3	8.7	23.1	43.2	16.5
2006	9	19.9	11.6	9.2	20.0	46.0	15.2
2007	9	19.0	13.8	8.2	11.5	50.0	13.6
2008	9	17.3	13.2	6.6	9.3	45.1	11.1
2009	9	23.6	15.2	8.1	25.0	47.6	17.0
2010	11	25.8	17.9	8.0	25.3	49.8	17.4
2011	11	24.7	16.8	7.2	21.7	45.2	16.1

Appendix B – Data for Figure 12 – Risk Based Capital Ratios for Insurers with different Business Focus & Size

Table reports descriptive statistics for risk based capital ratios over time for insurers with risk based capital ratio less than 100. The columns are the number of insurers in the analysis (N), the average value of the capital ratio (Mean), the cross-sectional standard deviation of the capital ratio (Stdev), the 10th, 50th, and 90th-percentile value of the capital ratio (p10, p50, p90), and the aggregate capital ratio (Aggregate), which is defined as the sum of the insurers' total adjusted capital divided by risk based capital.

Panel A1: Large - Life: Insurers with 75% of their net premiums from Life Insurance and total general account assets > \$5 billion in 2011 dollars

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	15	10.7	15.8	3.6	6.7	14.7	7.6
2002	16	6.7	3.1	2.6	5.9	10.8	7.4
2003	14	6.9	3.4	3.5	6.0	12.0	7.7
2004	14	8.2	4.2	2.8	6.9	14.6	8.3
2005	16	8.4	2.8	5.2	8.5	11.9	8.3
2006	16	9.1	2.7	5.7	8.9	14.6	8.3
2007	18	8.1	2.7	4.4	8.2	12.5	7.4
2008	15	7.5	3.2	3.9	6.8	12.0	6.9
2009	13	8.7	3.4	4.5	9.0	14.5	8.4
2010	15	9.4	5.1	4.5	8.4	15.7	9.1
2011	15	9.4	4.6	5.0	8.5	15.6	9.2

Panel A2: Large- Annuity: Insurers with 75% of their net premiums from Annuities and total general account assets > \$5 billion in 2011 dollars

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	40	6.1	1.4	4.2	6.1	8.0	6.6
2002	39	5.8	1.2	4.3	5.9	7.3	6.2
2003	48	6.9	1.9	5.5	6.2	8.6	6.8
2004	44	7.7	1.7	6.0	7.4	9.6	7.6
2005	46	8.2	2.7	6.2	7.8	10.6	8.0
2006	44	8.8	3.2	6.0	7.8	13.4	8.2
2007	43	9.1	3.7	6.2	8.5	13.7	8.3
2008	46	8.4	3.6	6.0	7.8	10.1	8.0
2009	42	8.9	2.9	6.4	8.5	10.6	8.8
2010	39	9.0	1.9	6.8	8.8	11.7	9.4
2011	40	9.6	2.3	7.3	9.2	12.0	9.7

Panel A3: Large – A&H: Insurers with 75% of their net premiums from A&H Insurance and total general account assets > \$5 billion in 2011 dollars

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	8	6.9	3.1	4.6	5.4	13.3	6.3
2002	7	6.4	2.9	4.5	5.1	12.4	5.6
2003	8	7.3	2.5	5.6	6.7	13.3	6.6
2004	7	7.6	1.2	5.9	8.2	9.0	7.2
2005	6	8.9	2.4	5.7	9.0	11.7	8.9
2006	9	7.5	2.6	5.2	6.5	12.0	7.5
2007	9	8.1	3.2	4.1	7.1	13.4	7.5
2008	9	7.1	2.3	3.7	7.1	10.4	6.7
2009	9	7.9	2.7	4.1	7.7	13.2	7.2
2010	11	7.2	2.4	4.7	7.6	9.7	7.3
2011	11	7.2	2.0	5.3	7.3	9.9	7.2

Panel B1: Medium Insurers with 75% of their net premiums from Life Insurance (Medium is defined as total general account assets between \$1 b & \$5 billion in 2011 dollars)

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	38	9.2	8.6	4.2	7.4	11.7	6.7
2002	39	8.5	8.8	4.1	7.0	11.3	6.5
2003	33	10.1	10.5	5.0	7.5	14.5	6.7
2004	36	10.1	9.0	4.6	8.4	15.0	7.1
2005	39	10.8	9.9	5.4	8.6	17.1	7.5
2006	37	11.3	11.7	5.4	8.6	16.7	7.7
2007	40	11.7	12.5	5.5	9.0	15.8	7.5
2008	35	9.9	9.9	4.3	7.6	14.2	6.6
2009	34	10.2	4.1	6.2	9.0	16.8	8.8
2010	43	10.9	4.8	5.3	10.0	17.5	9.0
2011	41	10.2	5.3	5.5	8.5	18.5	8.1

Panel B2: Medium Insurers with 75% of their net premiums from Annuities (Medium is defined as total general account assets between \$1 b & \$5 billion in 2011 dollars)

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	29	7.5	3.6	3.8	6.9	12.8	7.1
2002	33	6.7	2.4	4.1	6.4	10.2	5.9
2003	26	7.3	3.0	4.2	6.7	12.9	5.6
2004	26	8.4	3.1	5.3	7.6	12.5	6.8
2005	19	9.6	4.5	5.3	7.8	16.1	7.7
2006	21	13.4	8.7	6.7	8.8	27.2	10.4
2007	22	13.6	6.7	7.4	11.3	21.4	9.7
2008	26	10.6	6.6	5.0	9.0	18.6	7.4
2009	27	9.7	4.6	4.1	9.1	16.9	7.4
2010	24	11.2	4.7	5.5	10.3	17.6	8.8
2011	24	12.6	7.3	5.4	11.7	18.5	9.5

Appendices

Panel B3: Medium Insurers with 75% of their net premiums from A&H Insurance (Medium is defined as total general account assets between \$1 b & \$5 billion in 2011 dollars)

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	27	7.5	4.2	3.1	6.5	15.0	6.3
2002	25	6.9	4.2	3.2	5.8	16.1	6.1
2003	23	10.8	13.4	3.9	6.5	17.3	7.3
2004	29	9.3	7.6	3.4	7.5	19.2	7.9
2005	22	9.5	8.5	3.6	7.8	16.6	7.4
2006	22	10.0	10.2	3.9	8.4	15.9	6.4
2007	22	9.5	9.4	4.5	7.9	10.5	6.5
2008	18	10.1	14.8	3.6	5.9	26.1	5.6
2009	18	9.7	9.0	3.9	6.7	25.7	6.4
2010	17	11.7	13.7	3.7	8.2	25.6	8.4
2011	18	12.5	15.8	4.3	8.0	23.3	8.4

Panel C1: Small Insurers with 75% of their net premiums from Life Insurance (Small is defined as total general account assets < \$1 billion in 2011 dollars)

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	261	18.7	18.2	4.4	11.8	42.5	9.2
2002	233	18.7	19.0	4.9	11.8	47.6	8.1
2003	230	19.1	19.4	4.9	11.9	44.2	8.8
2004	220	18.7	18.3	4.8	11.7	45.9	9.7
2005	204	20.3	20.2	5.3	12.3	48.3	10.5
2006	200	18.7	18.2	5.3	11.6	42.7	11.5
2007	192	18.7	19.5	4.9	11.3	44.2	10.2
2008	187	18.7	19.3	4.6	10.7	49.4	9.3
2009	177	19.8	19.8	4.1	12.7	48.4	10.6
2010	163	19.5	19.7	5.1	11.2	48.7	11.0
2011	161	20.9	22.9	5.1	11.3	55.9	10.3

Panel C2: Small Insurers with 75% of their net premiums from Annuities (Small is defined as total general account assets < \$1 billion in 2011 dollars)

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	46	17.1	16.3	4.8	9.8	51.7	10.0
2002	42	14.2	18.4	3.3	7.0	29.4	8.1
2003	47	16.3	20.3	3.9	7.2	56.7	7.9
2004	38	18.8	22.1	3.5	7.7	55.6	8.2
2005	31	15.7	18.9	3.7	8.9	31.6	8.3
2006	28	19.1	20.9	3.8	8.7	58.4	8.9
2007	33	27.2	26.5	3.9	16.3	71.7	9.5
2008	37	19.1	22.9	3.0	7.3	51.3	9.9
2009	40	19.0	23.1	3.5	9.9	59.4	11.6
2010	38	22.9	24.0	4.5	12.3	63.4	13.0
2011	41	19.5	19.5	5.3	11.7	47.1	10.1

Appendices

Panel C3: Small Insurers with 75% of their net premiums from A&H Insurance (Small is defined as total general account assets < \$1 billion in 2011 dollars)

<u>Year</u>	<u>N</u>	<u>Mean</u>	<u>Stdev</u>	<u>p10</u>	<u>p50</u>	<u>p90</u>	<u>Aggregate</u>
2001	222	11.3	14.6	2.3	5.8	28.7	6.3
2002	206	11.0	14.2	2.5	6.1	24.1	5.6
2003	213	12.9	17.3	2.6	6.9	35.8	7.0
2004	203	12.0	15.6	2.8	7.2	23.9	6.8
2005	182	11.3	12.2	3.5	7.8	22.9	7.0
2006	178	12.6	16.1	3.0	7.7	25.6	6.9
2007	173	12.0	12.8	3.8	8.0	24.4	6.9
2008	176	11.4	12.4	3.2	7.3	26.6	6.4
2009	174	12.2	14.9	3.5	7.6	27.6	6.5
2010	159	13.0	14.6	3.4	8.0	31.4	7.8
2011	145	11.4	11.2	3.7	7.7	22.7	8.0



NAIC Central Office
Center for Insurance Policy and Research
1100 Walnut Street, Suite 1500
Kansas City, MO 64106-2197
Phone: 816-842-3600
Fax: 816-783-8175

<http://cipr.naic.org>

© 2013 National Association of Insurance Commissioners, all rights reserved.

The National Association of Insurance Commissioners (NAIC) is the U.S. standard-setting and regulatory support organization created and governed by the chief insurance regulators from the 50 states, the District of Columbia and five U.S. territories. Through the NAIC, state insurance regulators establish standards and best practices, conduct peer review, and coordinate their regulatory oversight. NAIC staff supports these efforts and represents the collective views of state regulators domestically and internationally. NAIC members, together with the central resources of the NAIC, form the national system of state-based insurance regulation in the U.S. For more information, visit www.naic.org.

The views expressed in this publication do not necessarily represent the views of NAIC, its officers or members. All information contained in this document is obtained from sources believed by the NAIC to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, such information is provided “as is” without warranty of any kind. **NO WARRANTY IS MADE, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY OPINION OR INFORMATION GIVEN OR MADE IN THIS PUBLICATION.**