Views from Inside and Outside the Industry

Outlook of Market Trends and Premium Rate Stability

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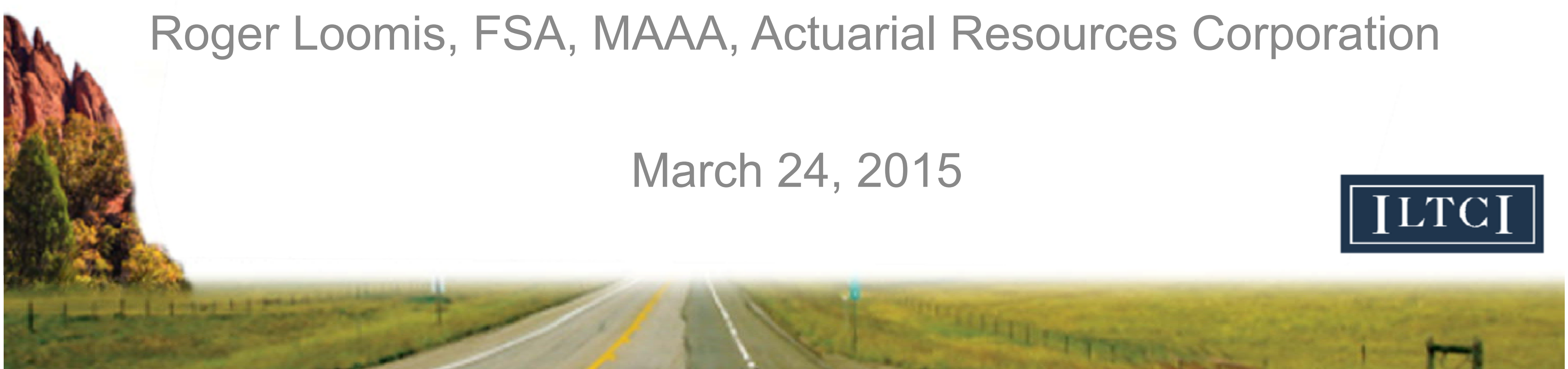
March 24, 2015

ILTCI



15th Annual Intercompany Long Term Care Insurance Conference

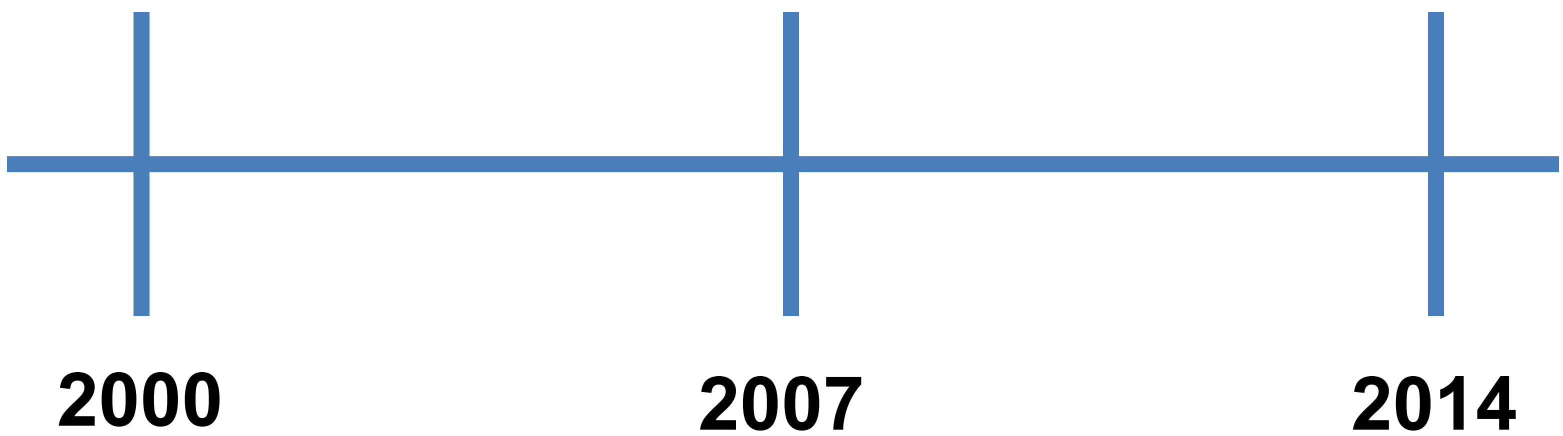
Views from Inside and Outside the Industry

Analysis of the Market for Long Term Care Insurance

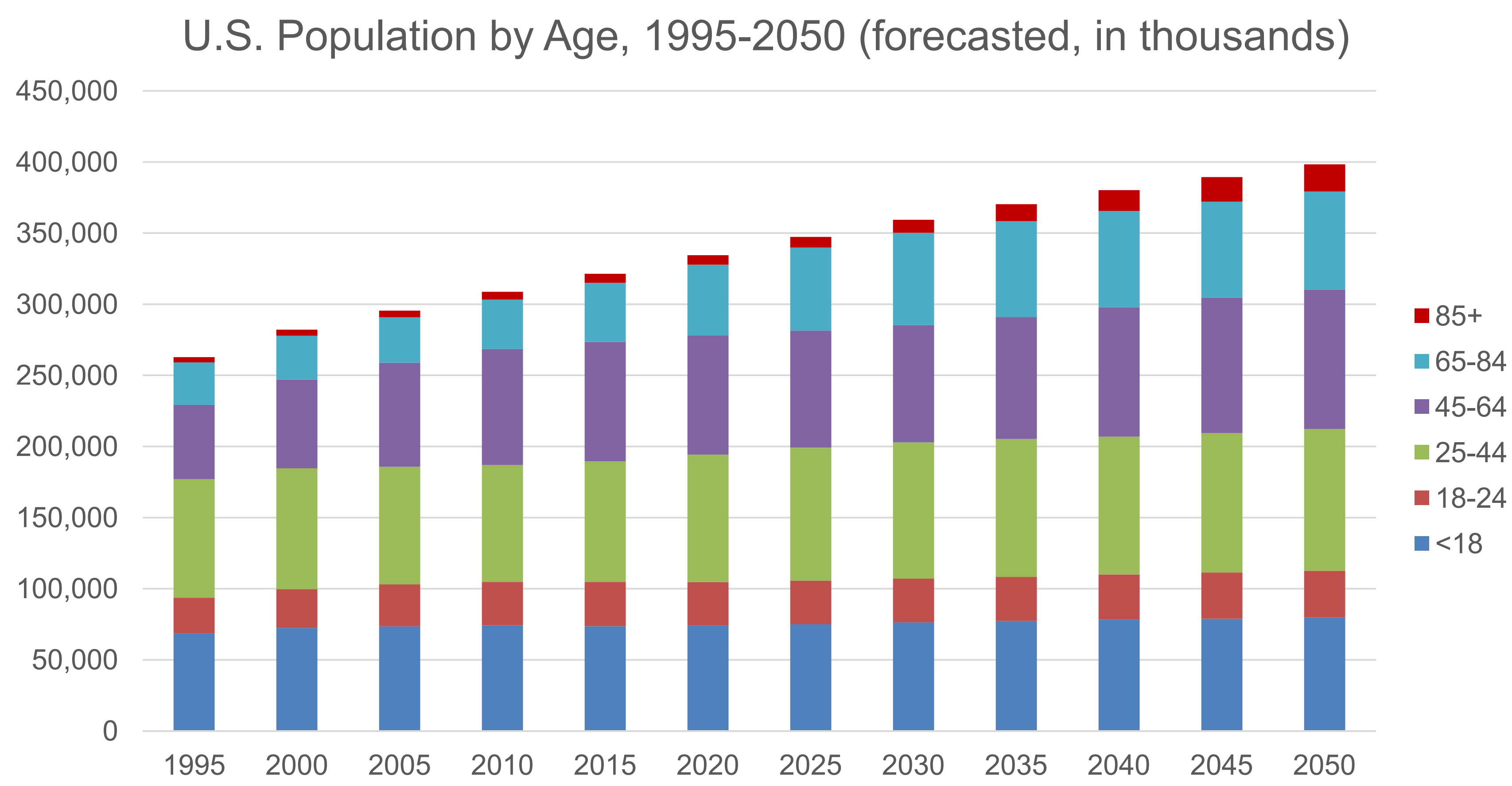
Patricia Born, Ph.D.
Florida State University

Agenda: Objectives

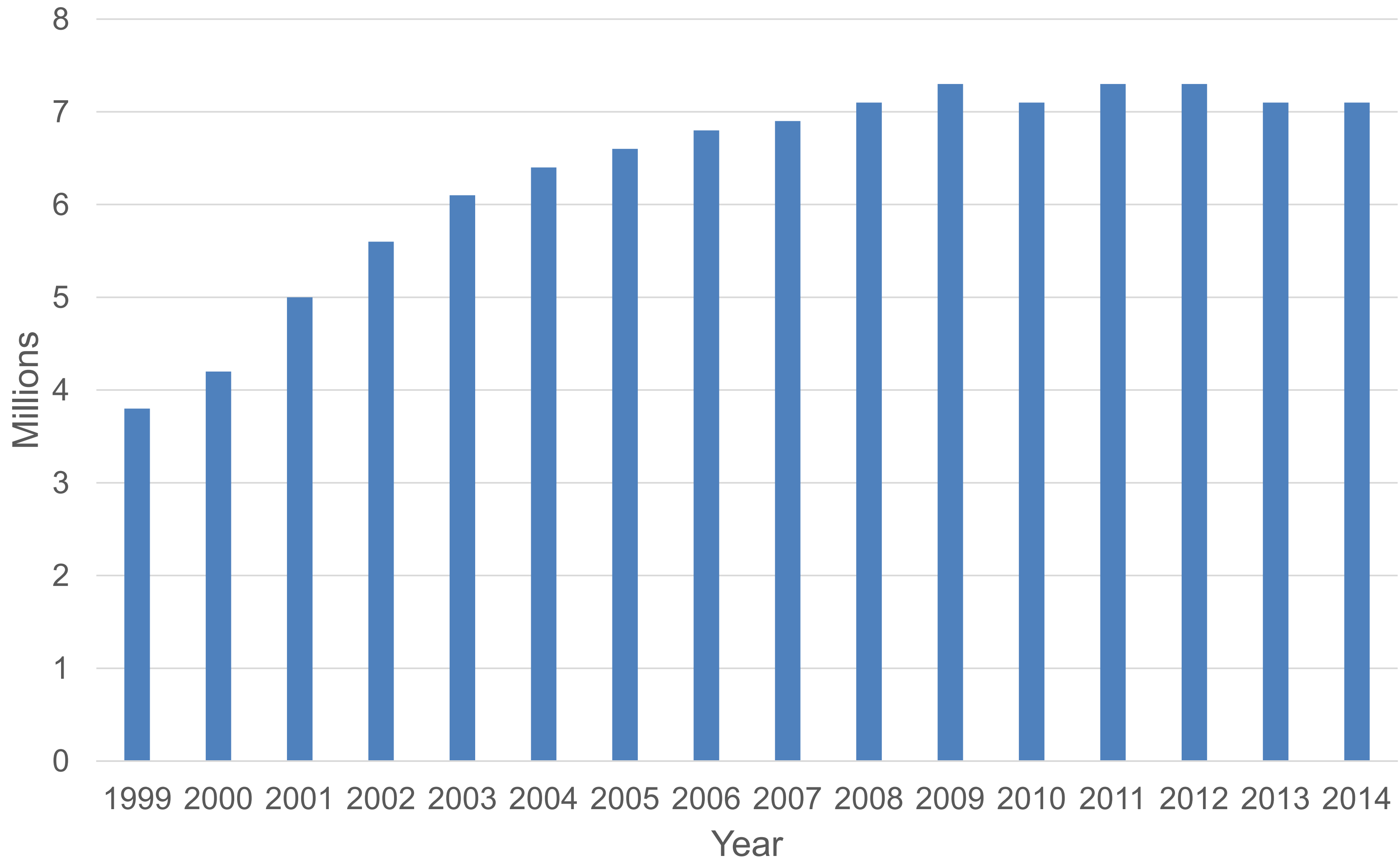
- Overview of economic conditions
  - Changing demographics
  - Investment environment
  - Other economic indicators
- The link between economic conditions and the LTC insurance market
- A “Generational” approach:
  - What did the market look like leading up to these years?
  - What did we forecast? What actually happened?



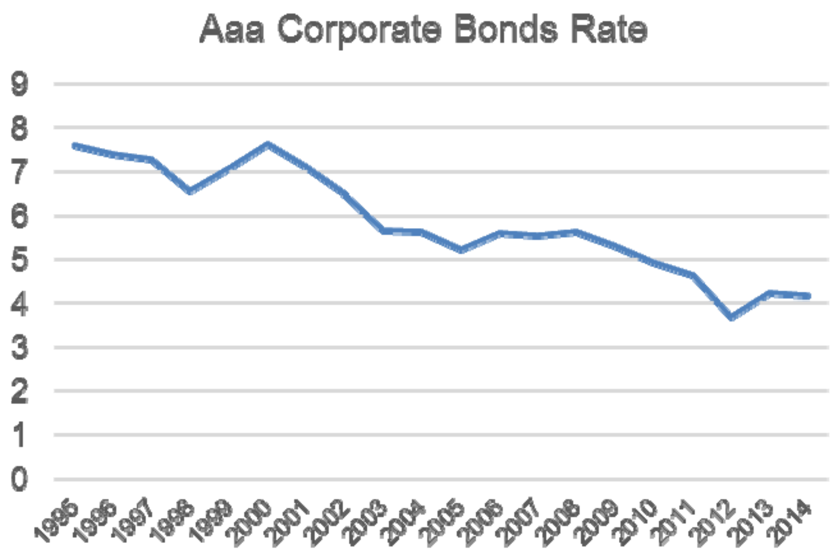
The Role of Changing Demographics

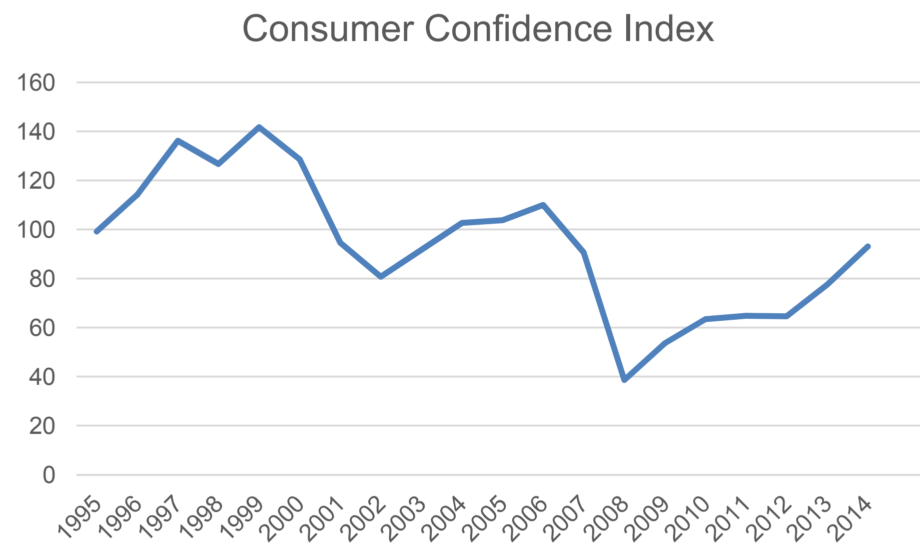


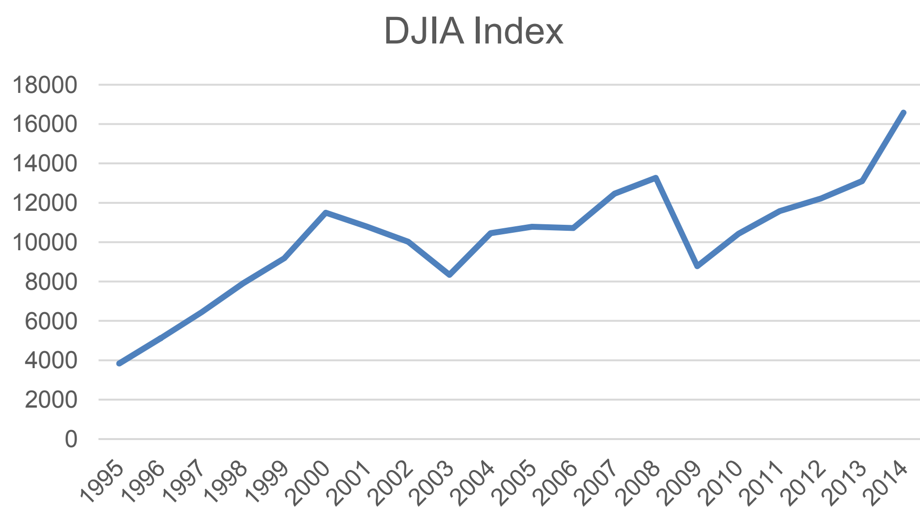
Covered Lives



Some Preliminaries – Economic Indicators





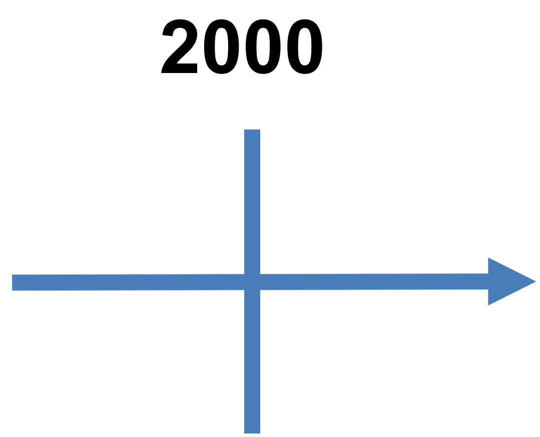


These indicators are important because they indicate conditions that drive:

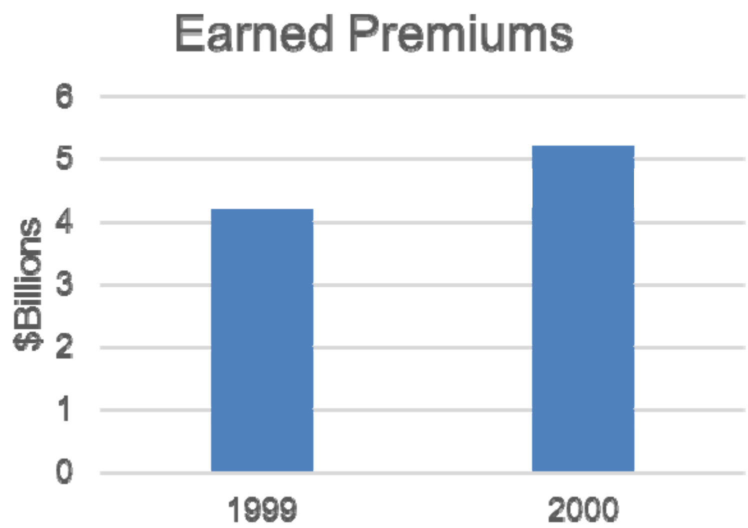
- Insurer decisions to offer coverage
- Types of products offered (e.g., features)
- Premium rates
- Consumer decisions to purchase coverage

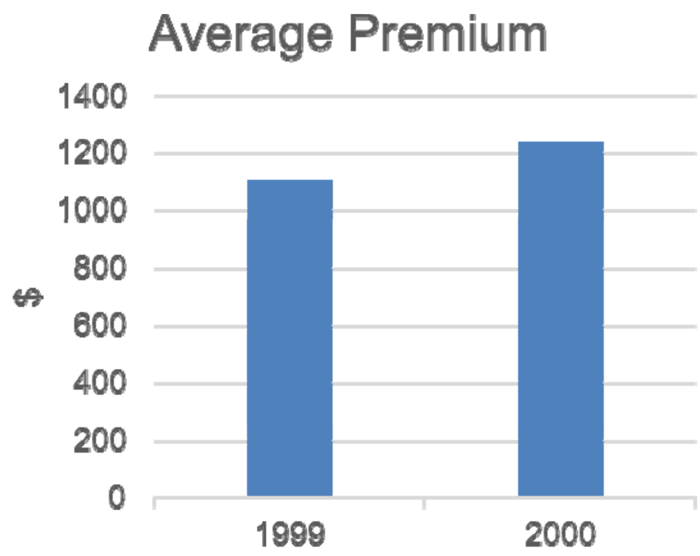
The Economy heading into 2000

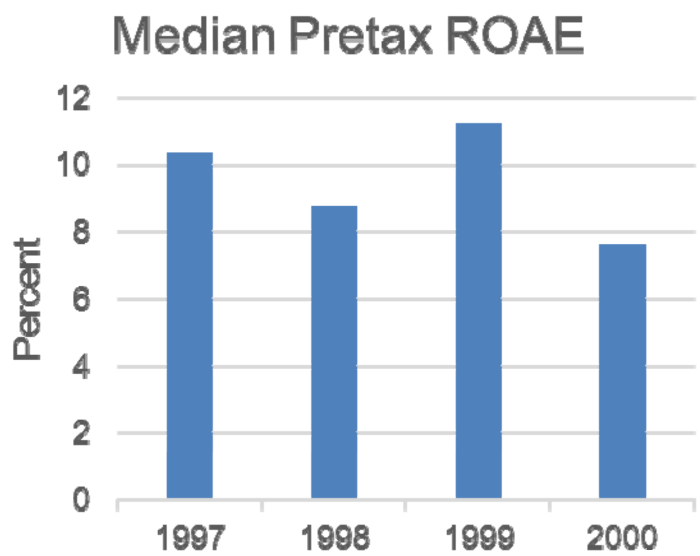
- The 1990s were characterized by:
  - Annual GDP growth from 3.5% to 4.25%
  - Low inflation
  - Low unemployment in latter half of decade
  - High consumer confidence
  - Dot-com bubble
  - Gramm-Leach-Bliley/Financial Modernization
  - Increasing interest rates
  - Low prices for LTC insurance coverage



LTC Insurance Market Measures





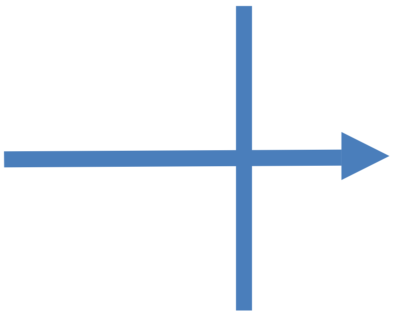


The Economy @ 2000: Outlook

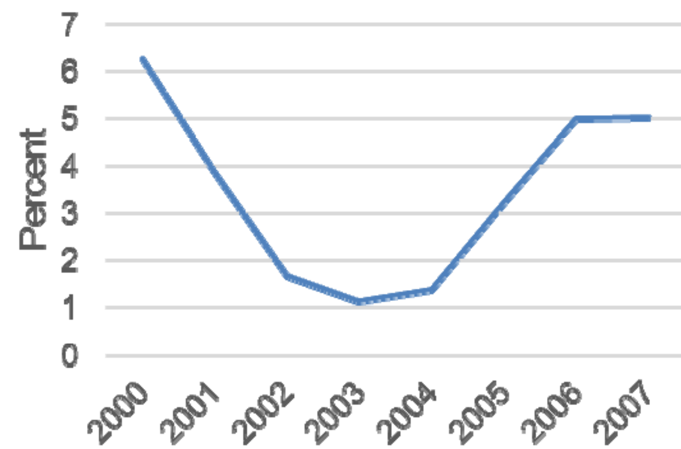
- Outlook for the economy:
  – More open and competitive markets, deregulation, technological advances shown to increase US productivity
- Outlook for the LTC insurance market
  – Higher standard of living for Americans
  – US firms expanding globally
  – CBO projects private insurance could grow to cover 18% of long term care spending by 2020.
  – Market participation high, competitive
- But the warning signs were there…
  – Growing uncertainty after 1997 Asian crisis, oil prices decline
  – Fed raised the interest rate six times between 1999-2000
  – Consumer confidence declines

What Happened?

2000

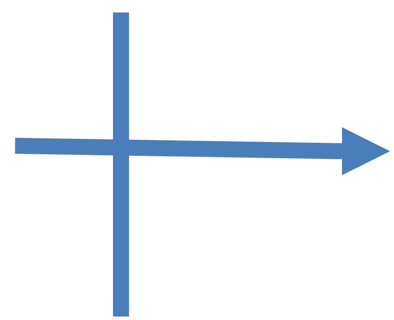


Federal Funds Rate



- Stock markets crash
- "Recession" of 2000
- Federal Reserve cuts interest rates
- Recovery after 2000 becomes apparent
  - "Jobless recovery" through 2003 then job growth
    - unemployment falls from 6.5% to 4.5%
  - Tax cuts in 2003 spur spending
  - War in Iraq – defense spending contributes to growth in GDP

2007



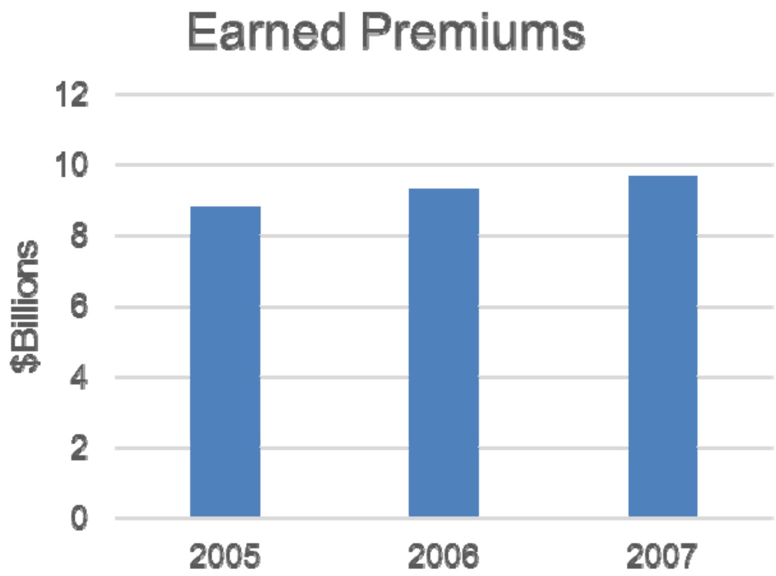
The Economy heading into 2007

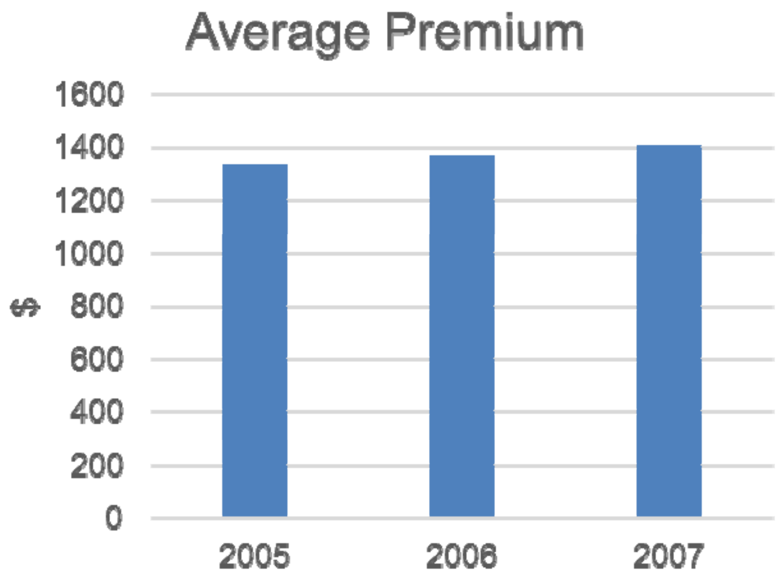
- The Federal Reserve starts increasing interest rates modestly beginning in 2004
- Hurricanes affect economic growth in 2005
- GDP growth in first quarter 2006 surprisingly high

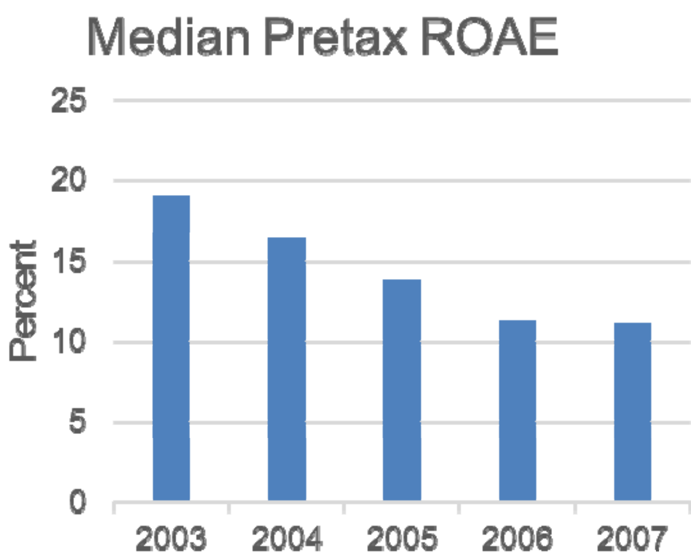
  "Clearly the economy still has plenty of momentum with a little hint of inflation risk in the background," - Ethan Harris, chief US economist at Lehman Brothers.

- Signs that the economy is slowing down again
  – 40% decline in the U.S. Home Construction Index during 2006
  – End of housing boom: prices peaked in early 2006
  – Job growth declining; unemployment peaks in 2005
  – Easy credit → Rising consumer debt = less money for key household expenditures
  – Retail sales weakening: big drop in auto sales but personal consumption expenditures robust through 2005

LTC Insurance Market Measures







The Economy @ 2007: Outlook

- Outlook for the economy
  - Slowing GDP growth
  - Increasing growth in Medicaid grants
- Outlook for the LTC insurance market
  - Lapse rates falling
  - Market participation declining
  - Prices increasing
  - Earned premium is increasing:
    - New types of policies gaining momentum
    - but new business sales down

What Happened?

2007

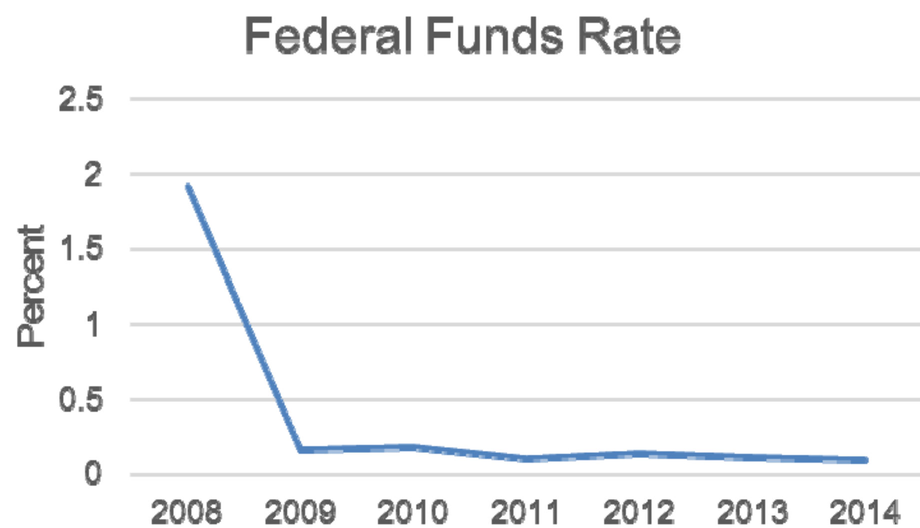
- U.S. economy performed surprisingly well, 4.9% growth at end of 2007
- Oil prices soared
- U.S. dollar took a dive - became less valuable than the Canadian dollar
- Home sales plunged and increasing foreclosures creates crisis in mortgage markets (e.g., subprime, CDO)
  - During February and March 2007, more than 25 subprime lenders filed for bankruptcy,
  - Merrill Lynch reports company's subprime losses were $3 billion higher than estimated.
- Tightening of lending standards = crisis of confidence by buyers and lenders

2014

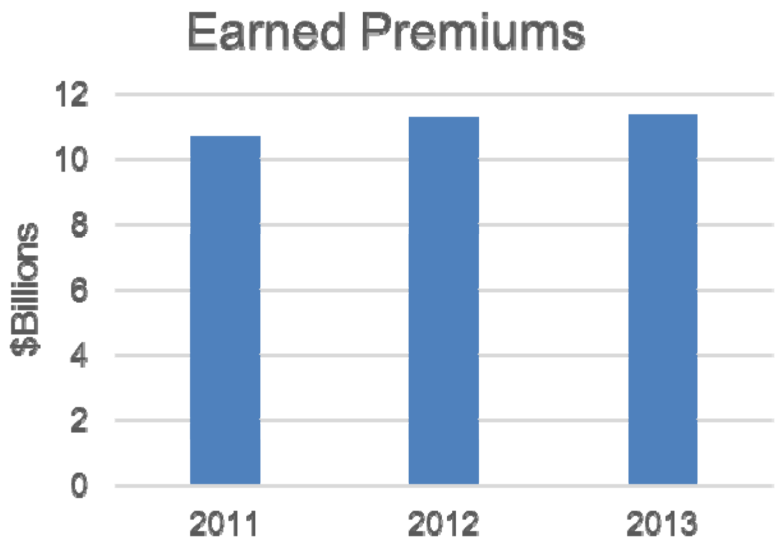
The Economy heading into 2014

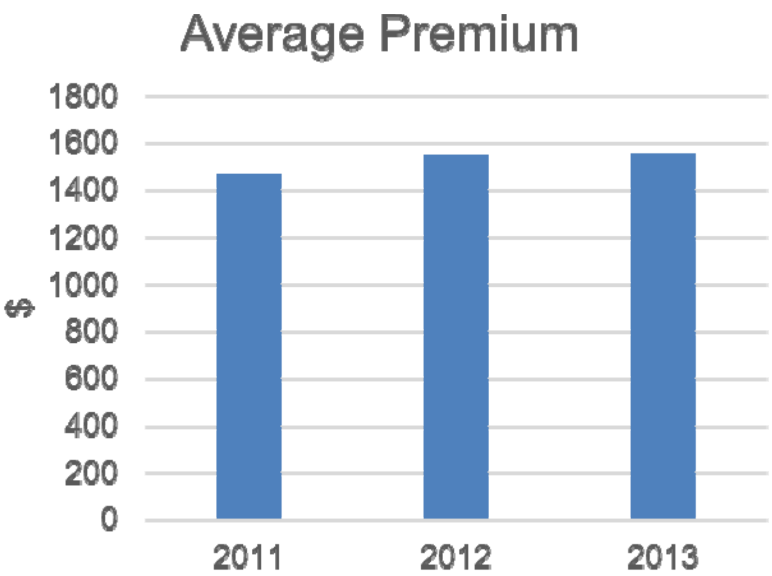
Recovery from 2007-2008 recession has been slow

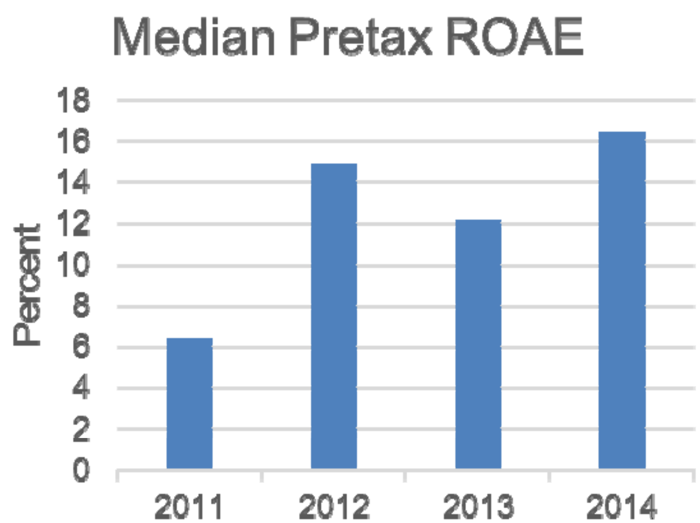
- Slow, steady growth in GDP
- Stagnant unemployment rate
- Crisis brings increased regulatory focus on insurer activities
- Interest rates remain low



LTC Insurance Market Measures







The Economy @ 2014: Outlook

2014

- Economic conditions clearly matter
- Concerns/Disadvantages
  - LTCI market participation stabilized but less competitive
    - Closed block companies → reputation risk
  - Increased potential for adverse selection when economy is bad
  - Low interest rate environment: how much longer?
    - Employment is up, economy is growing → increase expected soon
- Advantages
  - Increase in consumer awareness: ACA
  - New peak in consumer confidence = optimism for future earnings potential
  - Economic climate will improve

Thank you!

Views from Inside and Outside the Industry

A.M. Best's Perspective on LTC

Jeffrey Lane
Managing Senior Financial Analyst
A.M. Best Company

ILTCI

Disclaimer

A.M. Best's Perspective on LTC

1. Rating process
2. Evolution of the LTC market
3. A.M. Best's comments
4. A.M. Best's outlook
5. Summary

A.M. Best's Credit Rating Evaluation

- Interactive rating is derived from an in-depth evaluation of a company's
  - Balance Sheet Strength
  - Operating Performance
  - Business Profile
- Financial performance is viewed on both a GAAP and statutory basis
- The rating approach is applied consistently to all companies

A.M. Best’s Perspective on LTC

A.M. Best’s Credit Rating Evaluation, cont’d

- It is important to note that the risk assessments discussed represent A.M. Best’s view on the LTC product on a standalone basis
  - Therefore, there are factors that may offset these risks – diversification impact being the first and foremost

A.M. Best's perspective on LTC insurance - 2000

- Overview of the LTC market around 2000
  - Growing market
  - Underwriting
  - Pricing

A.M. Best's perspective on LTC insurance - 2000

– Overview of the LTC market around 2000
  - Benefits
  - Financial results
  - Distribution

A.M. Best's perspective on LTC insurance – 2000

– A.M. Best's comments around 2000
  - Opportunities
  - Challenges
  - Expectations

A.M. Best's perspective on LTC insurance - 2000

– A.M. Best's Outlook in 2000
  - Most of the largest participants are diversified into other products; therefore, their A.M. Best ratings are not heavily influenced by their LTC operations. Companies that rely on LTC for most of their operations must continue to demonstrate their ability to frequently monitor operating results while securing a sustainable competitive advantage in the expanding market.

A.M. Best's perspective on LTC insurance - 2007

- Overview of the LTC market around 2007
  - Decreasing market
  - Underwriting
  - Pricing
  - Benefits

A.M. Best's perspective on LTC insurance – 2007

- Overview of the LTC market around 2007
  - Financial results
  - Reinsurance
  - Regulatory
  - Deficit Reduction Act of 2005
  - Pension Protection Act of 2006

A.M. Best’s perspective on LTC insurance - 2007

- A.M. Best’s comments around 2007
  - Opportunities
  - Challenges
  - Expectations

A.M. Best's perspective on LTC insurance - 2007

- A.M. Best's Outlook in 2007
  - The LTC market will likely continue to experience growing pains for a number of years. A.M. Best continues to have a negative outlook on the LTC market overall, as it will take additional time to conclude whether the current products are priced accurately. For carriers with older blocks that were less conservatively written or priced using inaccurate assumptions, it will be a considerable challenge to approach their original profitability targets. A.M. Best believes as these blocks age it will be necessary for companies to continue implementing rate increases and to potentially strengthen reserve levels.

A.M. Best's perspective on LTC insurance - 2007

– A.M. Best's Outlook in 2007
  - A.M. Best's outlook for small to midsize or monoline LTC writers remains negative. They will be challenged to build the necessary surplus levels for this capital intensive product. Companies with weaker capitalization, combined with sustained losses, will have difficulty adhering to stricter reserving standards.
  - For larger, more diversified companies, operating results likely will not be as impacted by their LTC block's performance. A.M. Best continues to view the outlook as stable.

A.M. Best's perspective on LTC insurance today

– Overview of the current LTC market
  - Today's market
  - Underwriting
  - Benefits

A.M. Best's perspective on LTC insurance today

- Overview of the current LTC market
  - Pricing
  - Financial results
  - Regulatory
  - Economic environment

A.M. Best's perspective on LTC insurance today

- A.M. Best's current comments
  - Opportunities
  - Challenges
  - Expectations

A.M. Best’s perspective on LTC insurance today

- A.M. Best’s current Outlook
  - The legacy blocks of business will continue to hinder the LTC product’s profitability, as there were less conservatively underwritten and priced using inaccurate assumptions, and so will require continued rate increases and reserve strengthening. As such, A.M. Best continues to maintain a negative view on the LTC segment and remains concerned that the current amount of reserves, especially on the older blocks, may not be adequate despite current levels of strengthening.

A.M. Best’s perspective on LTC insurance today

– A.M. Best’s current Outlook
  - A.M. Best’s outlook on larger, more diversified companies remains stable
  - A.M. Best believes LTC has the highest risk of all health insurance products

A.M. Best's Perspective on LTC

Summary

- From early market expansion to large players exiting
- Very few companies are writing new business
- Less concern with larger, diversified companies
- Pressure on smaller, monoline companies
- Continued low interest rate environment remains an obstacle
- Legacy blocks will continue to impact results
- Some products in more recent years required rate increases
- Underwriting and products continue to evolve
- Newer products
  - It is too early to determine, will cautiously monitor
  - Experience needs time to develop and will be tracking
    - Will it reduce volatility?
    - New entrants?

Thank You

Jeffrey Lane
Managing Senior Financial Analyst
A.M. Best Company

24 March 2015

Views from Inside the LTCI Industry

Roger Loomis, FSA, MAAA

ARC SOFTWARE ■ CONSULTING

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LTC Pricing Project

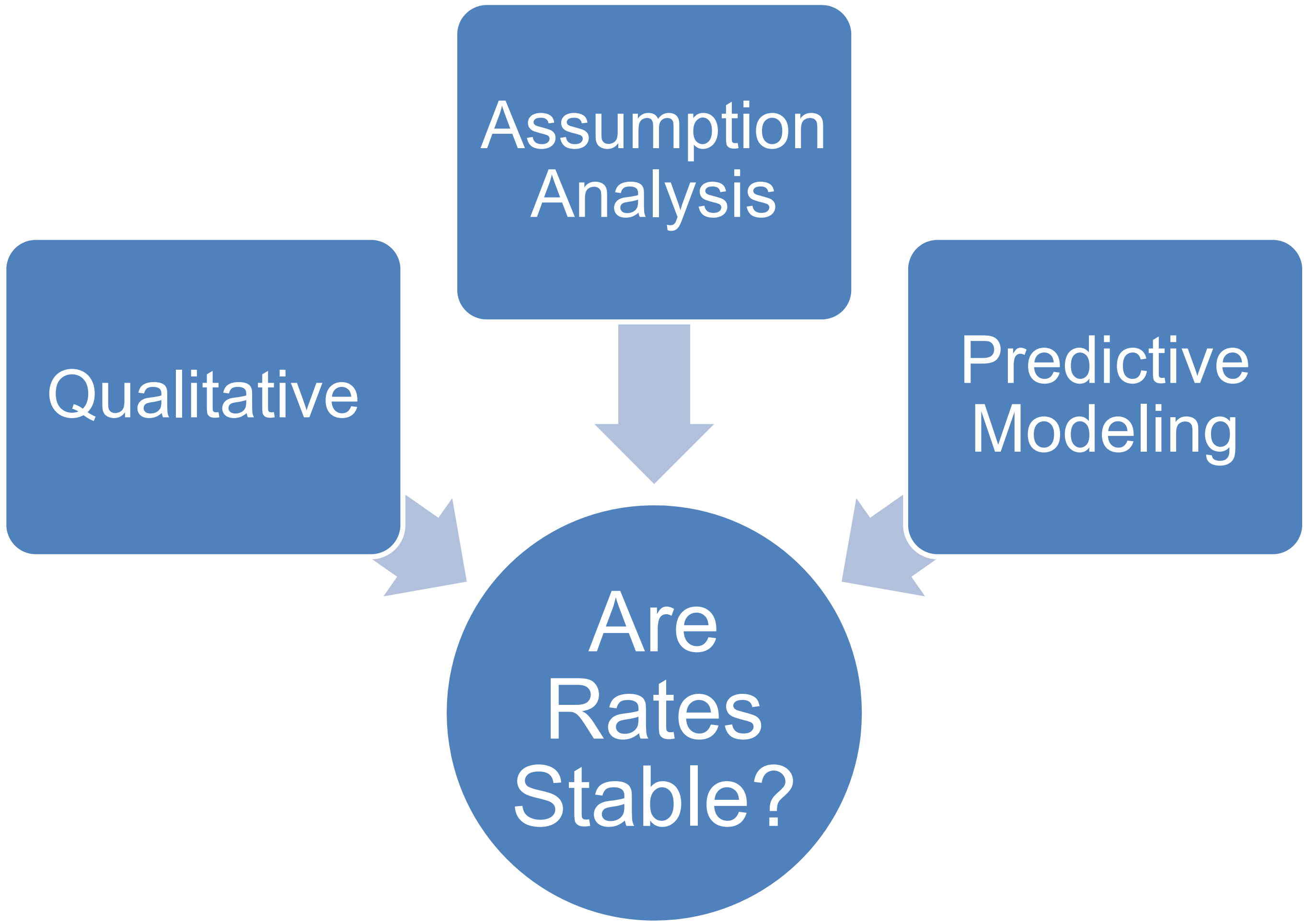
Jointly sponsored by the SOA's LTC Section and ILTCI

Research Question:

For traditional LTCI, how stable are premiums on new blocks?

Caveat: The results discussed here are preliminary

Three Approaches to Addressing Question



Qualitative

- Higher prices are necessarily more stable than lower prices
- Industry has learned from experience
- More data to support pricing assumptions
- Less risky product designs being offered
- Skill at managing LTCI well has been developed
- Better modeling tools

Be fearful when others are greedy and greedy when others are fearful.

-Warren Buffett

Assumption Analysis

- Can the key drivers of LTC experience get worse than current assumptions?
  - Morbidity
  - Interest Rates
  - Lapse Rates
  - Mortality

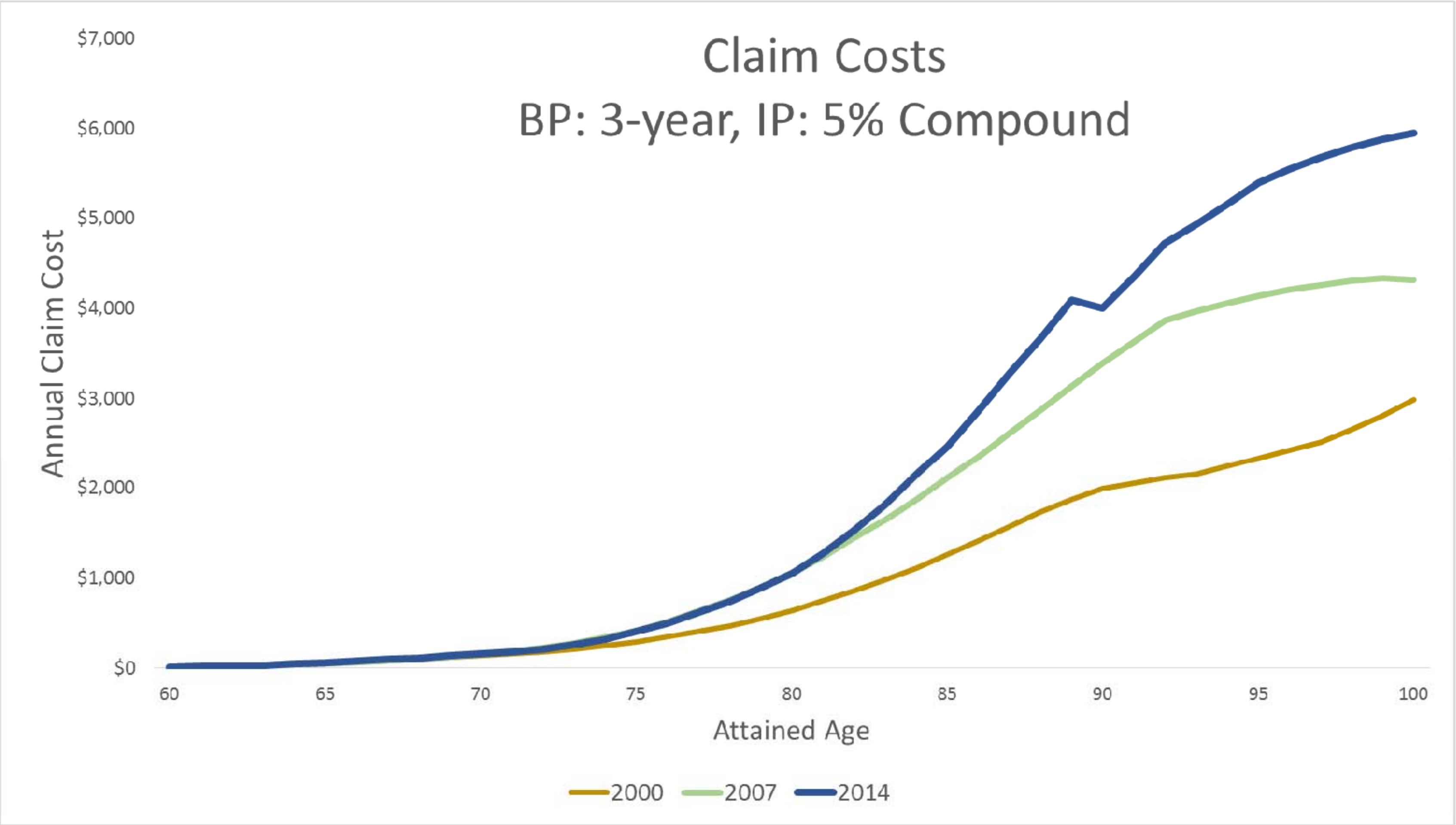
Assumption Methodology

- Seven large insurers who have been in the market continuously for at least 15 years participated
- Each provided the research team with pricing data for 3 points in time:
  - December 2000
  - December 2007
  - June 2014
- Data aggregated into “illustrative market assumptions”

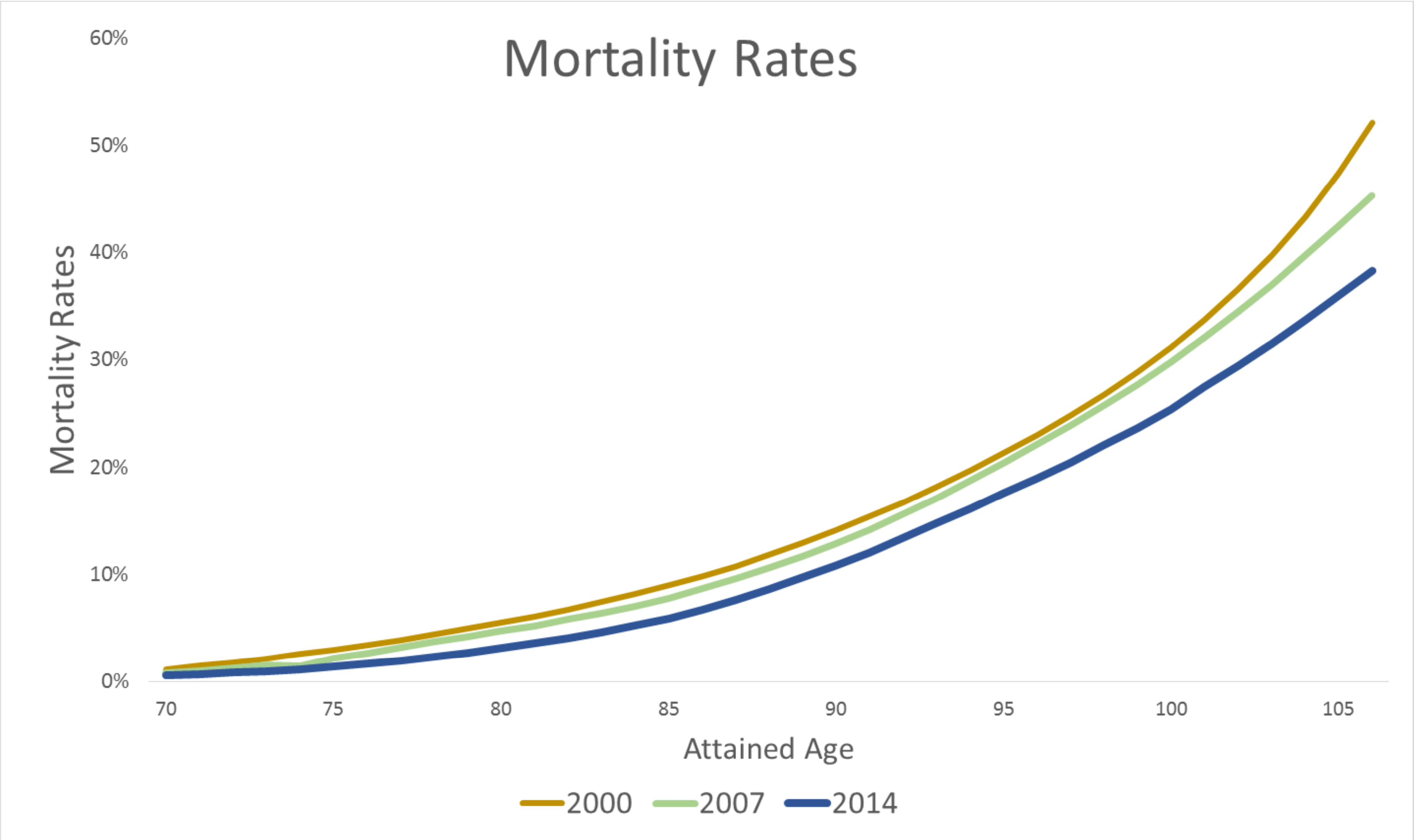
Illustrative Market Assumptions

- How have the assumptions changed over time?
- Should we now be more confident that the current assumptions are “right”?
- How much downside risk still exists?

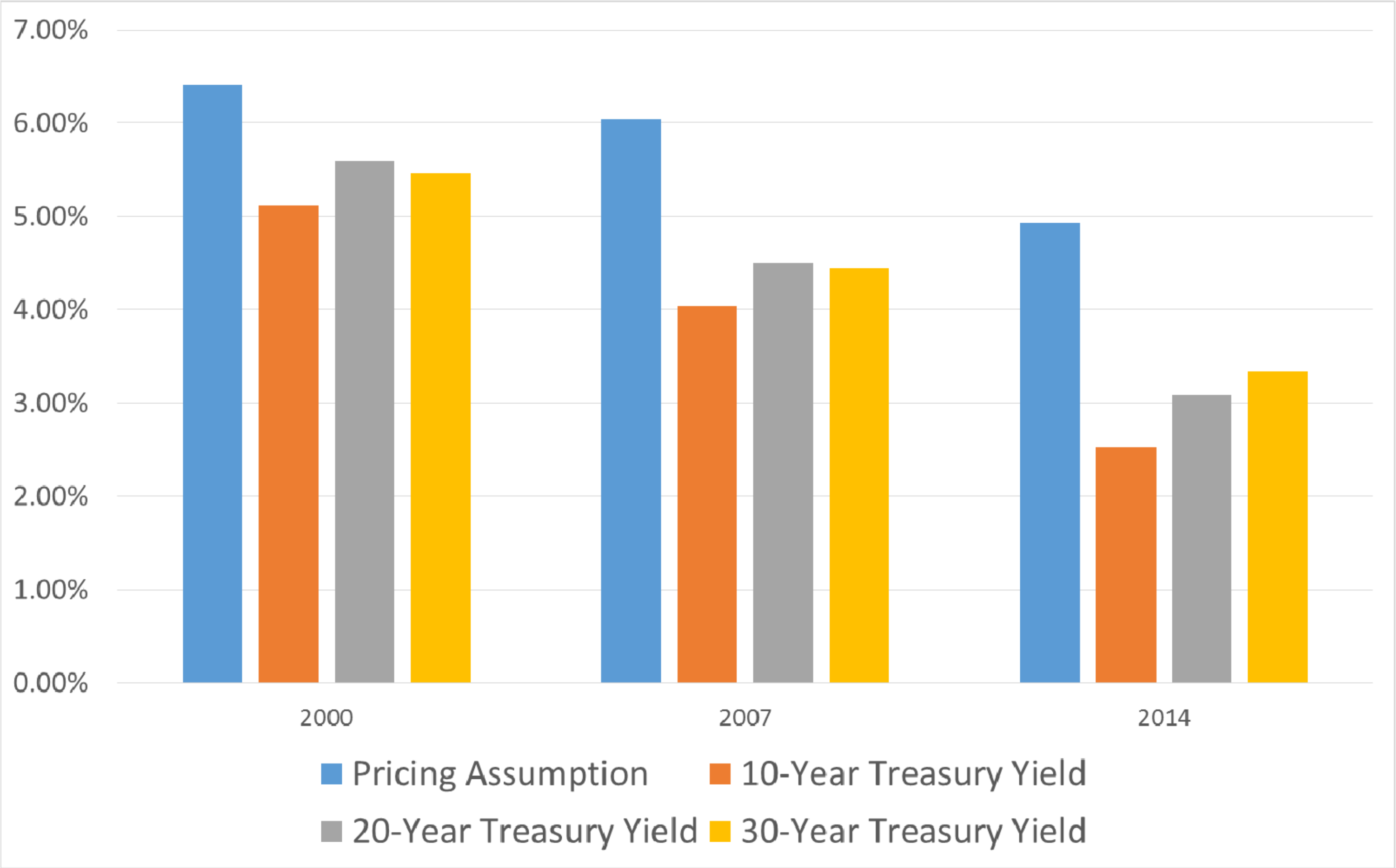
Morbidity Assumptions Now Much Higher



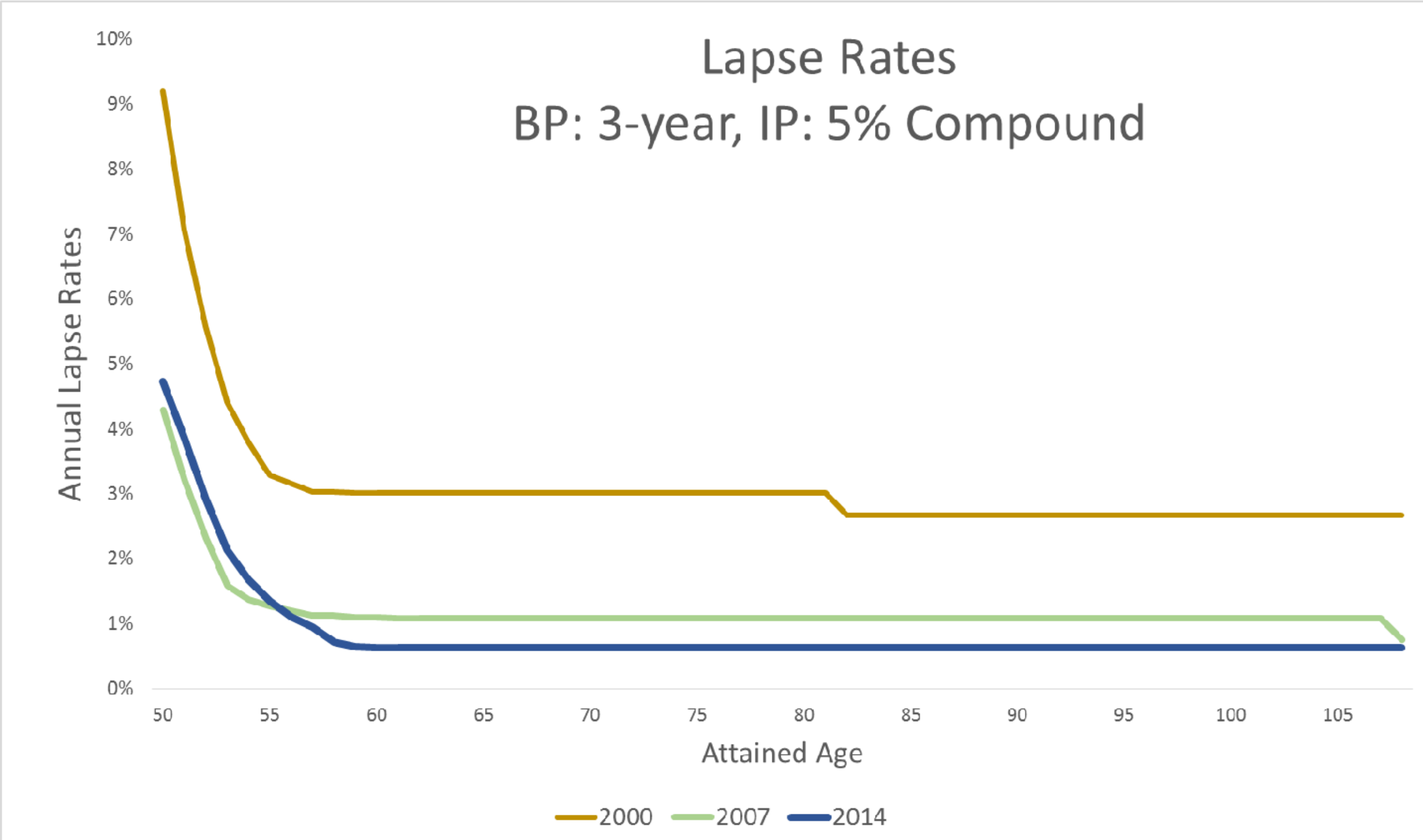
Mortality Rates More Conservative



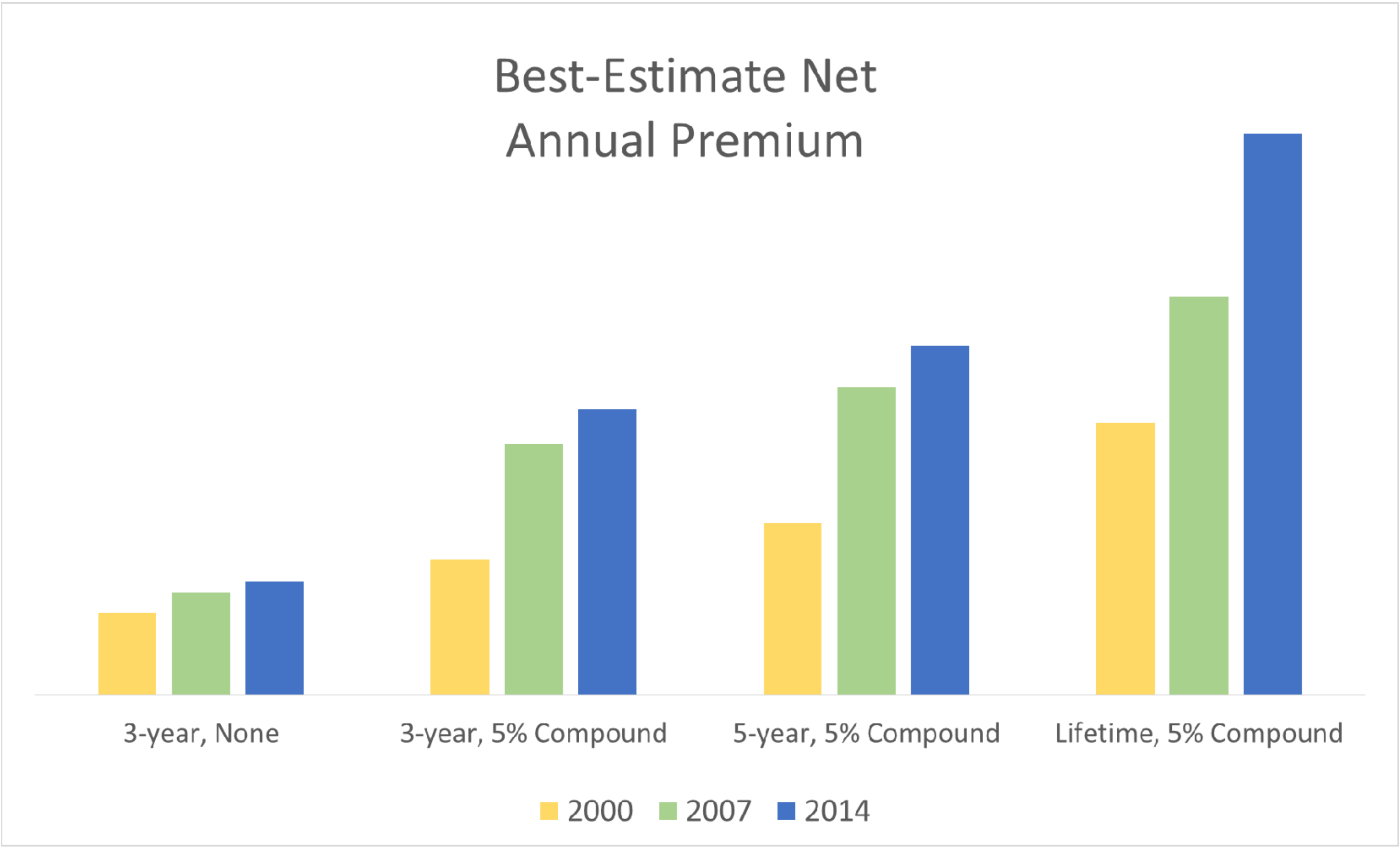
Interest Assumptions Lower



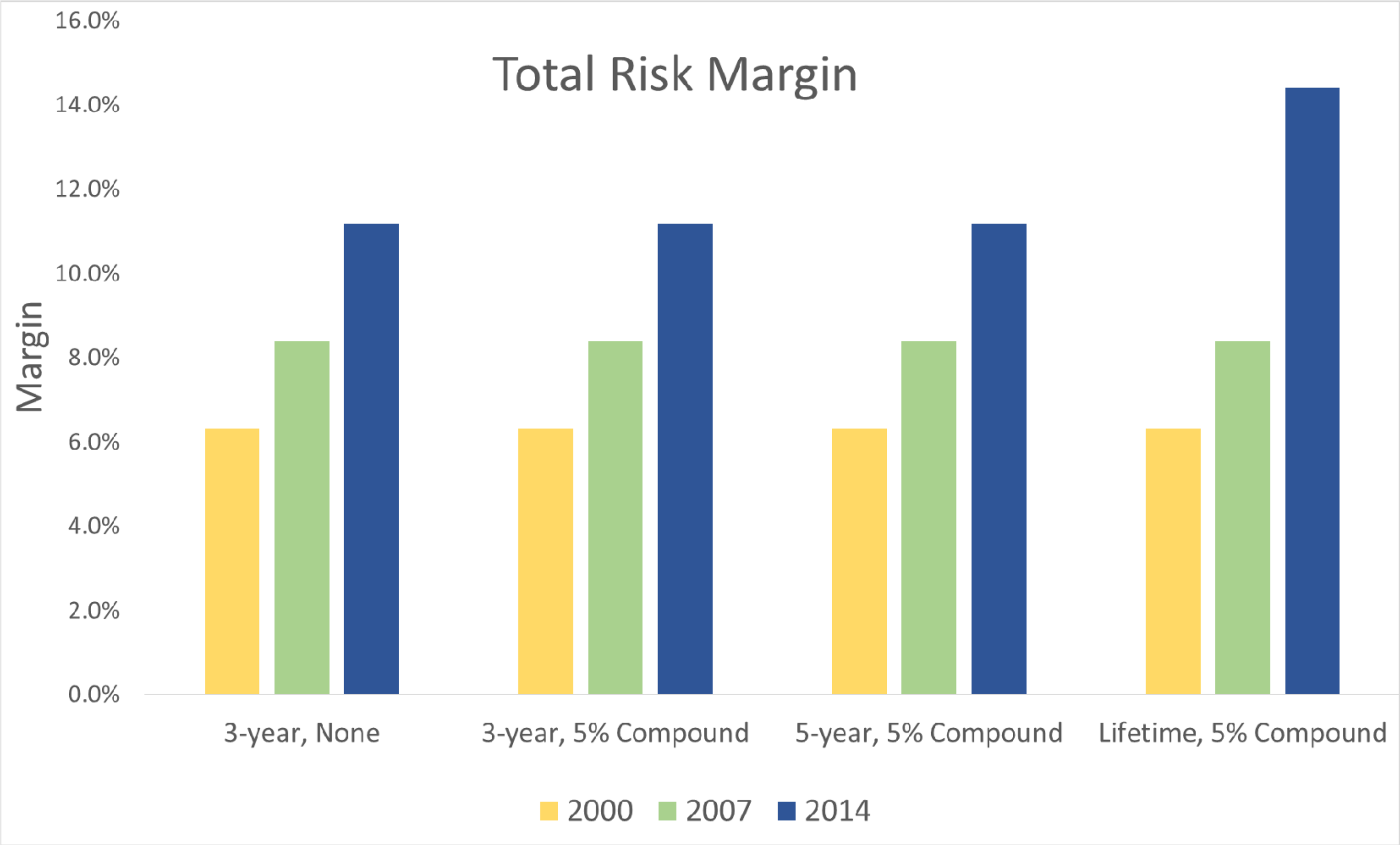
Lapse Assumptions More Conservative



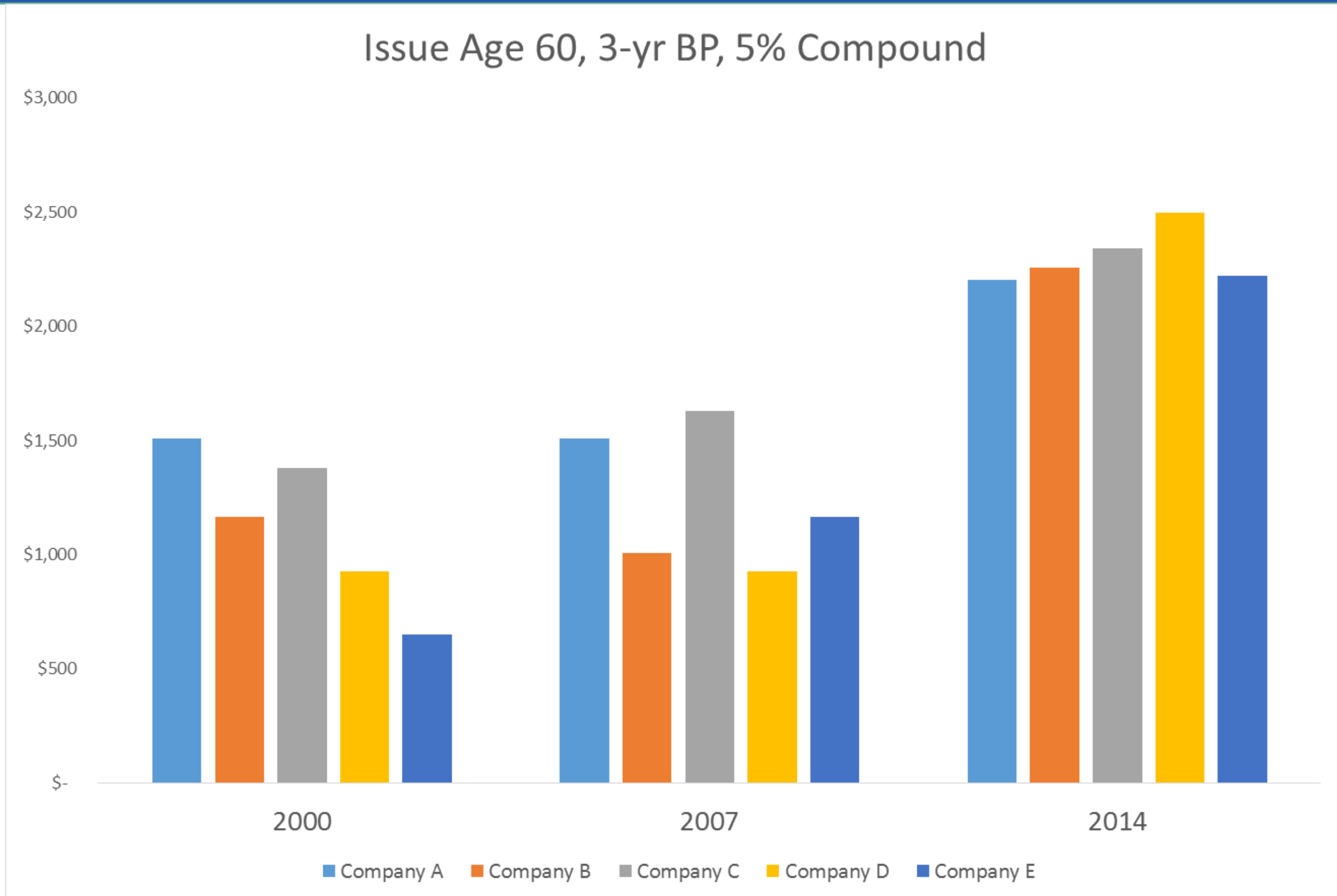
Net Premiums



Risk Margins Higher



Actual Gross Premiums for 5 Companies



Society of Actuaries Motto

The work of science is to substitute facts for appearances and demonstrations for impressions.

Ruskin

Predictive Modeling Methodology

- What was the probability of a rate increase for policies issued in 2000, 2007, and 2014?
- **Rule 1:** Calculations based only upon information available at each respective time period
- **Rule 2:** Except for those explicit differences, run the precise same calculations for the same distribution of policies at each of the three issue dates
- **Rule 3:** Model incorporates level of confidence in assumptions when they were made—not with hindsight

Assumptions

- Model only includes the following elements:
  - Claims
  - Net premiums + margin
  - Earned interest on reserves
  - Lapses
  - Mortality
- Those assumptions all taken from illustrative market assumptions
- 24,000 policies representing variety of issue ages and benefits sold on single issue date
- Company earns assumed portfolio yield

Stochastic Elements of Model

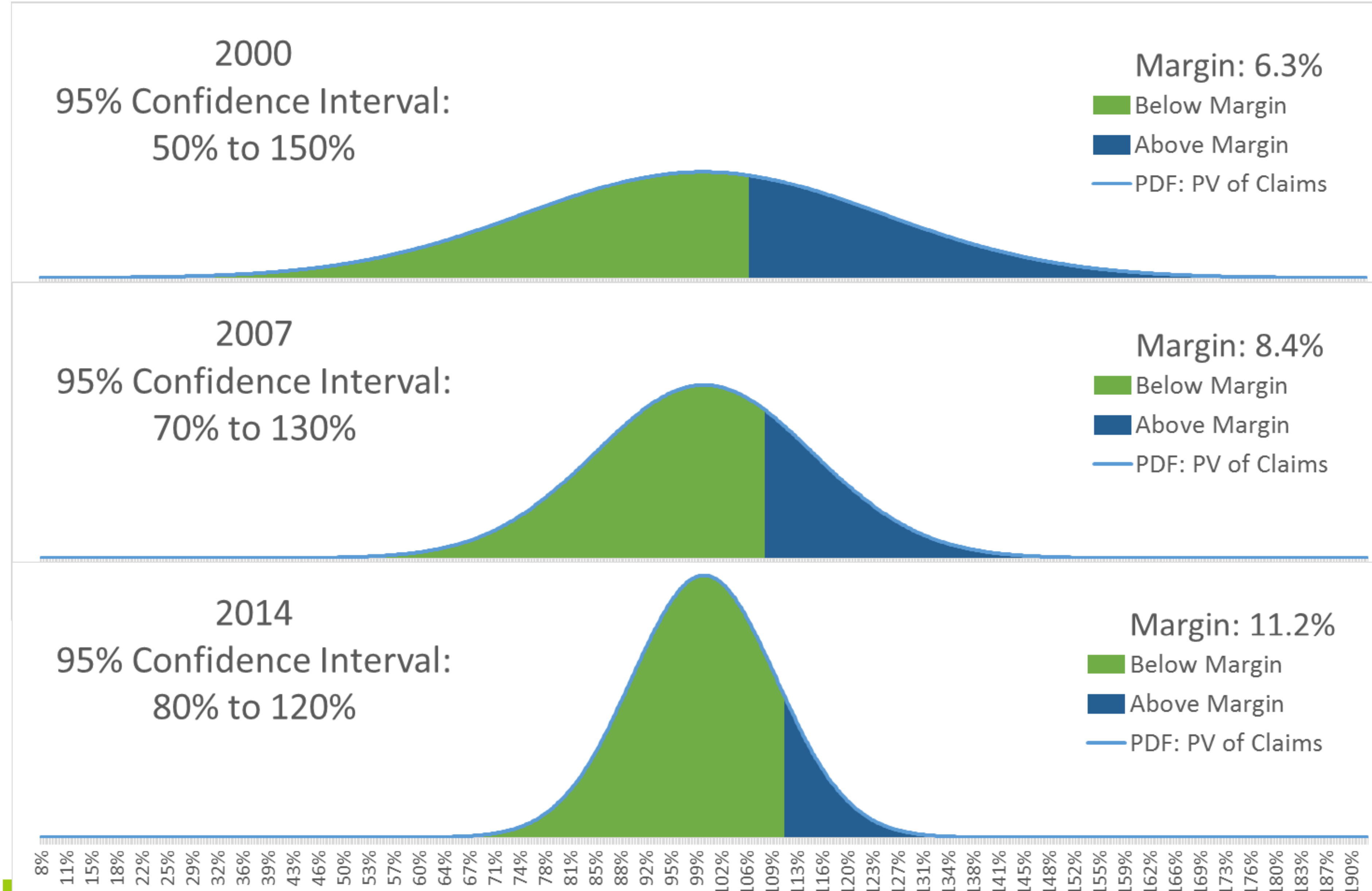
- Three random "uncertainty factors" chosen for each simulation. One each for:
  - Claim costs
  - Lapses
  - Mortality
- Variance of uncertainty factors chosen with predictive analytics based on:
  - Quantity of data used to calculate assumptions
  - Estimate of how likely the future could be different than the past

Stochastic Elements of Model (cont.)

- Assume we are 95% confident that our lifetime experience will be our best estimate plus-or-minus factor of *x%:*

	X% factor by year		
	2000	**2007**	**2014**
Claim Costs	50%	30%	20%
Lapses	14%	10%	8%
Mortality	5%	5%	5%

PV Claims as Percentage of Expected PV Claims

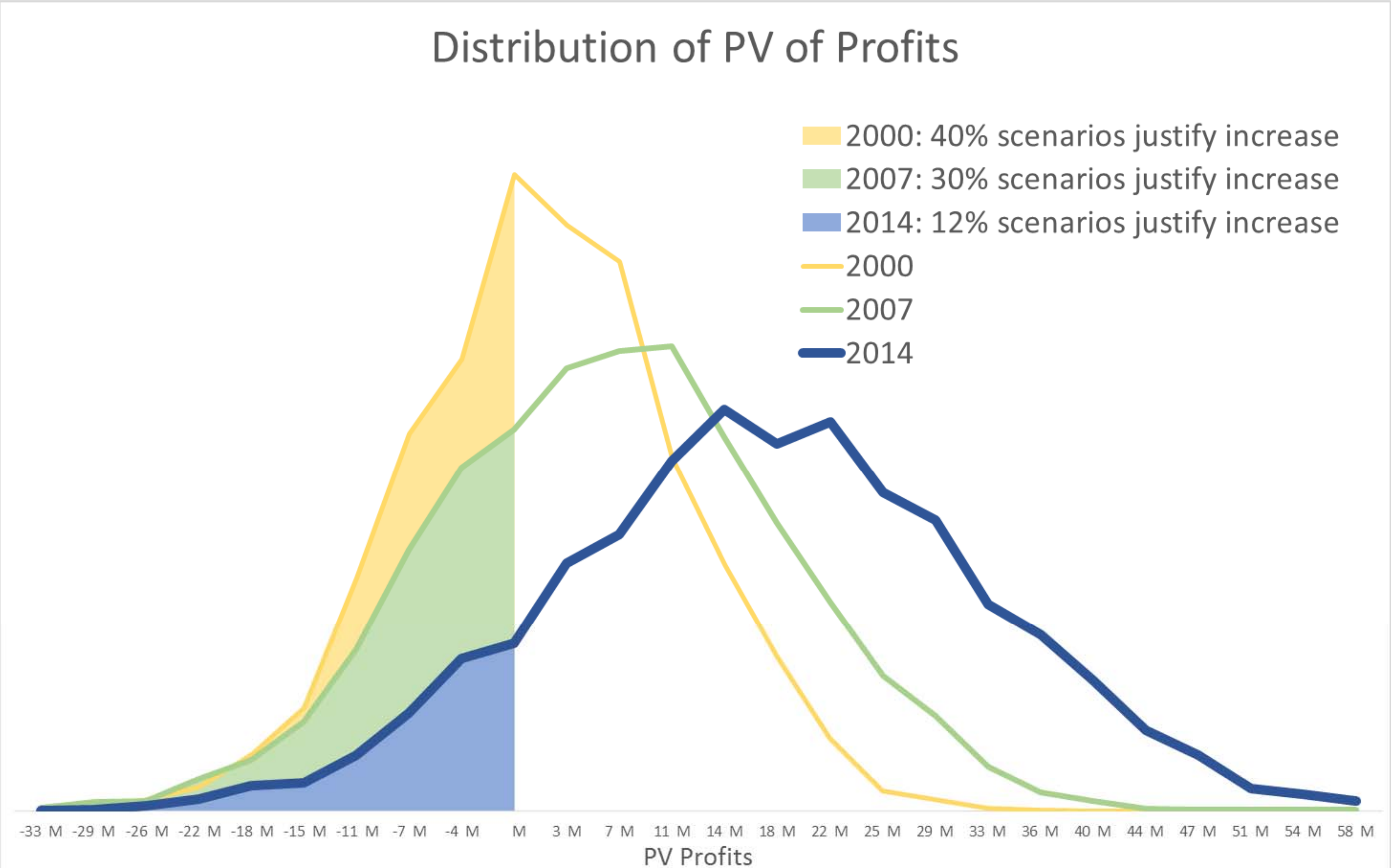


Rate increases on new business?

What is the probability that future experience will be so bad it will cause a rate increase?

- Run simulations using a variety of morbidity, mortality and lapse assumptions driven by the “uncertainty factor” random variables
- Interest returns NOT stochastic
- Premium is best-estimate net premium plus risk margin
- No profit margin, expenses, commissions or taxes in model
- $PV(Profits) < 0$ means net-premium plus margin doesn’t cover claims over life of policy and indicates a rate increase is justified
- Count the percentage of simulations where a rate increase is justified

Probability of Rate Increase



Probability of Rate Increase

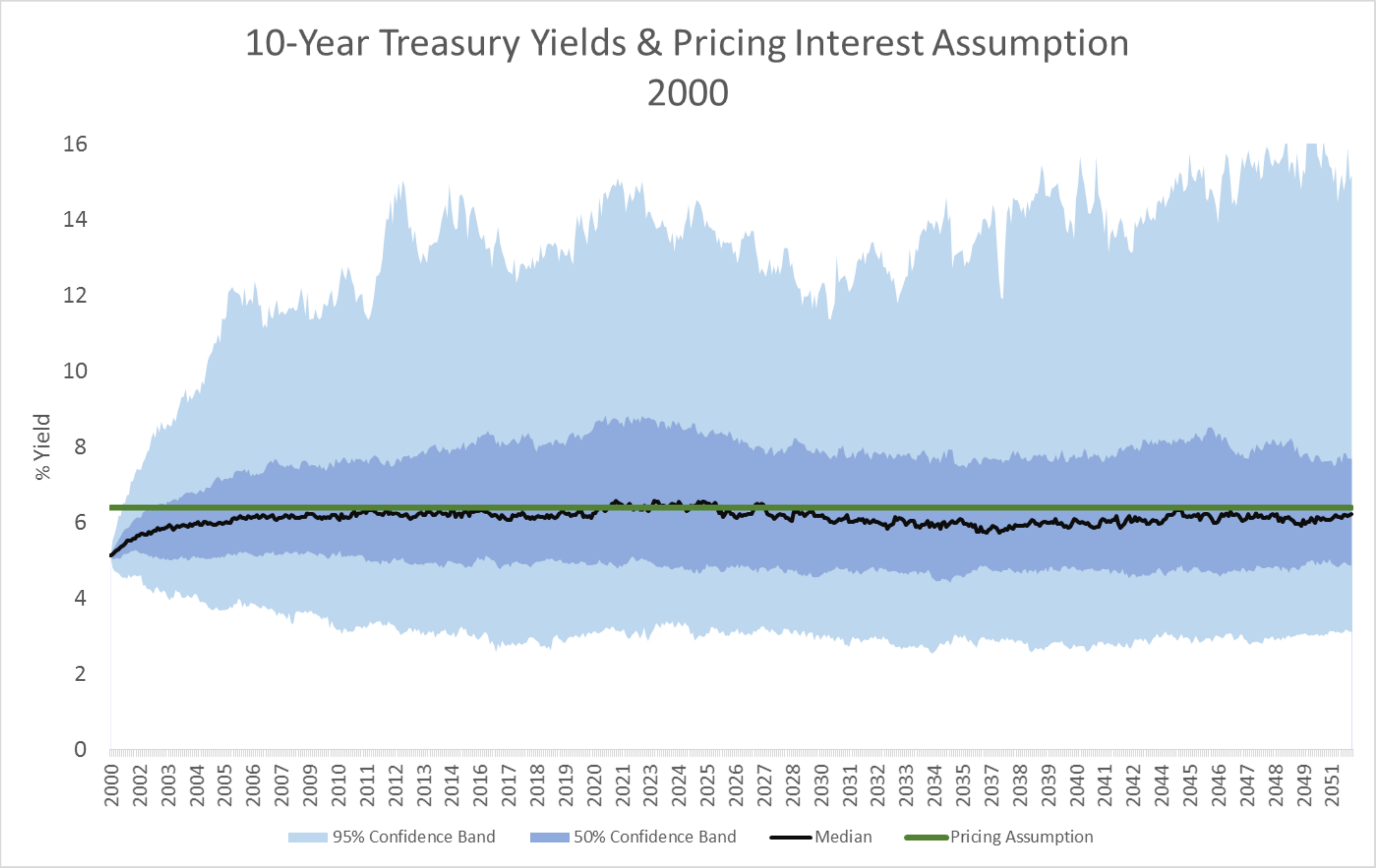
- Applying this methodology in 2000, we would have said then that there was a 40% chance of a rate increase
- 2014 rates now based on:
  - More data
  - Larger margins
  - Less downside risk (it can't get much worse)
- There is now a 12% chance of a rate increase

What About Corporate Profit?

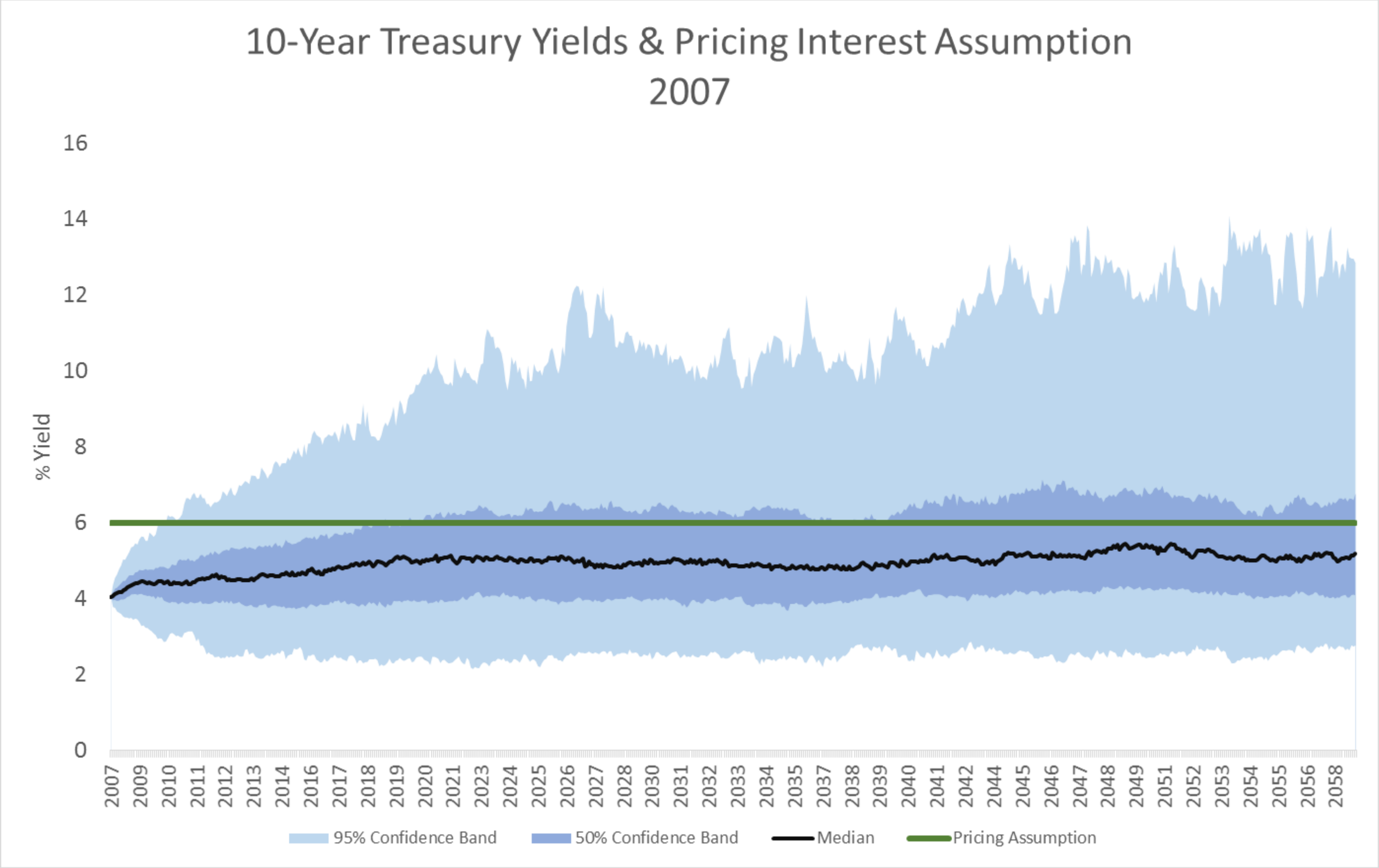
- In this model, two things are required to earn a satisfactory profit over the lifetime of the policies:
  1. Pricing margins plus (hopefully unlikely) rate increases cover risk associated with morbidity, mortality, and lapse
  2. Company achieves assumed returns on invested assets

- 2014 illustrative investment yield assumption: 4.9% over lifetime of new policies

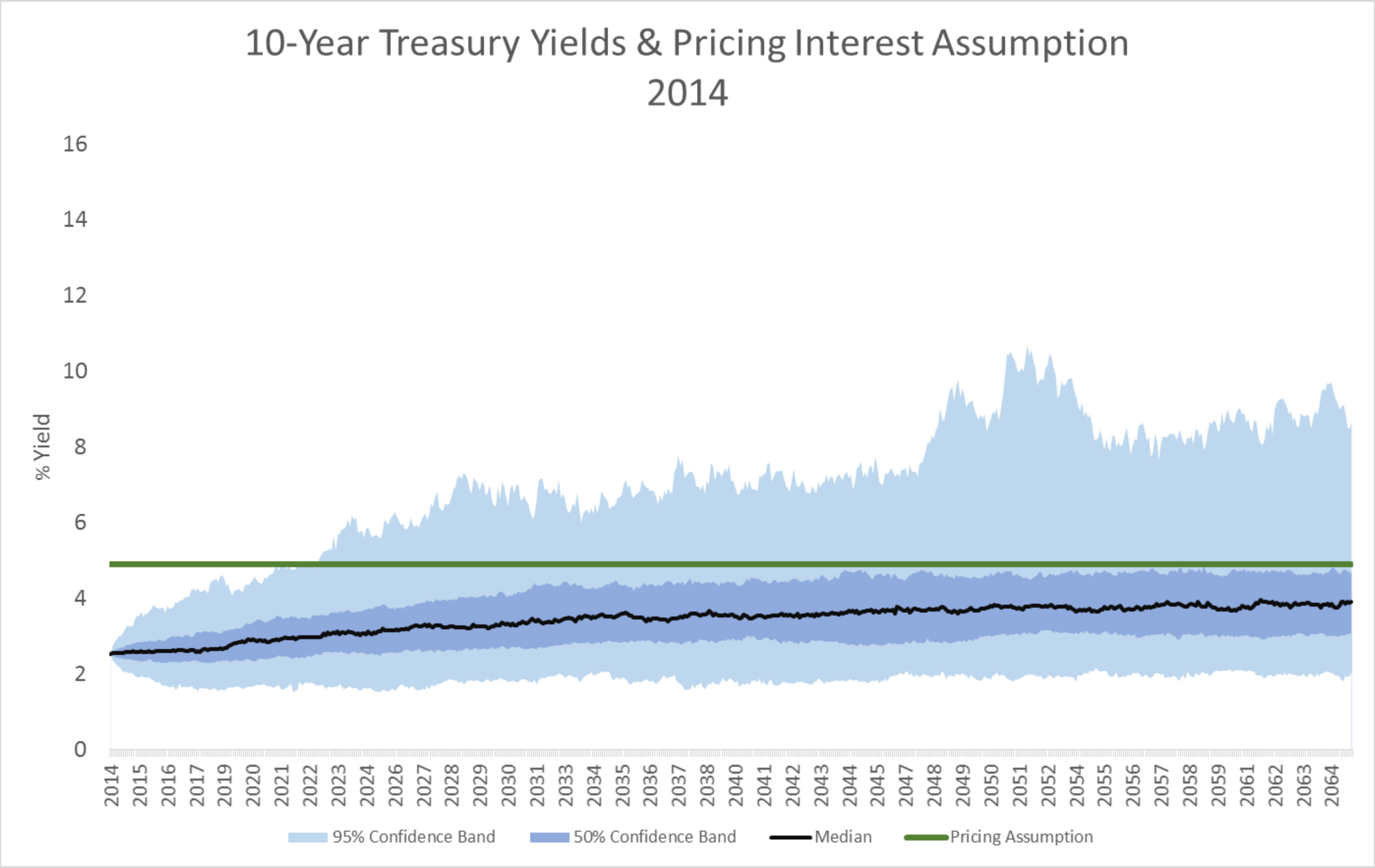
Yield Projections in 2000



Yield Projections in 2007



Yield Projections in 2014



Based on This Actuarial Analysis

- For new business, strong margins, better understanding of morbidity, and rock-bottom lapse assumptions indicate relatively low probability of a rate increase (e.g. 12%)

- *If* companies can achieve relatively moderate portfolio yields (e.g. 4.9%), there is a good chance they will make satisfactory profits