LES BONS TEMPS DEVANT NOUS?

LONG TERM CARE

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* Many of the opinions have not been vetted by spouses and are likely to be dumb and all wrong.

YOUR PANEL

Vince "Fast Vinnie" Bodnar

ASA, MAAA
SVP PRODUCT MANAGEMENT USLI
GENWORTH

PANEL

LARRY "THE GHOST DANCER" RUBIN

FSA, MAAA
PRINCIPAL IN PWC'S ACTUARIAL PRACTICE

PETER "ANSWER MAN" GALLANIS

JD*
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PANEL

TIM “THE NEW KID” LUEDTKE

FSA, MAAA
NAVIGATOR BENEFIT SOLUTIONSLLC

PATRICK "IS HE STILL HERE?" CANTILO

CIR-ML, JD*
PARTNER,
CANTILO & BENNETT, LLP

* This means another freakin Lawyer

SUMMARY OF THE PRESENTATION

- INTRODUCTORY COMMENTS

- HISTORY AND NATURE OF THE PRODUCT

- STATE OF THE INDUSTRY

- CHALLENGES OF LTC

- PENN TREATY EXPERIENCE

- POSSIBLE SOLUTIONS

INTRODUCTORY COMMENTS

- **THE INDUSTRY IS IN TURMOIL.**
  - **LOSSES ARE PILING UP.**
  - **CARRIERS ARE LEAVING.**
- **THE NEED IS GROWING.**

- **SERIOUS CHALLENGE FOR STATE INSURANCE REGULATION:**
  - **NEED TO ADDRESS TROUBLED COMPANIES EFFECTIVELY.**
  - **NEED TO ADDRESS COMPANIES AT RISK.**
  - **NEED TO ADDRESS THE FUTURE OF THE INDUSTRY.**

INDUSTRY IN TURMOIL

THE INDUSTRY HAS INVESTED HEAVILY IN UNPROFITABLE LTC PRODUCTS.

- **GENWORTH HAS "INVESTED" $3.5 BILLION IN ITS LTC BUSINESS.**
- **A YEAR AGO ITS FORMER PARENT, GE, BOOSTED LTC REINSURANCE RESERVES BY A STUNNING $15 BILLION.**
- **LAST YEAR HUMANA SOLD ITS LTC BUSINESS AT A NEARLY $800 MILLION LOSS.**

INDUSTRY IN TURMOIL (Cont'd)

THE INDUSTRY IS CONTINUING TO THIN OUT.

- **IN 2018 GENWORTH ANNOUNCED SEVERAL BENEFIT REDUCTIONS IN NEWER PRODUCTS.**
- **TRANSAMERICA ALSO ANNOUNCED BENEFIT REDUCTIONS.**
- **UNUM STOPPED SELLING GROUP POLICIES.**
- **PRUDENTIAL STOPPED INDIVIDUAL PRODUCTS FIRST AND LATER ABANDONED GROUP PRODUCTS AS WELL.**
- **ABOUT A DOZEN WRITERS LEFT OF 100 A DECADE AGO.**
- **10 COMPANIES ACCOUNT FOR MORE THAN 75% OF MARKET BY PREMIUM.**

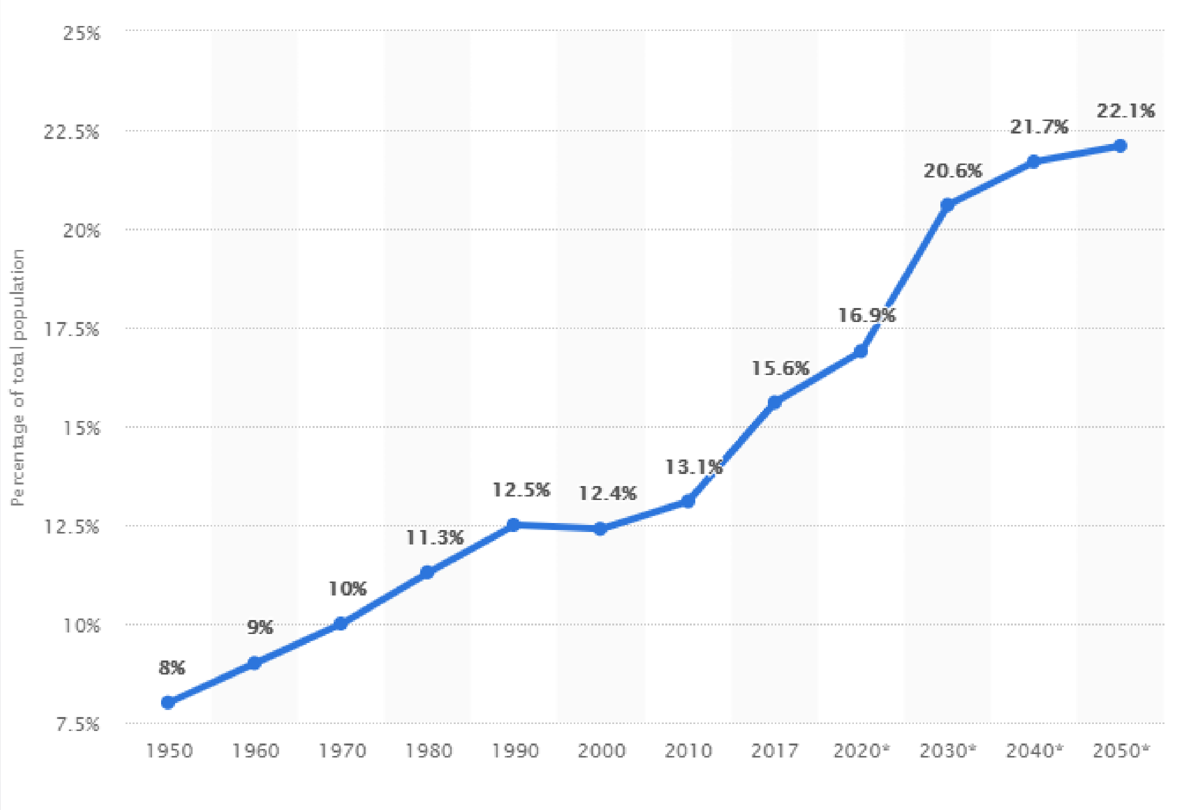
INDUSTRY IN TURMOIL (Cont'd)

- **CURRENTLY BETWEEN 7 AND 7.5 MILLION LTC LIVES.**
- **GENWORTH IS OVER 1.2 MILLION OF THOSE.**
  - **SALE TO CHINA OCEANWIDE UNDERWAY.**
  - **ASSUMES $5.8 BILLION IN FUTURE RATE INCREASES AS OF 12/31/17.**
- **INDUSTRY RESERVES ~$150 BILLION.**
- **INDUSTRY CAPITAL ~ $145 BILLION VS ~ $30 BILLION REQUIRED CAPITAL.**
- **ABOUT 10% OF CURRENT INDUSTRY LIABILITIES IN THINLY CAPITALIZED OR UNDER-CAPITALIZED COMPANIES.**

GROWING NEED

- **THE U.S. CENSUS BUREAU PROJECTS THAT BY 2035 OLDER PEOPLE WILL OUTNUMBER CHILDREN, 78 MILLION OVER AGE 65 AND ONLY 76.4 MILLION UNDER 18.**

SHARE OF U.S. POPULATION 65 AND OLDER – 1950 TO 2050



SOURCE: STATISTICA, 2019

GROWING NEED (Cont'd)

CARE IS EXPENSIVE:

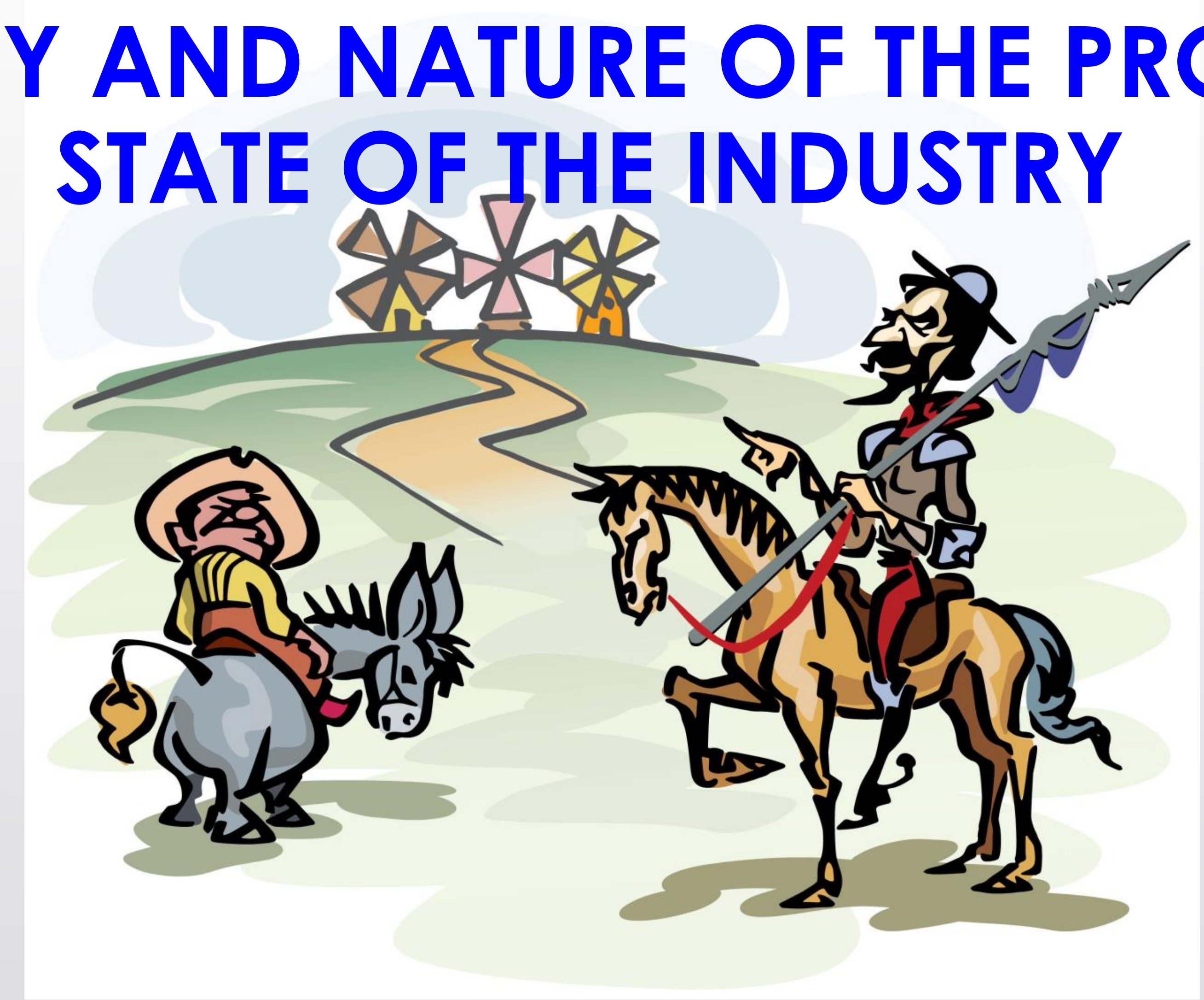
- **$341,840: ESTIMATED LIFETIME COST OF CARE FOR SOMEONE WITH DEMENTIA.**
- **$18,200: MEDIAN ANNUAL COST FOR ADULT DAY CARE (FIVE DAYS/WEEK), 2017.**
- **$45,000: MEDIAN ANNUAL COST FOR ASSISTED-LIVING FACILITY, 2017.**
- **$85,775: MEDIAN ANNUAL NURSING-HOME COST, SEMIPRIVATE ROOM, 2017.**
- **$97,455: MEDIAN ANNUAL NURSING-HOME COST, PRIVATE ROOM, 2017.**

SOURCE: MORNINGSTAR, 2018

THINK ADVISOR 2/10/19

- SEVEN INSURERS TOLD US ABOUT THE LARGEST CLAIMS THEY STILL HAD OPEN AS OF DEC. 31, 2018.
- AT EACH OF THOSE INSURERS, THE LARGEST OPEN CLAIM WAS FOR MORE THAN $1 MILLION.
- AT SEVERAL, THE LARGEST OPEN CLAIM HAS SURPASSED THE $2 MILLION THRESHOLD.
- MOST OF THE LARGEST CLAIMS HAVE BEEN OPEN FOR AT LEAST 11 YEARS.
- THE LARGEST OPEN CLAIM OF ALL HAS LED TO THE PAYMENT OF MORE THAN $2.6 MILLION IN BENEFITS. THE CLAIM HAS BEEN OPEN FOR MORE THAN 15 YEARS.

HISTORY AND NATURE OF THE PRODUCT
STATE OF THE INDUSTRY



Stand-alone LTCI features

- LTCI was first introduced in the U.S. in the mid 1970s. The early versions paid limited benefits for stays in skilled nursing facilities only. These were called "SNF policies".
- Modern version emerged in the late 1980s and were patterned after U.S. disability income plans
- Most have a defined benefit trigger: requires assistance with 2 out of 6 activities of daily living ("ADLs") or requires supervision due to a severe cognitive impairment
- Once trigger is met: costs for qualified services are reimbursed up to a daily maximum benefit
  - Usually care received in a skilled nursing facility (now referred to as nursing home), assisted living facility or by a qualified home health care professional
  - Some plans do not require expenses to be incurred. A cash benefit is paid to the claimant as long as he continues to meet the benefit trigger conditions.
- Specified maximum benefit (maximum amount of benefits paid for an episode of care) and elimination periods (time at the beginning of care episode that is not covered)
- Inflation protection option: e.g., daily benefit increases 5% each year
- Issue age rated: premiums are intended to be level for life
  - Guaranteed renewable: insurer cannot cancel as long as required premiums are paid
  - Premium increases must be actuarially justified and approved by regulators

Stand-alone LTCI challenges

Emerging environmental factors that were unforeseen in pricing adversely affected stand-alone LTCI profitability and sales…

Low interest rates	8% became 3%
Low lapse rates	5% became 1%
Increasing longevity	5 to 10 year increase in lifespans
Evolving care delivery	Emergence of assisted living facilities
Regulatory uncertainty	Political not actuarial
Carrier exits	100+ to about 10
Distribution contraction	20k+ became ~2k
Wary consumers	Smart buy to risky buy

Stand-alone LTCI market leaders

With the exception of three carriers, stand-alone LTCI sales are on track to decrease for the market leaders in 2018[1]:

$Millions of New Premium Issued

	2017	2018
Mutual of Omaha	**47.0**	**46.8**
Northwestern Mutual	**43.5**	**34.6**
New York Life	**14.1**	**16.6**
Thrivent	**11.2**	**11.8**
Transamerica	**17.0**	**11.2**
Bankers Life & Casualty	**10.3**	**10.8**
MassMutual	**8.7**	**7.6**
Genworth	**7.1**	**6.6**
State Farm	**4.0**	**4.0**
Knights of Columbus	**3.2**	**2.6**
Total industry	**176**	**154**

LTC specialists sell for Mutual of Omaha, Transamerica and Genworth. All other carriers sell through career (captive agents) that sell multiple types of insurance products.

[1]2018 figures are estimated by doubling results for first half of 2018.
Source: LIMRA

Combo LTCI products

Life insurance combo products

- Often a rider that can be attached to any type of permanent life product
- The insured can accelerate (receive an advance payment from) all or a portion of the death benefit
- Must meet benefit eligibility requirements
  - Generally the same as U.S. tax requirements to qualify for LTC expense
  - Unable to perform 2 activities of daily living or a severe cognitive impairment
- A small percentage (2% - 4%) of the death benefit is available per month until the death benefit is exhausted
  - Sometimes a residual death benefit is payable if the scheduled death benefit is use up
- Extension of benefits option: more than the policy’s death benefit is available for LTC
  - Two or three times the death benefit are the most common options
- “Chronic illness” variant:
  - Not regulated as LTC and cannot be marketed as LTC
  - Agents are not required to have LTC sales training
  - Cannot have an extension of benefits option

Combo LTCI products

Deferred annuity combos:

- Account value is available for LTC benefits with a reduced or no surrender charge
- An additional benefit is available for LTC if and when the account value is exhausted by LTC benefit payments
- Eligibility and payout structure is similar to life combo products
- Typically financed through monthly account value charges or a reduced interest credit on the account value

Immediate annuity combos:

- Introduced in the early 1990s, but discontinued
- Issued to healthy lives
- The base monthly annuity payment starts immediately for life
- The payment increases if and while an LTC eligibility trigger is met
- Financed through an additional single premium charged at issue

Combination LTCI product appeal

Customers

Easy to understand: Access to a pot of money (death benefit)

Cost effective: Add-on premiums are generally less than stand-alone

Immediate value: Death benefits and equity build up via the life insurance cash value

Carriers

Mitigated risks:

- Exposure limited to life policy net amount at risk
- Insured’s equity in base coverage acts like a “co-pay”
- Low mortality offsets life insurance risk

Easy to distribute:

- “Add-on” to the base policy sale; can be sold by broad distribution
- Decreased regulatory, reserve and capital requirements

Combo LTCI sales leaders (2017)

- Combo products are generally not sold by LTC specialists. They are sold by life and annuity agents that already sell for each carrier. The primary sale is the base life policy with LTC added-on during the sales process.
- An exception is Lincoln National's Money Guard, which is positioned as a LTC solution.

Company	Channels	New Premium ($millions)
Lincoln National	IA, BD, RIA, Banks	$1,075
Pacific Life	IA, BD	687
OneAmerica	IA	472
Midland	IA	280
Penn Mutual	IA, CA	227
Great West	Banks	186
Nationwide	BD	184
MassMutual	CA	160
New York Life	CA	138
Transamerica	IA	132
Other		575
Total		$4,116

IA: Independent agents that sell for multiple carriers.

CA: Career agents: agents that primarily sell the products of one carrier.

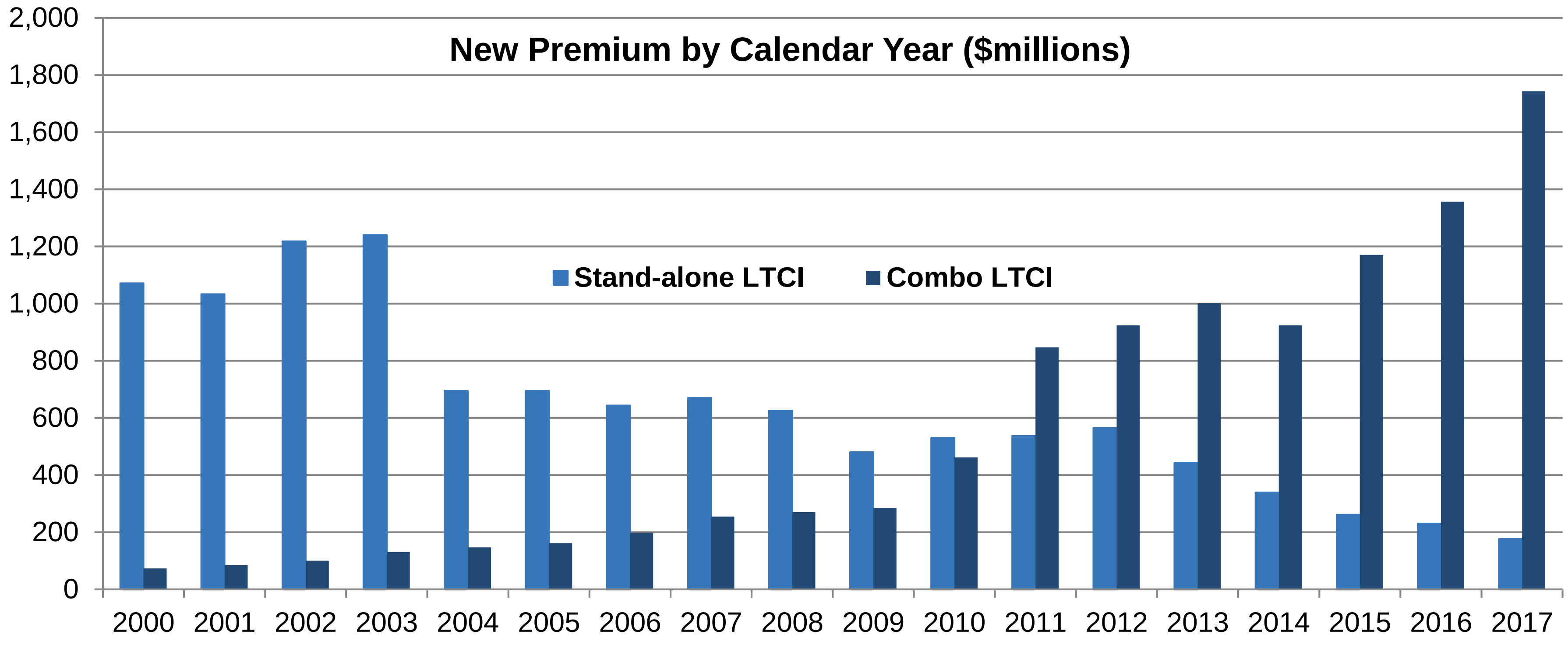
BD: Broker dealers: financial advisors that are licensed to sell securities

RIA: Registered investment advisors

- About 70% of premium (11% of policies) written was single premium

Source: LIMRA

Stand-alone vs. combo LTCI sales



- Sales for these two product segments have moved in opposite directions since 2000.
  - Stand-alone sales decreased due to premium rate increases and carrier exits
  - Combo sales increased as carriers entered the market
- *Note*: Premiums for single premium combo products are divided by 10 here. Unadjusted sales for 2017 were $4.1 billion.

Sources: 2001-2014 *Broker World Surveys* and *LIMRA's Individual Life Combo Products Annual Reviews*

Insurance industry lessons learned

If we had a chance to start over with LTCI, we would change the following:

- **We would allow for annual changes in premium rates**, just like we do with medical insurance. This would allow us to reflect emerging morbidity trends, cost of care inflation, care delivery changes, interest rate environment and longevity. Such changes should be expected by policyholders and regulators, and approval processes should be quick and easy.
- **We would design the products to be simpler and easier to understand**. This would have allowed for broader distribution of stand-alone LTCI through existing agents, direct to consumer, and through employers.
- **We would include managed care provisions**. We would require annual health checks while healthy, interventions while disabled and incentives to use preferred providers.
- **We would allow cash values in stand-alone LTCI products**, to allow policyholders to have equity in their products and possibly increase attractiveness to younger customers.
- **We would have stronger cooperation with state and federal governments**.
  - LTCI premiums would be paid with pre-tax dollars.
  - We would help the governments create public programs that coordinate with and wrap around private insurance. This could be subsidized premiums for the poor and public programs that cover long episodes of care after a period of 3 to 4 years.
  - We would ask the government to fund awareness campaigns about the risks of aging and properly planning for the payment of LTC.
  - LTCI could be sold via public exchanges to allow people become educated on plans and to purchase one directly and comparison shop.

CHALLENGES OF LTC

COMPARISON OF PRICING ASSUMPTIONS

The examples throughout the presentation uses a representative individual LTC policy with the following characteristics:

- 5 year benefit period with initial daily benefit of $100
- 90 day elimination period
- Issue age of 60
- 60% lifetime loss ratio

	1990	2008	Change in Premium due to Incremental Change in Assumption
Ultimate Lapse	5%	0.75%	+$1,540
Mortality	83 GAM	2012 IAM	+$680
Discount Rate	6%	4%	+$1,680
Benefit Inflation	5%	4%	-$1,020
Total Premium	$1,550	$4,430	+$2,880

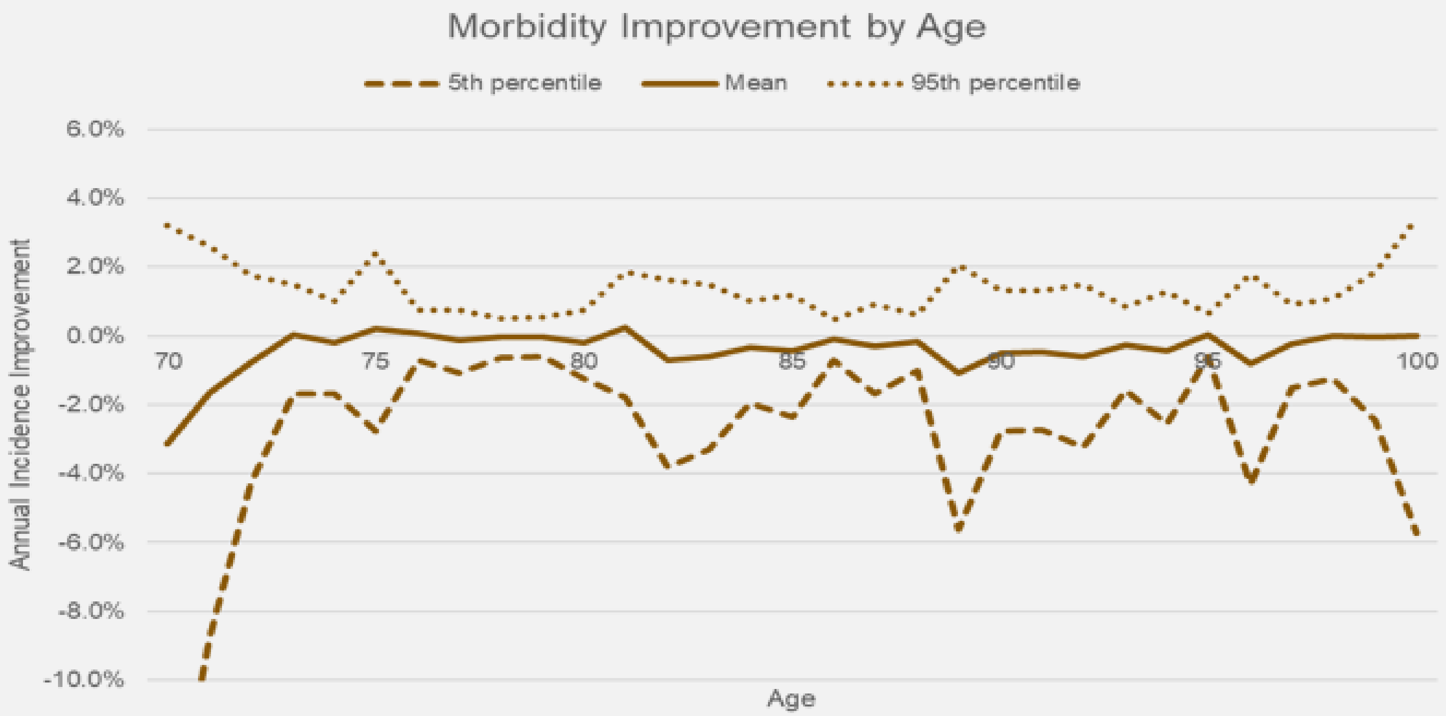
RATE INCREASES

Example

- Block of policies was issued in 1990
- Rate increase submitted in 2008 and received 70% of requested $2,880 premium increase to maintain 60% loss ratio
- In 2018, a premium of $18,050 (5 times the premiums after 2008 rate increase) would be required to eliminate insolvency

	Financial Position in 2018
Premium after 2008 Rate Increase	$3,570
Gross Premium Reserve (GPR[a])	$134,000
Statutory Reserve	$108,000
Reserve Deficit (due to Inadequate Premium)	$26,000
Accumulated Premium Deficit	728%
Current Deficiency due to 30% Ineffectiveness	$5,372
Multiple of PV of Future Premium	141%
Premium Required to Eliminate Insolvency	**$18,050**

MORBIDITY IMPROVEMENT (2006-2011)



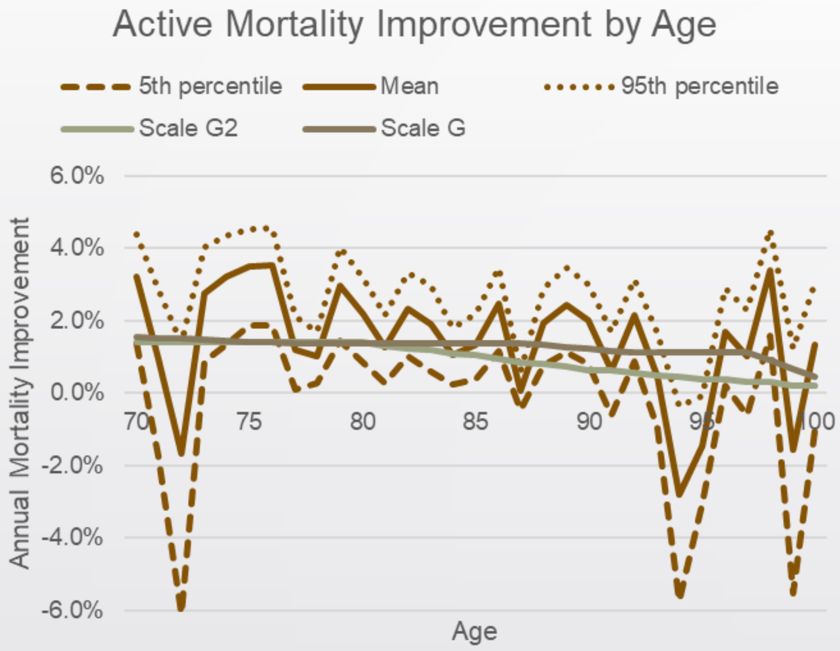
Notes:
- Simulated using a Lee-Carter model, calibrated on Industry data from 2006-2011.
- Excludes claims within 15 years of policy issue.
- The range assumes the parameters are "correct" and that there is no parameter risk.

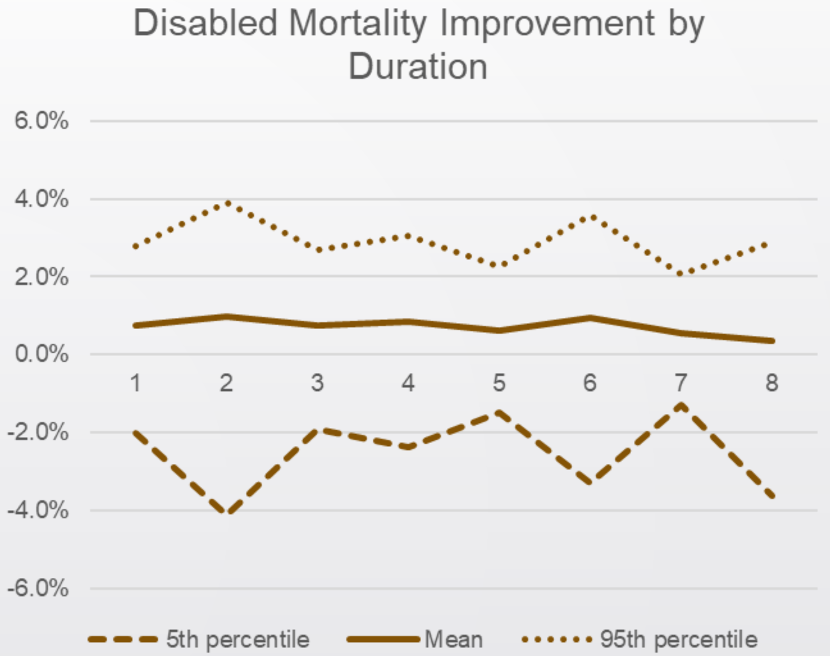
Impacts

	2018[a]	No Morbidity Improvement
GPR	$108,000	$142,100
Change in GPR as % of PV of Premiums		32%

*Post 2018 premium increase to eliminate deficit. Assumes 1.00% morbidity improvement for 15 years.

LONGEVITY





	2018[b]	1.4% Forever
GPR	$108,000	$161,400
Change in GPR as % of PV of Premiums		51%

	2018[b]	1% for 15 Yrs
GPR	$108,000	$127,500
Change in GPR as % of PV of Premiums		19%

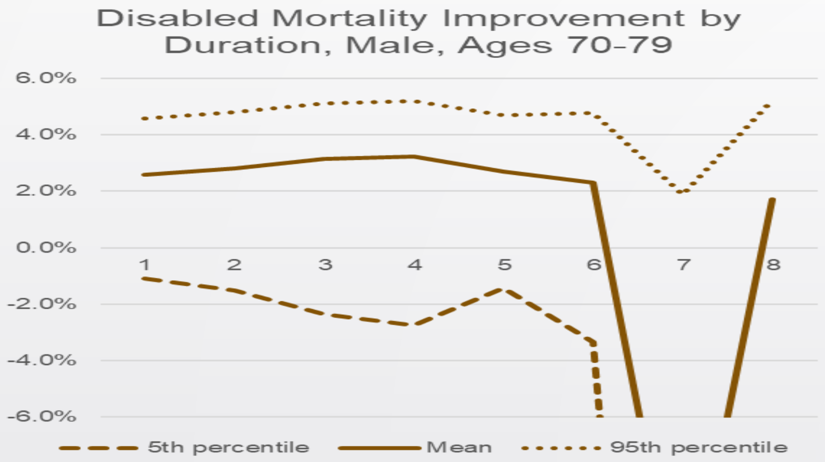
[a] Simulated using a Lee-Carter model, calibrated on Industry data from 2001-2011 for active lives excluding active deaths for policies within 15 years of policy issue and 2006-2011 for disabled lives. The range assumes the parameters are "correct" and no parameter risk. For disabled lives, we are applying an age based stochastic longevity model to durational analysis. Excludes active deaths within 15 years of policy issue.

[b] Post 2018 premium increase to eliminate deficit. Assumes 1.4% active mortality improvement for 15 years and 0% disabled mortality improvement

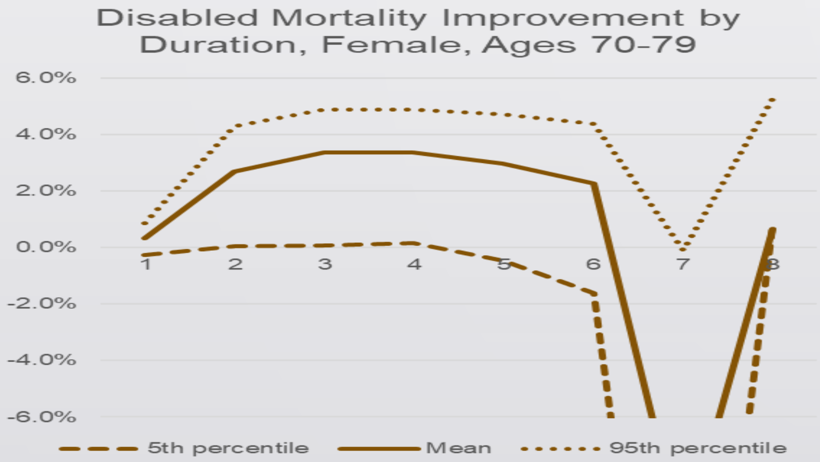
LONGEVITY (Cont'd)

Ages 70 to 79

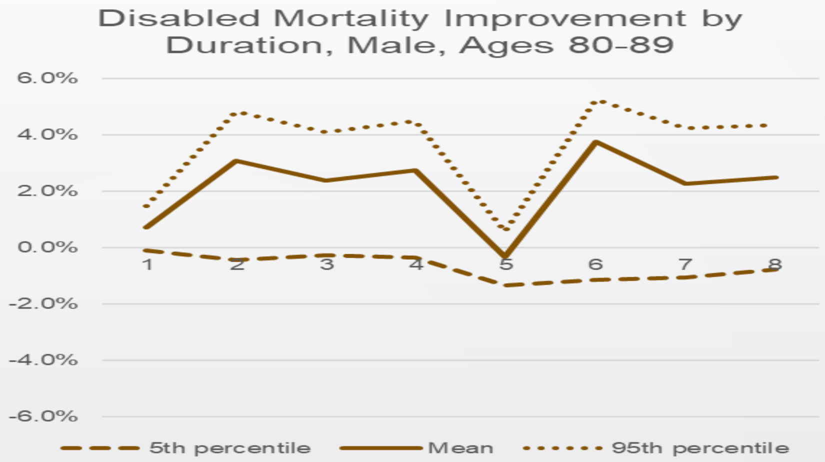
Male

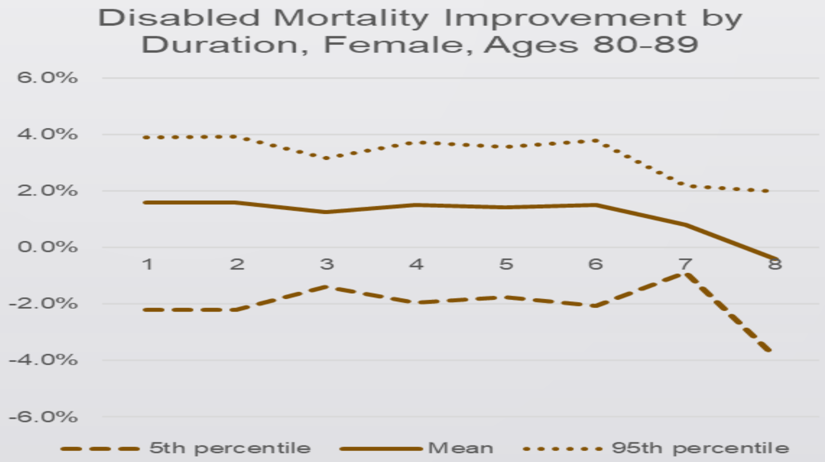


Female



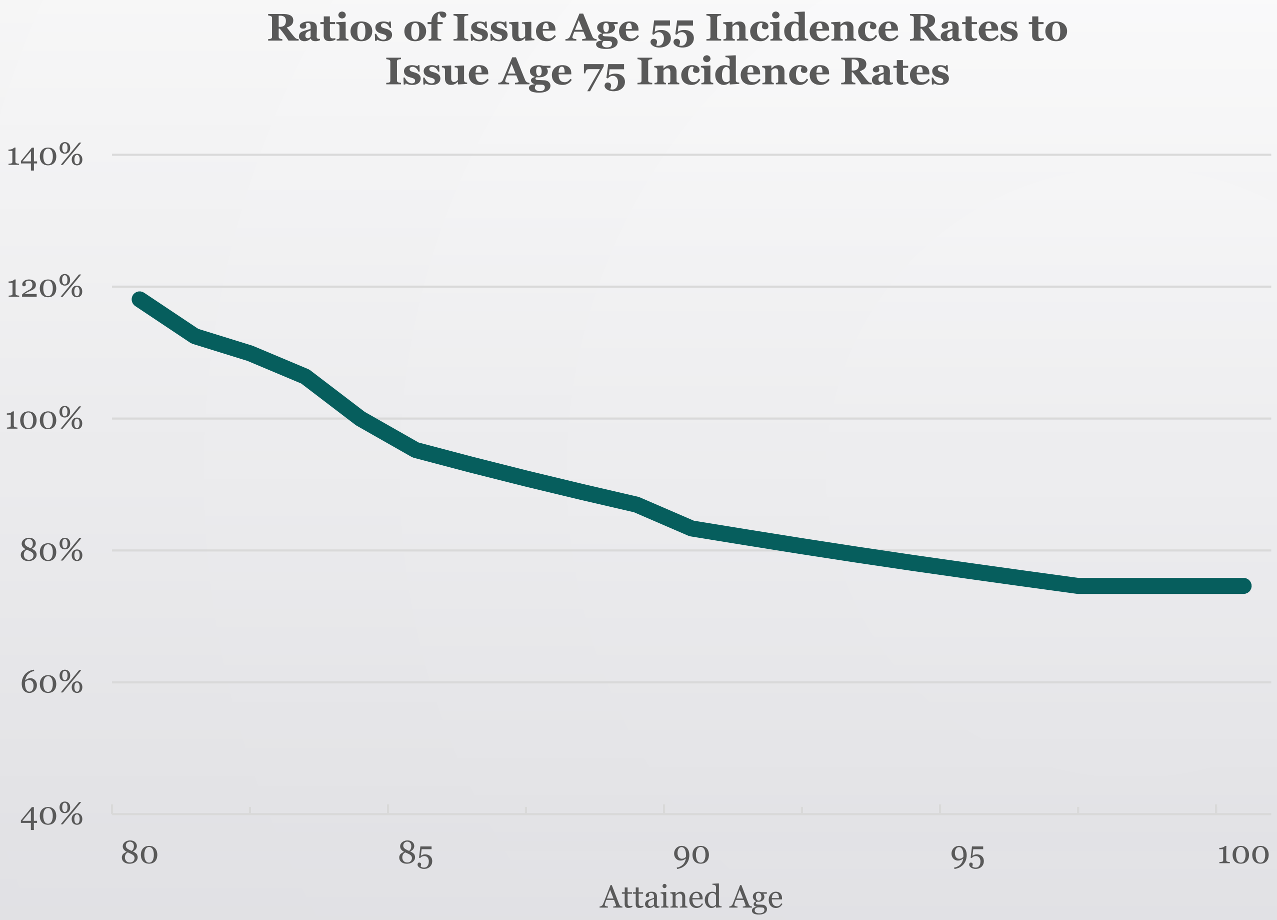
Ages 80 to 89





[a] Simulated using a Lee-Carter model, calibrated on Industry data from 2006-2011 for disabled lives. The range assumes the parameters are "correct" and no parameter risk. For disabled lives, we are applying an age based stochastic longevity model to durational analysis.

ISSUE AGE DISCOUNT



Impacts

	2018[a]	No Issue Age Discount[b]
GPR	$108,000	$126,800
Change in GPR as % of PV of Premiums		18%

[a] Post 2018 premium increase to eliminate deficit.
[b] Assumes 10% higher claims

CONSIDERING ALL ASSUMPTIONS AT ONCE

What if we needed to eliminate the premium deficit due the following changes in assumptions?

- No morbidity improvement
- 1.4% of mortality improvement for active lives, forever
- No issue age discount[a]

	2018[b]	All 3 Changes in Assumptions
GPR	$108,000	$236,800
Change in GPR as % of PV of Premiums		**122%**

[a] Post 2018 premium increase to eliminate deficit.
[b] Assumes 10% higher claims

ACTUARIAL FAIR NON-FORFEITURE VALUE

- Offer policyholder statutory reserve rather than benefit bank
- This may increase the take-up rate, for example from 1% to 5%

Example

- GPR = $134,000
- Statutory Reserve = $108,000
- Benefit Bank = $24,357

Benefit Bank	→	**Statutory Reserve**
($134,000-$24,357) * 1%		($134,000-$108,000) * 5%
Gain to Company = $1,096		Gain to Company = $1,300

Result

- Policyholders can receive better benefits and the Company can release more reserves

ASSET SHARE ANNUITIZATION

- Company uses their actuarial fair non-forfeiture value to purchase a single premium immediate annuity (SPIA) from an insurance company in exchange for LTC contract
- For an $108,000 initial deposit, below are annual income amounts [a] available as of January 1, 2019:

Age	Male	Female
55	$6,156	$5,984
60	$66,95	$6,426
65	$7,506	$7,064
70	$8,403	$7,927
75	$10,011	$9,255

BENEFIT TRIGGERS

- Tax Qualified (TQ) policies require policyholder to need assistance for at least two out of 6 activities of daily living (ADL), as determined by a Company assessment
- Non Tax Qualified (NTQ) policies have Doctor prescribed benefit triggers

Example

- 25% of policies have NTQ triggers
- 28% reduction in claims rate
- All NTQ policies convert to TQ policies
- **Results in a $10,290 reduction of GPR[a] (8% of GPR)**

[a] Based on GPR of $134,000.

CLAIMS MANAGEMENT

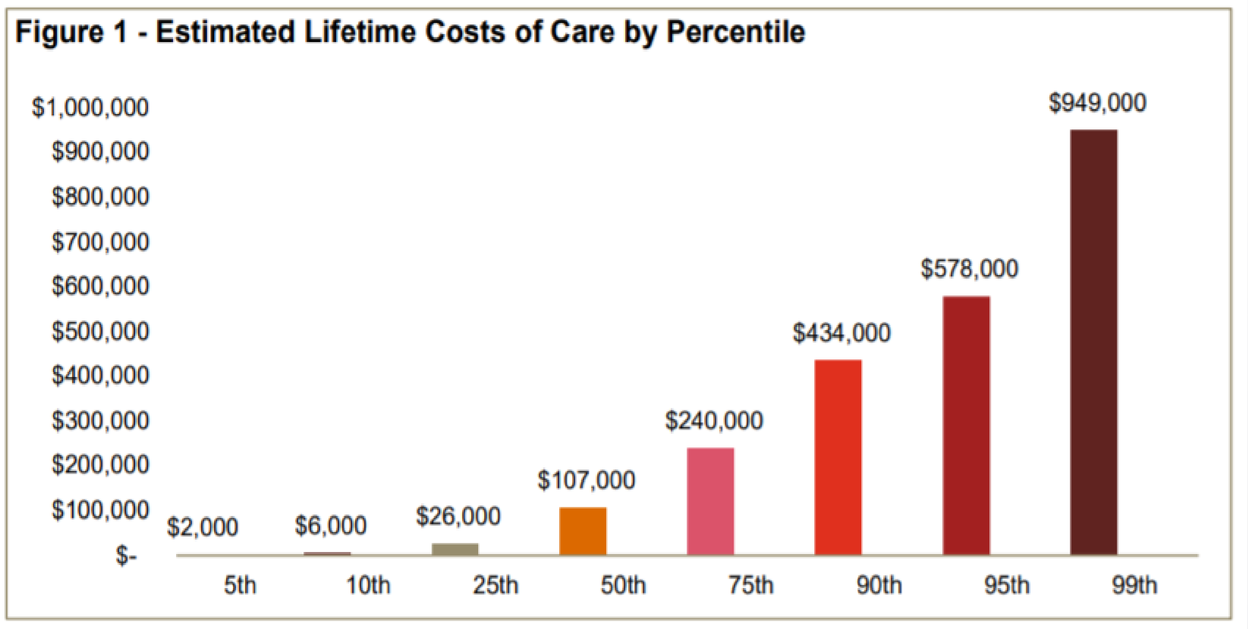
- Companies' claims management practices can have a big impact on profitability
- Below is a table showing the impact on GPR of PwC's observed differences in Companies' claim rejection rates:

Claims Rejection Rates	**2%**	**5%**	**8%**
GPR[a] Reduction	$2,940	$7,350	$11,760
% of GPR	2%	5%	9%

[a] Based on GPR of $134,000.

REDUCE LIFETIME BENEFITS

- Policies with lifetime benefits could be converted to a 5 year benefit period with defined cap on benefits at $750k.
- Experience shows that lifetime care costs in excess of $750k is a low probability event.



Example

- 33% lifetime benefit policies
- 40% decrease in claims rate due to conversion
- All policies with lifetime benefit periods convert to a 5 year benefit period
- **Results in a $12,045 reduction of GPR[a] (9% of GPR)**

[a] Based on GPR of $134,000.

Graph Source: https://www.pwc.com/us/en/industries/insurance/library/long-term-care-services.html

DAYS OF CARE POOL OF MONEY COVERAGE

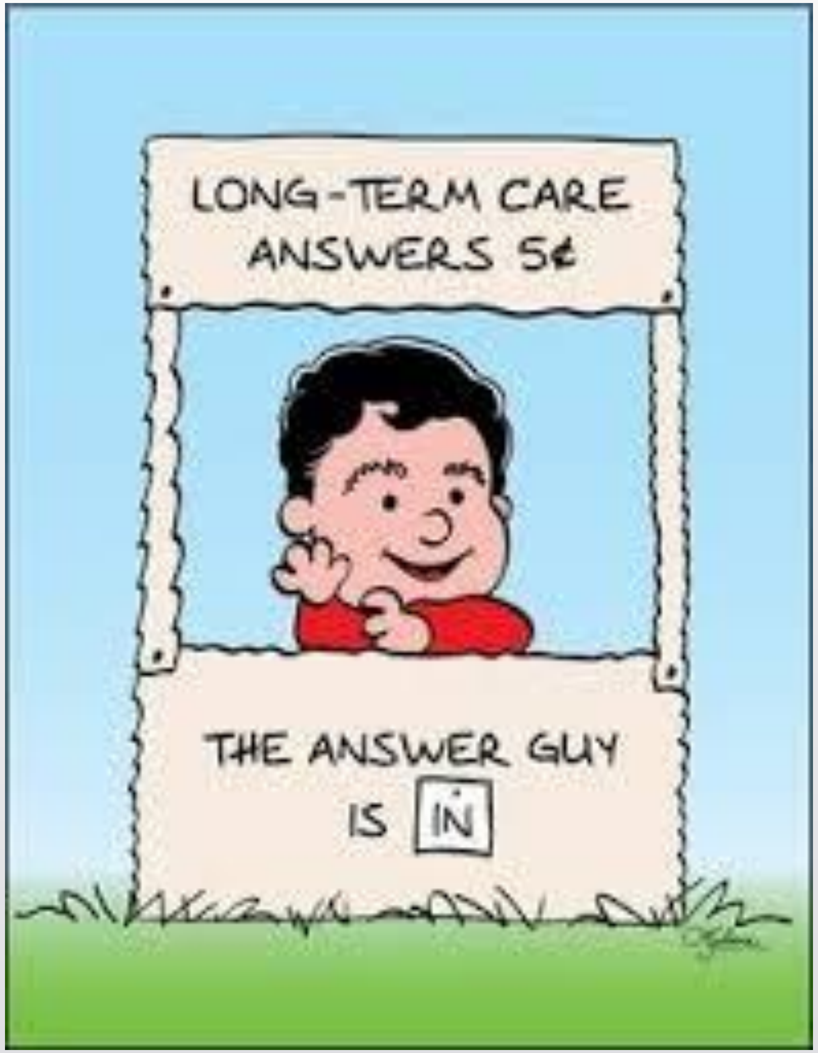
- Change benefit coverage from days of care type to pool of money benefit
- Incentivizes policyholders to use money for benefits more judiciously

Example

- All policies with days of care coverage convert to pool of money coverage
  - Days of Care = 5 years of days of care available, up to $100 per day
  - Pool of Money = policyholder has a pool of money to use that is equivalent to the days of care coverage
- 25% of policies have days of care coverage
- 20% reductions in claims cost for pool of money relative to days of care
- **Results in a $7,350 reduction of GPR[a] (5% of GPR)**

[a] Based on GPR of $134,000.

PENN TREATY EXPERIENCE



POSSIBLE SOLUTIONS

Long-term Care

Analysis

&

An Industry Solution

Navigator Benefit Solutions LLC

Tim Luedtke, FSA

Principal & Consulting Actuary

Economic and Finance Foundations

- “rational self-interest in a system of freely-adjusting markets would lead to order and mutually-compatible prices”
  - Richard Cantillon (1680-1734)
- Adam Smith saw people as operating in their own self-interest
- “Investors are rational and behave in a manner as to maximise their utility with a given level of income or money.”
  - Harry Markowitz (Modern Portfolio Theory)

Foundation Shaken

"[Alan] Greenspan has had a change of heart: he no longer thinks that classic orthodox economics and mathematical models can explain everything."

Gillian Tett, Financial Times
An Interview with Alan Greenspan
October 25, 2013

An Actuary's View

"…We may need to expand our models from … purely actuarial aspects … [i]ndeed for many of the problems … providing of healthcare to people of all ages, inflation protection, retirement benefits …the nonactuarial elements may, in fact, be the most pressing."

"actuarial ideas really are expressions of the dynamics, the time evolution of … motion, and emotion as well."

James Tilley, FSA
Managing Director, Morgan Stanley & Co.
June 12-14, 1989
Washington D.C. Actuarial Meeting
North American Actuarial Centennial Celebration

Regulator's Dilemma

- lifetime loss ratio is 60%
- insurer LR to date <15%
- state residents, yet to file a claim!
- constituent insurers will fund any guarantee benefits
- another state controls any rehabilitation
- & Federal regulation a risk

Not a Perfect Answer,

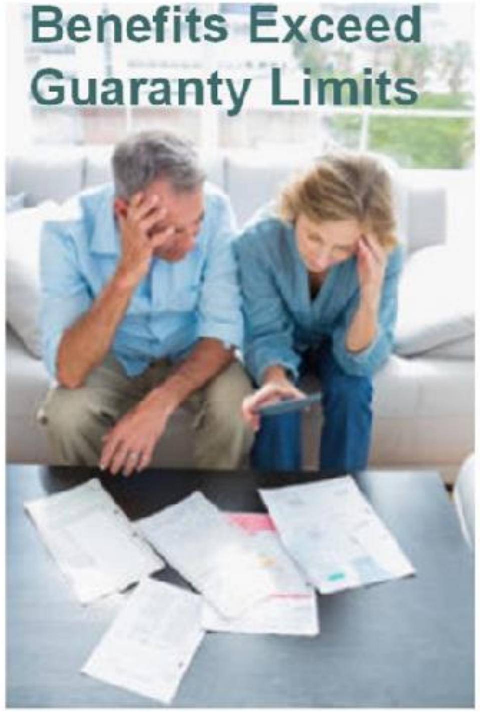
Citizens Still Unprotected

Policyholder Dilemma

$

Rate Increase

- Pay XX% More
- Reduce Inflation Rider
- Cancel Coverage for Refund of Premiums



We Invested So Much Already . . .

Yet with Penn Treaty – What Should We Do?

Amos and Danny
Architects of Behavioral Economics

Prospect Theory:

Option A - $ X Certain

Option B – 50/50 Gamble $ 0 / $ 1000

Prefer Option A:
Where X > ~$370

Amos and Danny
Architects of Behavioral Economics

Prospect Theory:

Option C – $ X Certain Loss

Option D – 50/50 Gamble ($ 0)/($ 1000)

Prefer Option D:
Where X > ~$370

PANEL DISCUSSION

CURRENT ISSUES

- RATE INCREASES
- DOWNGRADES ("LANDING SPOTS")
- SUBSIDIES
- AG-LI (51)
- CFT VS GPR
- MORBIDITY IMPROVEMENT
- RESTRUCTURES
- OTHER SOLUTIONS

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