Actuaries Respond to an Aging Society

Chicago Actuarial Association Meeting
November 14, 2007
Today’s Presentation

- Helps us think about the aging society
- Focuses on
  - Actuarial profession research and innovation
  - 2007 Risks and Process of Retirement Survey
    - Trends and comparison to prior studies
    - Health and long-term care as huge issues
    - Phases of retirement – new focus
  - Links to other research
- Provides ideas about what we might do
- Shares some dreams
Agenda

- Context and current situation
- Other SOA research and initiatives
- Summary and dreams for the future
Context

- Population aging
  - Longer life spans
  - Boomers reaching retirement age
- Continued pressure on spending
  - Government and private sectors
  - Fewer lifetime benefits and more individual responsibility
- Health care = big national issue
  - Uninsured growing
  - Less retiree health
  - Medicare: uncertain future + higher premiums
21st Century Challenges

- Growing conflict over values and security
- Demographics: aging population + low fertility = increasing dependency ratios
  - People need/want to work longer
  - Fewer entrants to labor force
  - Stress on intergenerational transfers/pay-as-you go programs
- Adjusting to evolving definition of retirement
- Global competition: pressure on labor costs > pressure on health
- Regulatory + accounting uncertainty/litigation
- Low savings rates and financial literacy
Trends and realities: Demographics

- Key trends
  - Living longer
  - Older population—partially result of Baby Boom
  - Healthy longer but not forever
  - More divorce

- New ways to think about life cycle
  - Third age: period between full time work and total retirement
  - During transition period
    - Some work and more leisure
    - Supplement earnings with retirement resources
## Trends and Realities

### Demographics—Aging Populations

Changing ratio of active workers to retirees

<table>
<thead>
<tr>
<th>Country</th>
<th>Current</th>
<th>Projected 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>3.44</td>
<td>1.72</td>
</tr>
<tr>
<td>China</td>
<td>5.54</td>
<td>2.26</td>
</tr>
<tr>
<td>India</td>
<td>7.01</td>
<td>4.19</td>
</tr>
<tr>
<td>Italy</td>
<td>2.36</td>
<td>1.33</td>
</tr>
<tr>
<td>Japan</td>
<td>2.44</td>
<td>1.36</td>
</tr>
<tr>
<td>UK</td>
<td>2.64</td>
<td>1.59</td>
</tr>
<tr>
<td>US</td>
<td>3.33</td>
<td>1.90</td>
</tr>
</tbody>
</table>

Reasons & Implications

- Declining fertility rates: fewer workers
- Aging population: older workers
- Increased life expectancies: longer retirement


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Trends and Realities
Women vs. Men

- In 2002, the median earnings of full-time full-year workers
  - Men $38,884
  - Women $29,680

- Median years worked of workers retiring in 2000
  - Men 44
  - Women 32

- Life expectancy at age 65 in 2002
  - Men 16.6 years
  - Women 19.6 years

Trends and Realities
US Marital Status, Age 65+

Marital Status
By Age & Sex, United States 2003

Number of people (thousands)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 65-74</td>
<td></td>
<td></td>
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<tr>
<td>Age 75+</td>
<td></td>
<td></td>
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</tbody>
</table>

Source: U.S. Census Bureau, Statistical Abstract of the United States: 2004-2005, Table No. 53

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How individuals think about retirement

- Focus is on investments: not risk transfer
- Planning time horizon and focus
  - Relatively short/take things as they come
  - Many use intuitive approach
- Perceptions
  - Can do better on their own: overestimate safe withdrawals and don’t focus on longevity
  - Annuity products have poor image (reinforced by advisors)
    Inability to change mind later is big negative to annuities
- Main risk reduction strategy is to reduce spending
- More likely to chose investment advisor than broad based planner
Focus on post-retirement risk

Overview: Public understanding

- Continue to be major gaps in risk understanding
- Health care, long-term care and inflation continue to lead list of concerns
- Differences between retirees and pre-retirees
- Consistency in what we are hearing across time and across surveys
Potential disruptions to stability: Risks Americans face in old age

Risks transferable, poolable

- Longevity: individual and spouse
- Cost of disability and long-term care
- Cost of acute health care
- Economic loss on death of spouse
- Investment risk and interest rate risk

Examples of other risks

- Inability to find job, earn expected income
- Premature retirement risk
- Family members needing care
- Inflation risk (sometimes transferred)
Concerns about risk are fairly constant

How concerned are you that…? (Percentage very or somewhat concerned)

<table>
<thead>
<tr>
<th>Retirees (2007 n=400)</th>
<th>Pre-retirees (2007 n=401)</th>
</tr>
</thead>
<tbody>
<tr>
<td>51%</td>
<td>69%</td>
</tr>
<tr>
<td>46%</td>
<td>75%</td>
</tr>
<tr>
<td>46%</td>
<td>79%</td>
</tr>
<tr>
<td>46%</td>
<td>58%</td>
</tr>
<tr>
<td>43%</td>
<td></td>
</tr>
<tr>
<td>57%</td>
<td>63%</td>
</tr>
<tr>
<td>51%</td>
<td>63%</td>
</tr>
<tr>
<td>57%</td>
<td>65%</td>
</tr>
<tr>
<td>55%</td>
<td>78%</td>
</tr>
<tr>
<td>52%</td>
<td>63%</td>
</tr>
<tr>
<td>52%</td>
<td>61%</td>
</tr>
<tr>
<td>48%</td>
<td>66%</td>
</tr>
<tr>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>48%</td>
<td>55%</td>
</tr>
<tr>
<td>43%</td>
<td>59%</td>
</tr>
<tr>
<td>46%</td>
<td>71%</td>
</tr>
<tr>
<td>47%</td>
<td>54%</td>
</tr>
</tbody>
</table>

You might not have enough money to pay for adequate (2003/2001: good) health care

You might not be able to keep the value of your savings and investments up with inflation

You might not have enough money to pay for [a nursing home/nursing care at home]

You might not be able to maintain a reasonable standard of living for the rest of your life

Emerging values/ideas about risk

“The Great Risk Shift is not just an economic change; it is also an ideological change. For decades, Americans and their government were committed to a powerful set of ideals that combined a commitment to economic security with a faith in economic opportunity. … Today the message is starkly different, you are on your own.”


- Social Security reform options driven by values
- Benefit structures influenced by values
- Huge amounts of risks have shifted to the individual
How well do individuals handle risk?

- Little longer term planning
- Gaps and misperceptions in what people know
- Behaviors often lead to poorer health
- Don’t recognize that long-term care risk applies to them
- Much more confidence in future retirement security than assets to back it up
- Underestimate importance of Social Security, overestimate what they will get from savings and employer plans

Bottom line—many gaps in decisions/planning
“An effective, workable health reform policy must successfully address the interrelationships among costs, quality and access.”
National Business Group on Health, July 2006
Future of employer role depends on total health care system issues
Health Care = big national issue

- Health care =
  - States very active in reform
  - Big issue for 2008 election
  - Costs rising faster than inflation and earnings
  - Medicare: uncertain future + higher premiums
  - Major business group (ERIC) has proposed moving away from employer-based system
    - Includes mandate
    - Includes regional purchasing cooperatives
Health and long-term care risks are most likely to worry pre-retirees

How concerned are you that…?
(Retirees, n=400; Pre-retirees, n=401)

- **You might not have enough money to pay for adequate health care**
  - Retirees: 25% Very concerned, 26% Somewhat concerned (51%)
  - Pre-retirees: 34% Very concerned, 35% Somewhat concerned (69%)

- **You might not have enough money to pay for a long stay in a nursing home or long period of home health care**
  - Retirees: 27% Very concerned, 25% Somewhat concerned (52%)
  - Pre-retirees: 22% Very concerned, 41% Somewhat concerned (63%)

- **You might not be able to rely on children or other family members to provide assistance**
  - Retirees: 11% Very concerned, 18% Somewhat concerned (29%)
  - Pre-retirees: 13% Very concerned, 20% Somewhat concerned (33%)

Inflation continues to be a top concern of retirees

How concerned are you that...?
(Retirees, n=400; Pre-retirees, n=401)

<table>
<thead>
<tr>
<th>Concern</th>
<th>Retirees</th>
<th>Pre-retirees</th>
<th>Very concerned</th>
<th>Somewhat concerned</th>
</tr>
</thead>
<tbody>
<tr>
<td>You might not be able to keep the value of your savings and investments up with inflation</td>
<td>22%</td>
<td>22%</td>
<td>34% (57%)</td>
<td>41% (63%)</td>
</tr>
<tr>
<td>You might not be able to maintain a reasonable standard of living for the rest of your life</td>
<td>20%</td>
<td>19%</td>
<td>28% (48%)</td>
<td>36% (55%)</td>
</tr>
<tr>
<td>You might deplete all of your savings</td>
<td>22%</td>
<td>18%</td>
<td>23% (45%)</td>
<td>37% (56%)</td>
</tr>
<tr>
<td>Your spouse may not be able to maintain the same standard of living after your death (retirees n=261; pre-retirees n=299)</td>
<td>16%</td>
<td>10%</td>
<td>23% (39%)</td>
<td>25% (35%)</td>
</tr>
<tr>
<td>You might not be able to afford to stay in your current home for the rest of your life</td>
<td>16%</td>
<td>10%</td>
<td>20% (37%)</td>
<td>25% (35%)</td>
</tr>
</tbody>
</table>

Inflation

- Most important risk concern for retirees, second for pre-retirees
- Other research indicates that little is done to address the issue
- Experience of last few years
  - Big increases in health costs and premiums
  - Otherwise modest inflation
- Very serious long-term issue
Stages of retirement

- Different way to think about retirement
- Can be defined by activity level, working or not working, age, health status
- Survey defines stages based on abilities and associated needs
- Planning often focused on first stage
- Pre-retirees expect to retire differently than current retirees
  - Ignoring premature retirement risk
  - Big group says retirement does not apply
Stages of retirement

- Those who expect to work are unlikely to do so after age 75
- Couple issues
  - Timing of retirement
  - Changes at death of spouse
- Other research shows changes in activities, time use
  - Papers will be available in monograph
Only half of retirees have or expect an active stage of retirement

Do you think you will have a time in retirement when your abilities and needs are about the same as before you retired?

52% Retiree (n=400) 60% Pre-retiree (n=401)

Pre-retirees expect to retire later than retirees, 1 in 3 say it doesn’t apply

How old were you when you retired or began to retire from your primary occupation? / At what age do you expect to retire from your primary occupation?

<table>
<thead>
<tr>
<th>Age category</th>
<th>Retirees (%) (n=400)</th>
<th>Pre-retirees (%) (n=401)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under age 55</td>
<td>31</td>
<td>1</td>
</tr>
<tr>
<td>55 to 61</td>
<td>30</td>
<td>16</td>
</tr>
<tr>
<td>62 to 64</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>65 to 69</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>70 or older</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Will not retire</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Doesn’t apply</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

Phased retirement already exists informally

In the past 12 months, have you worked for pay . . . ? (Retirees, n=400)

- Not worked for pay at all: 70%
- Full time throughout the year: 12%
- Part time throughout the year: 10%
- Full or part time for only part of the year: 8%

And phased retirement will likely increase in the future

Which statement comes closest to describing how you retired/plan to retire from your primary occupation? (Among those providing retirement age from primary occupation)


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Few retire at the same time as their spouse

Who retired/will retire first? You, your spouse, or will you and your spouse retire together? (Among married retirees and pre-retirees providing retirement age from primary occupation)

For those who want to work, will opportunities exist?

- Wide range of views around future shortages of workers
- Labor force will grow more slowly
- Specific occupations will face challenges
  - Nurses, nuclear engineers, e.g.
  - How many and where?
- Needs for workers subject to
  - Changes in market need
  - Outsourcing
Puzzles around longer work

- More than 7 in 10 people say they want to work in retirement
- About 4 in 10 people retire earlier than planned
  - Don’t plan for premature retirement risk
- Higher age displaced workers take longer to get jobs
- Other research indicates that older applicants get fewer call backs
  - Age discrimination? Will this change as population ages?
- Future: unknown effect of longer work on retirement patterns
A majority expect to experience some level of incapacity

Do you think you will have a time in retirement…?

- **When your abilities and needs are about the same as before you retired**
  - Retiree (n=400): 52%
  - Pre-retiree (n=401): 60%

- **When you are somewhat less able to do things you used to do and your needs are somewhat different**
  - Retiree (n=400): 72%
  - Pre-retiree (n=401): 84%

- **When you are much less able to do things you used to do and your needs are very different**
  - Retiree (n=400): 65%
  - Pre-retiree (n=401): 68%

Insurance plays only a small role in preparing for increased need

What, if anything, have you done or will you do to prepare for your changing needs in retirement? (Among those expecting less active stages)

<table>
<thead>
<tr>
<th>Top Mentions (multiple responses accepted)</th>
<th>Retirees (%) (n=330)</th>
<th>Pre-retirees (%) (n=353)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save (more) money</td>
<td>16</td>
<td>37</td>
</tr>
<tr>
<td>Invest to make assets last</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>Buy long-term care insurance</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Make home modifications</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Cut back on spending</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Stay healthy/improve health</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Pay off debts</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Nothing</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>Don’t know</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

If your spouse were to pass away before you/if you were to pass away before your spouse, do you think it would leave you/your spouse financially...? (Among married retirees and pre-retirees)

Retirees (2007 n=261)
- Better off: 16% (You), 26% (Your spouse)
- About the same: 60% (You), 62% (Your spouse)
- Worse off: 22% (You), 11% (Your spouse)

Pre-retirees (2007 n=299)
- Better off: 21% (You), 34% (Your spouse)
- About the same: 58% (You), 58% (Your spouse)
- Worse off: 8% (You), 21% (Your spouse)


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Death of spouse – major event?

- In many cases, respondents do not anticipate big change
- Many women spend last years in widowhood
  - 4 out of 10 have nothing but Social Security
  - Decline in economic status at widowhood
  - Needs to be planned for
More Research: Planning Software and the Post-Retirement Period

- SOA, LIMRA, INFRE jointly did study to identify how software handles post-retirement risks
- Found major gaps
- Found big variations in results/same scenarios were run
- Lack of quality control in some programs
- Some programs did not handle two-earner families, housing wealth correctly

**Bottom line – tools were much better for accumulation period than for post-retirement; caution needed in selecting tools**

**Study to be repeated in 2008**
Focus groups: Recent retirees with good 401(k) balances

- Goal – understand how people make decisions after retirement
- Concerned that people say they want income but rarely choose it
- Findings –
  - Short term focus
  - Intuition often guide with little analysis
  - Big gaps in knowledge about risk products, investments
  - Changes in investment strategy if new advisor
- Phase II work scheduled for 2008 – survey sponsored by SOA, LIMRA and INFRE
- Full report on research list
Retirement 20/20

- SOA led multi-disciplinary project
- Focused on future of retirement system – looking for new solutions
- Special web-site includes
  - Headlines
  - Paper on self adjusting systems
- New paper calls coming
Living to 100

- Third in series of paper calls from SOA
- Focused on research into high age mortality and implications of longer life
- International and multi-disciplinary in scope
In summary

- Continue to find major gaps in risk understanding
- Longer term risk management very difficult for individuals
- Widows and very old will continue to be vulnerable
- Should be good opportunities for expansion of financial products
- Best retirement programs are those that work without individual action
- Education is desirable, but there are limits on what it can accomplish
Issues for actuaries

- Given that
  - Periods of retirement have lengthened
  - Many people are working at older ages
  - People say they want to work longer
  - Older people seem to have more trouble finding jobs and/or may become physically incapable of obtaining suitable employment
  - Shortages issues – open question
  - Major gaps in focus on financial products
- How should risk-protection systems and products change to meet the evolving work and retirement landscape?
Dreams for the future

- General awareness of variability and length of life and focus on longer term planning
- General understanding of retirement timing and implications
- Strong safety net
- Default options (with the chance to make other choices) in DC plans that include some timed purchase of life income
- Risk protection products that offer a portfolio of options to protect from different risks
  - Potential to use these with retirement resources directly in employer sponsored plans
  - Opportunities to purchase on group basis
- Software that handles post-retirement period well and without too much difficulty
Appendix

- Resources
- More actuarial projects
Academy Social Insurance Committee

- Focuses on policy issues
- Communicates with policymakers and other publics
  - Issue briefs
  - Special reports
  - Do not take positions
- Practice Councils deal with other aging related issues
Learnings from behavioral finance

- Motivating individuals to plan for retirement is extremely difficult
  - The payoff for behavioral change is quite uncertain
  - Workers do not easily buy the idea of payoffs in the distant future
  - The promise of pleasure tomorrow means pain today
  - The wrong decision yields instant gains
  - There is no immediate tangible reward for saving now
  - The savings decision can be postponed without immediate penalty
  - There are no functional deadlines for action.

SOA Committee on Post-Retirement Needs and Risks

- Focus is on understanding and mechanisms to assist in distribution phase
- Work
  - Risk Chart
  - Risks and Process of Retirement Surveys
    - Select issues for special focus
  - Retirement Plan Preferences (with Academy)
  - Misperceptions Papers
  - Focus Groups on Financial Management in Retirement
  - Research on retirement planning software
Methodology: Risks and Process of Retirement Survey

- Sponsored by the Society of Actuaries
- 801 19-minute telephone interviews conducted in June and July 2007
- Interviewed Americans ages 45 to 80
  - Considered retirees and pre-retirees separately
- Margin of error at 95% confidence level is ± 5 percentage points for all retirees and all pre-retirees
- Conducted by Mathew Greenwald & Associates and Employee Benefit Research Institute (EBRI)
Resources – research and information

- List provided of Society of Actuaries key studies from actuarial profession
  - Retirement 20/20
  - Several other studies
- Actuarial Foundation Consumer Education active in literacy for retirement
  - Several Projects with WISER
  - DOL Project – Take the Mystery Out of Retirement Planning
  - Supported AARP tip sheets
- For information on policy issues
  - American Academy of Actuaries Issue Briefs