



SOCIETY OF ACTUARIES

**Equity-based Insurance Guarantees Conference**  
**October 27-28, 2008**

**Overview of Market Landscape**  
[Hubert Mueller](#)

**Moderator**  
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## Overview of Market Landscape

### **Equity-Based Insurance Guarantees Conference (Boston)**

**October 27, 2008**

**0840 –0930 hours**

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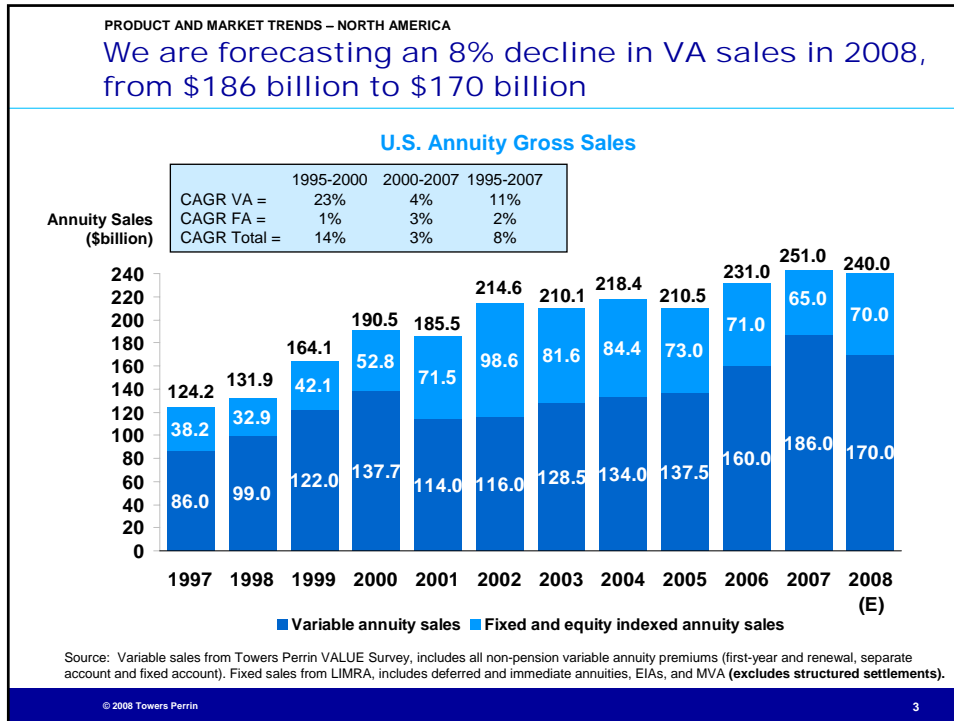
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## Agenda

- **Product and Market Trends – North America**
- Product and Market Trends – Global
- Rating Agency/Regulatory Developments
- Recent Trends with Risk Management
- Outlook

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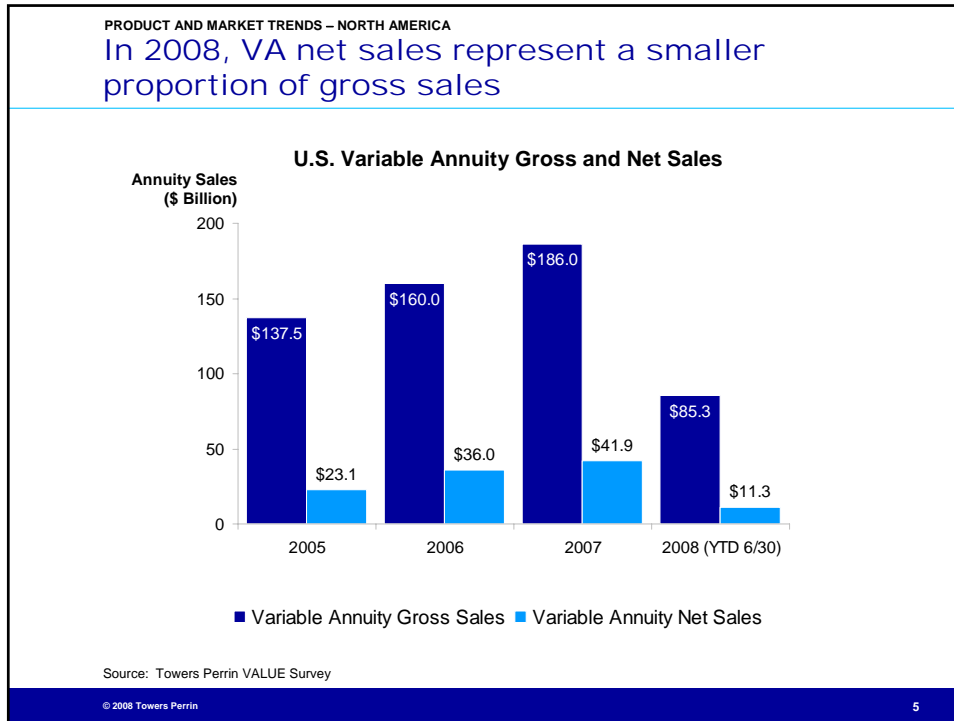
PRODUCT AND MARKET TRENDS – NORTH AMERICA

The Top 15 companies still control 86% of the VA market, but some positions have shifted

| YTD Ranking |      | Company Name                    | Sales Volume (\$ million) |               | Market Share % |             |
|-------------|------|---------------------------------|---------------------------|---------------|----------------|-------------|
| YTD 2008    | 2007 |                                 | 2007                      | YTD 2008      | 2007           | YTD 2008    |
| 1           | 5    | ING                             | 13,095                    | 7,780         | 7.0            | 9.1         |
| 2           | 1    | AXA Financial/MONY              | 16,234                    | 7,587         | 8.7            | 8.9         |
| 3           | 3    | TIAA-CREF                       | 14,116                    | 7,161         | 7.6            | 8.4         |
| 4           | 2    | MetLife                         | 15,833                    | 6,943         | 8.5            | 8.1         |
| 5           | 6    | Lincoln National                | 12,826                    | 6,119         | 6.9            | 7.2         |
| 6           | 7    | Prudential Financial            | 11,678                    | 5,563         | 6.3            | 6.5         |
| 7           | 8    | John Hancock                    | 10,805                    | 4,974         | 5.8            | 5.8         |
| 8           | 4    | Hartford Life                   | 13,255                    | 4,790         | 7.1            | 5.6         |
| 9           | 11   | AIG/SunAmerica/American General | 9,531                     | 4,689         | 5.1            | 5.5         |
| 10          | 10   | Pacific Life                    | 10,675                    | 4,280         | 5.7            | 5.0         |
| 11          | 9    | RiverSource Life                | 10,762                    | 4,219         | 5.8            | 4.9         |
| 12          | 12   | Jackson National                | 9,114                     | 3,549         | 4.9            | 4.2         |
| 13          | 13   | Nationwide Life                 | 6,051                     | 2,553         | 3.3            | 3.0         |
| 14          | 15   | AEGON Companies                 | 3,166                     | 1,831         | 1.7            | 2.1         |
| 15          | 14   | Allianz                         | 3,316                     | 1,464         | 1.8            | 1.7         |
|             |      | <b>Total Top 15</b>             | <b>160,457</b>            | <b>73,502</b> | <b>86.3</b>    | <b>86.2</b> |
|             |      | <b>Market Total</b>             | <b>186,000</b>            | <b>85,250</b> |                |             |

\* Source: Towers Perrin's VALUE Survey (YTD 2008 sales through June 30)

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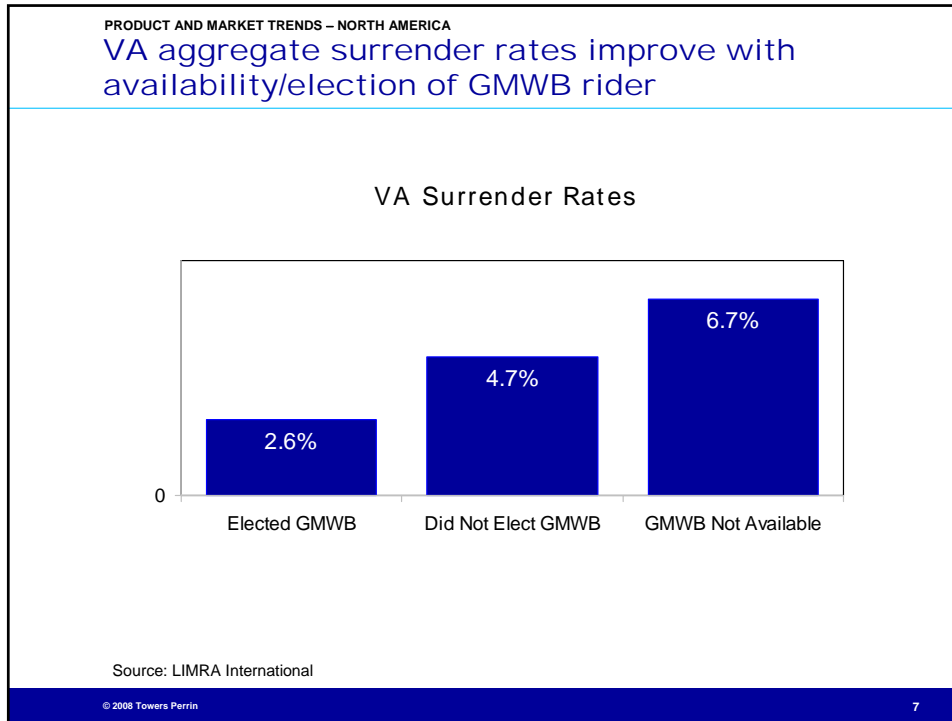
PRODUCT AND MARKET TRENDS – NORTH AMERICA

Typical current forms of VA death benefit and living benefit guarantees\* (GLBs) sold in the US

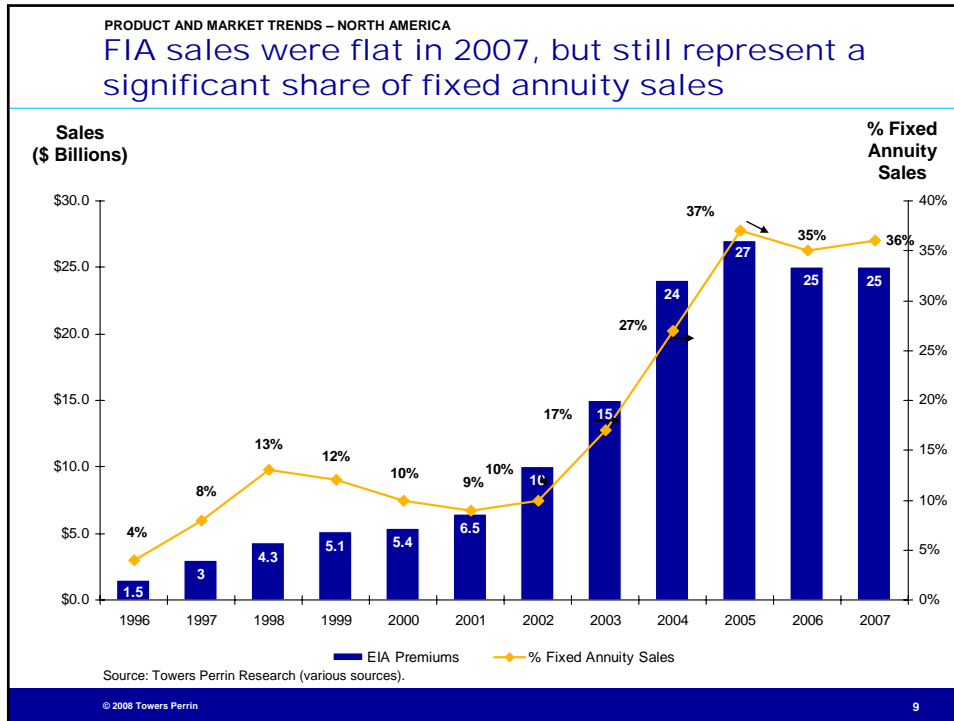
| Type | Nature of Guarantee                        | Typical Waiting Period | Typical Guarantee                             | Enhanced Feature   | Typical Annual Charge |
|------|--|------------------------|---|--|-----------------------|
| GMDB | Lump sum on death                          | None                   | Annual ratchet or 5% roll-up, to age 80       | Combination, or 7% roll-up                                 | 15 – 35 bps           |
| GMWB | Guaranteed amounts via partial withdrawals | None                   | Return of premium via 5% withdrawals for life | Bonus and resets until withdrawal; higher % for older ages | 60 – 85 bps           |
| GMIB | Guaranteed income at annuitization         | 10 years               | 5% roll-up                                    | Greater of 5% roll-up and annual reset                     | 50 – 75 bps           |
| GMAB | Guaranteed lump sum                        | 10 years               | Return of premium at year 10                  | Resets/combo products                                      | 25 – 50 bps           |

\*Many features require diversification of assets.

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- PRODUCT AND MARKET TRENDS – NORTH AMERICA
- Recent GMWB innovations have intensified focus on this feature
- Lifetime GMWB withdrawals were introduced in 2003
    - Many products have asset allocation restrictions to keep charges down
    - Most carriers have introduced a version for married couples
    - Several carriers offering higher maximum withdrawals for older ages
  - Sun Life introduced “Income Storage Benefit” (March 2007)
    - Unused GMWBs are stored for later withdrawal
  - Prudential added lifetime GMWBs to its 401(k) product (July 2007)
  - Bonus features were added by most companies (since 2007)
    - Use of rollups and ratchets (or both) to increase guarantee base
  - Hybrid products were introduced in 2008
    - Only one product approved to date
  - We saw a flurry of re-pricing and enhancements this year
    - Higher charges/more restrictive features to make up higher option costs
    - Lately, companies have introduced new features and raised charges
      - Combinations GMWB with GMAB (85 to 170 bps)
      - Optional nursing home rider doubles annual income (20 bps)
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**PRODUCT AND MARKET TRENDS – NORTH AMERICA**  
**The Top 5 players in the Fixed Indexed Annuity (FIA) market have a market share of 61%**

**Top 5 Players**

| Company          | 2007 Sales (\$ Billions) | Market Share (%) |
|------------------|--------------------------|------------------|
| Allianz Life     | \$5.2                    | 21%              |
| AVIVA USA        | \$4.3                    | 17%              |
| American Equity  | \$2.1                    | 8%               |
| Old Mutual       | \$2.0                    | 8%               |
| Midland National | \$1.7                    | 7%               |
| <b>Top 5</b>     | <b>\$15.3</b>            | <b>61%</b>       |
| Market Total     | \$25.2                   | 100.0%           |

- In 1Q08, Aviva's FIA sales exceeded Allianz Life's sales for the first time

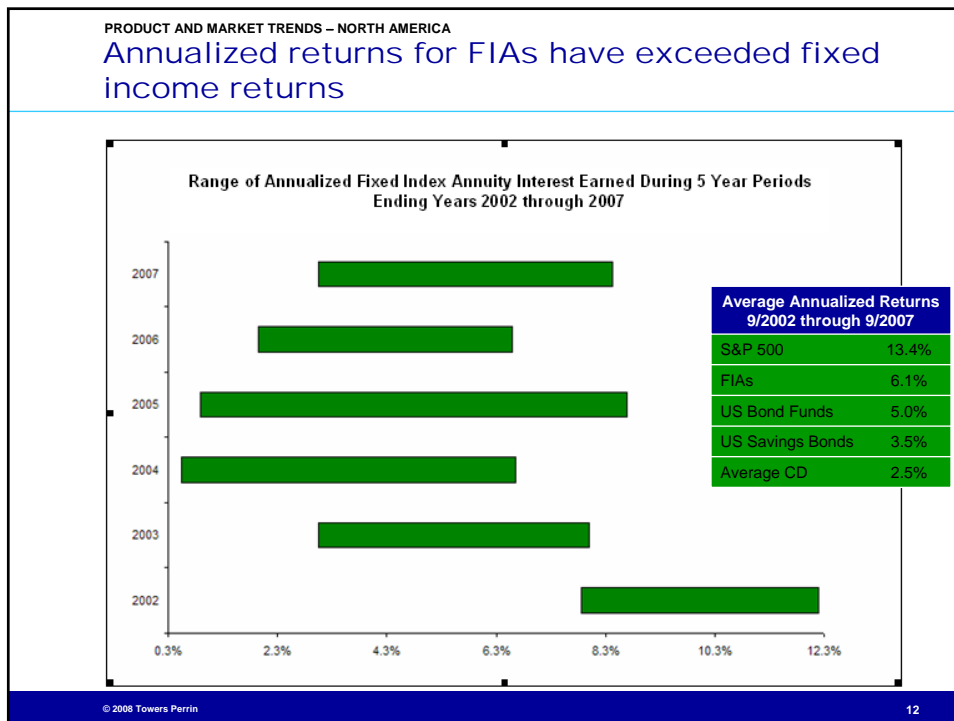
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PRODUCT AND MARKET TRENDS – NORTH AMERICA

**FIA's were a key growth engine within fixed annuity segment, but last few years sales are flat**

- Option budget determines the cap, which is reset each year
  - Newer designs use monthly accumulation of index performance, where each month is capped
  - Companies typically buy static put options on a weekly or monthly basis to match obligations
  - Hedging is still mainly static, not dynamic
- FIA's have received increased scrutiny lately
  - The SEC has proposed that certain FIA's be considered a security
  - Broker licensing issues
  - Increased market conduct risk
- Not expecting a lot of growth in this segment in the near or medium term

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### Agenda

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PRODUCT AND MARKET TRENDS – GLOBAL

### VAs are rapidly spreading across the globe

|   |  |   |
|---|--|---|
| <p><b>UK</b></p> <ul style="list-style-type: none"> <li>- Aegon</li> <li>- AIG Life</li> <li>- Hartford Life</li> <li>- MetLife</li> </ul> <p><b>Germany</b></p> <ul style="list-style-type: none"> <li>- Allianz</li> <li>- AXA</li> <li>- Hartford Life (2009)</li> </ul> | <p><b>France</b></p> <ul style="list-style-type: none"> <li>- AXA</li> </ul> <p><b>Spain</b></p> <ul style="list-style-type: none"> <li>- AXA</li> </ul> <p><b>Korea</b></p> <ul style="list-style-type: none"> <li>- Samsung Life</li> </ul> <p><b>Hong Kong</b></p> <ul style="list-style-type: none"> <li>- HSBC</li> <li>- Manulife</li> </ul> | <p><b>Japan</b></p> <ul style="list-style-type: none"> <li>- Hartford Life (first)</li> <li>- Most of the market now</li> <li>- Recent new entrants</li> <li>■ Allianz</li> <li>■ MassMutual</li> </ul> <p><b>New Markets</b></p> <ul style="list-style-type: none"> <li>- Singapore</li> <li>- Taiwan</li> </ul> |
|---|--|---|

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## PRODUCT AND MARKET TRENDS – GLOBAL

## Market trends with global VA guarantees

- Europe
  - GMWB and GMIB becoming popular vehicles to satisfy huge retirement opportunity (older population)
  - Generally introduced by multinationals, forcing local players to “catch up”
  - Hedging becoming increasingly more common – multinationals still have the edge
- Asia
  - Japanese market is highly developed (\$125 billion in assets)
    - Guarantee features tend to be more conservative
    - Higher proportion of bond funds provides better protection against tail risk for insurers
  - Other markets (Korea, Taiwan) are just starting
  - Hedging still mostly in its infancy

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## RATING AGENCY/REGULATORY DEVELOPMENTS

## Rating agencies' views of capital adequacy are increasingly based on Economic Capital (EC)

- Multinationals and large domestic companies have adopted EC following adoption of European solvency regulations in selected markets
  - Expected adoption of Solvency II in 2011 (2012) is having global impact, particularly with the subsidiaries of multinationals in North America
  - A suggested approach for minimum regulatory capital in Solvency II model is to use the 99.5 percentile, with a one-year observation period
- EC has proven to be effective in quantifying risk in an ERM framework and measuring appropriate capital needs
  - S&P has focused on ERM/EC since 2005
- Because it has proven effective, more insurance companies globally are implementing and considering implementing EC:
  - Rating agencies agree and are starting to incorporate EC models into their view of insurance companies' capital adequacy
  - Regulatory developments in Europe (Solvency II) and North America (Principles-based Regulation) further encourage companies to develop EC
  - EC is the common approach for defining required capital in a market-consistent embedded value ("MCEV") framework
  - Peer pressure from competitors is prompting companies to act now

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## RATING AGENCY/REGULATORY DEVELOPMENTS

## Principles-based regulation (PBR) – recent trends

- Implementation effort is at full steam
  - No changes to VA RBC (C-3 Phase II)
  - VA CARVM was adopted for year-end 2009 (retrospective)
  - Life and Fixed Annuity Capital Model (C-3 Phase III) expected to be effective for year-end 2009 (retrospective)
  - Life and Fixed Annuity Reserve Model and Valuation Manual expected to be adopted during 2009 or 2010, with full implementation expected to begin January 1, 2010 or 2011 (prospective only)
- Current discussions continue between NAIC, ACLI, actuaries and tax authorities
  - More focus on Solvency II – NAIC is considering using a more streamlined approach to adoption
- Companies need to prepare for PBR now

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RATING AGENCY/REGULATORY DEVELOPMENTS

**IFRS (Fair Value) reporting will be replacing US GAAP in the medium term**

- The SEC has published a proposed roadmap that would lead to the mandatory use of IFRS reporting by US insurers beginning in 2014
  - A final decision would be made in 2011, based on some trial reporting by 100 large companies by 2011
- Implications
  - US GAAP, in its current form, will give way to IFRS
  - Market-consistent reporting will become the norm
  - Full alignment between hedging economic risk and the accounting treatment
    - Should lead to hedging of life-contingent GLBs over time (GMDB, GMIB)

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RATING AGENCY/REGULATORY DEVELOPMENTS

**44% of companies in our CFO Survey are already using a market-consistent reporting basis or intend to do so in the next three years**

**Are you preparing financial reports on a market-consistent basis for any purpose?**

| Reporting Status   | Percentage |
|--|------------|
| We do not currently report internally or externally using a market-consistent basis and do not intend to do so | 56%        |
| We have been using a market-consistent basis for both internal and external reporting for a year or more       | 8%         |
| We have been using a market-consistent basis for internal reporting for a year or more                         | 8%         |
| We have already started to use a market-consistent basis for internal reporting in some areas                  | 16%        |
| We intend to report internally using a market-consistent basis in the next three years                         | 12%        |

Source: Towers Perrin CFO Survey (NA) 2007

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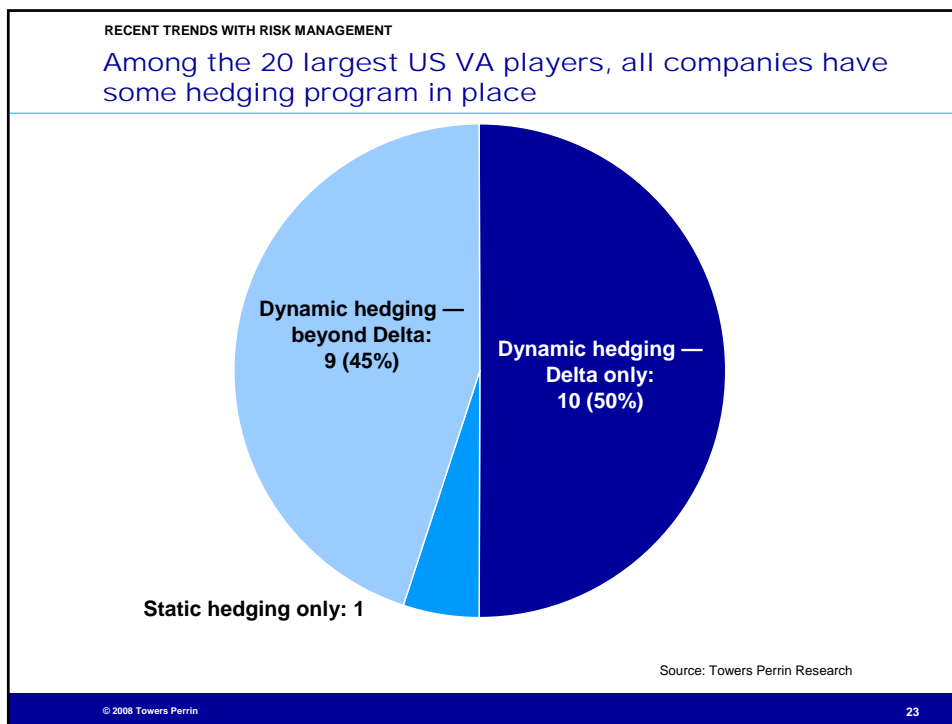
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### RECENT TRENDS WITH RISK MANAGEMENT

## GLB risk management strategies

- Product Design
  - Asset allocation restrictions
    - Can reduce tail risks significantly, leading to lower capital requirements and more competitive charges
  - Age restrictions
    - Higher withdrawals at older attained ages
  - Fee assessment
    - Based on guarantee base, account value or greater of the two
  - Limiting maximum annual growth on resets / bonus features
- Reinsurance
  - Quota-share alternatives available during 2007, but have dried up this year
  - General lack of repricing of guarantees despite higher market volatility has made reinsurance too expensive
- Hedging
  - Multi-Greek dynamic hedging becoming standard practice
  - Companies generally assume market volatility will return to historic levels over time (5 – 10 years)
  - Recent market volatility has led to some breakage and reassessment



## OUTLOOK

## Lessons learned to date in the US

- Proliferation of GLBs should help the life insurance sector gain a larger share of global retirement assets
- Even the larger companies have only been hedging VA guarantees for a few years, mainly in a bull market
  - Many companies still only hedge Delta risk
  - Ability to assess/improve hedge effectiveness will become a key differentiator for success
- Regulators and rating agencies are only allowing partial credit for hedging when defining capital requirements
  - Typically, only 50% credit is allowed initially
- Use of hedging may enable a reduction in risk-based capital (20%–30%), but may increase reserves
  - Need to take into account in pricing and valuation
  - Implementing “smart modeling” techniques will expedite processing of large stochastic models

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## OUTLOOK

## The outlook for VA sales globally and in the US is good

- Growing number of individuals reaching retirement
- Growing pool of retirement assets and rollover assets in the US
  - Approximately \$15 trillion by end of 2007, plus \$300 billion in annual rollovers to individual retirement accounts
- Shift of retirement savings responsibility from employer to employees
- US life insurers can leverage their expertise internationally
  - Example: Hartford Life will be selling VAs in Germany by 2009
- GLBs provide a huge growth opportunity for life insurers
  - Larger asset size could help improve economics with investment advisory fees and revenue sharing
- Forces companies to continue refining their pricing and risk management strategies
- Unique position of insurers to offer products protecting against longevity risk, vs. banks/mutual funds
- Sales and profits are negatively affected by increased market volatility

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OUTLOOK


## Where will the US annuity market go?



- VA product design will remain a key differentiator for sales success
  - GLBs a must for growth
- Annuity sales growth in 2009 and beyond will continue at a slower pace (5-6% growth for VAs, 2-3% overall)
- Proliferation of VAGLBs will continue, leading to further bifurcation, lower ROEs and ongoing market consolidation
  - Requires setting up hedging programs
  - Improving hedge effectiveness will become a key market differentiator
- Payout annuities with longevity features will increase their market share
- We see a trend emerging towards simpler, low cost products and features
- Principles-based regulation will lead to increased capital and reserve requirements
  - Smaller companies are being hit harder
  - Need to offer living benefits to achieve scale
  - Expecting further market consolidation

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## Questions and Comments



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