

# Universal Life or Annuity – LTC Combinations

Product Design,  
Underwriting, Pricing and  
Modeling Considerations

Chicago Actuarial  
Association

Carl Friedrich and Deyu Zhou  
March 9, 2010

# Background – Hybrid Life/LTC Plans

- Hybrid plans generally have a component that accelerates, or draws down, remaining base plan values (death benefits and cash values) to pay for a first tier of LTC coverage
  - Represents a form of self-insurance, and results in lower rates than independent LTC benefits
- Hybrid life/LTC coverages beginning a period of expansion
  - Shrinking number of insurers selling stand-alone LTC
  - Increased rates for new LTC sales
  - Companies willing to gain experience through reduced risk plans
  - Significant product development activity in the works
- Interesting new annuity/LTC combinations appearing, with more in development due to new tax law changes

# Why the Turmoil?

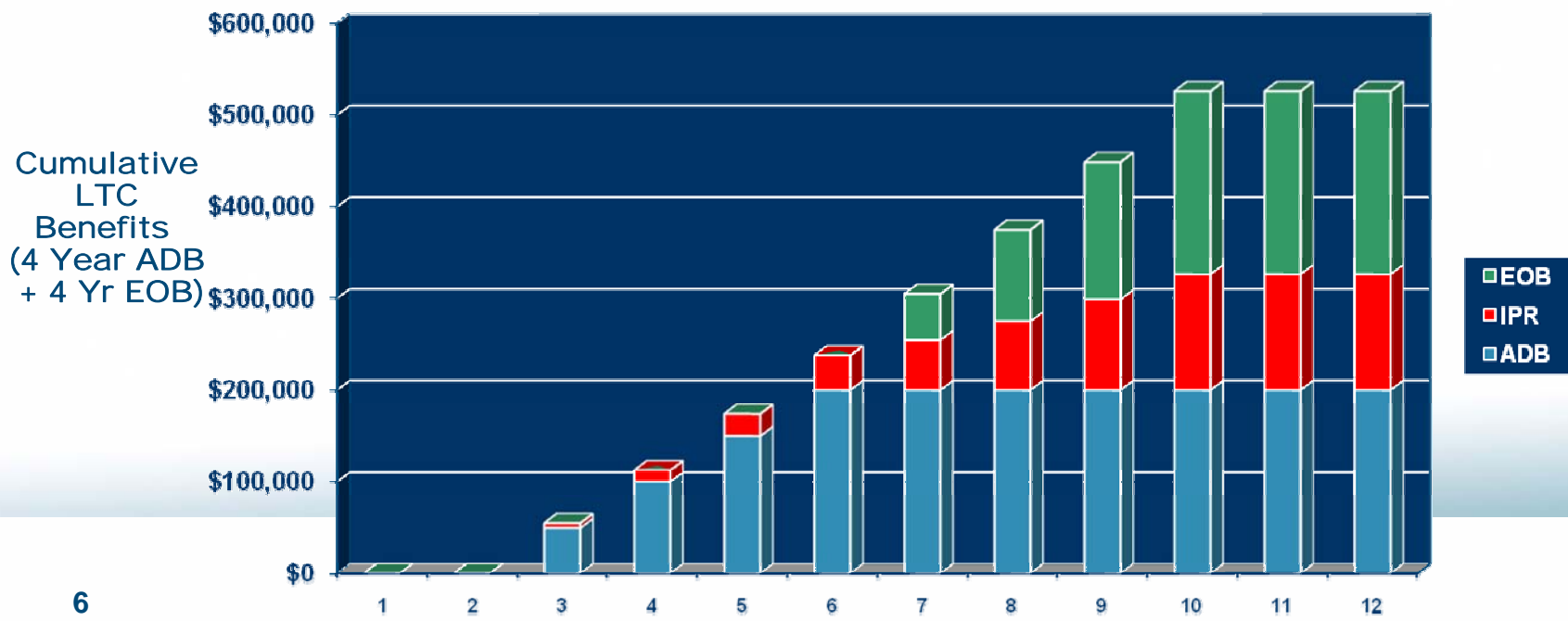
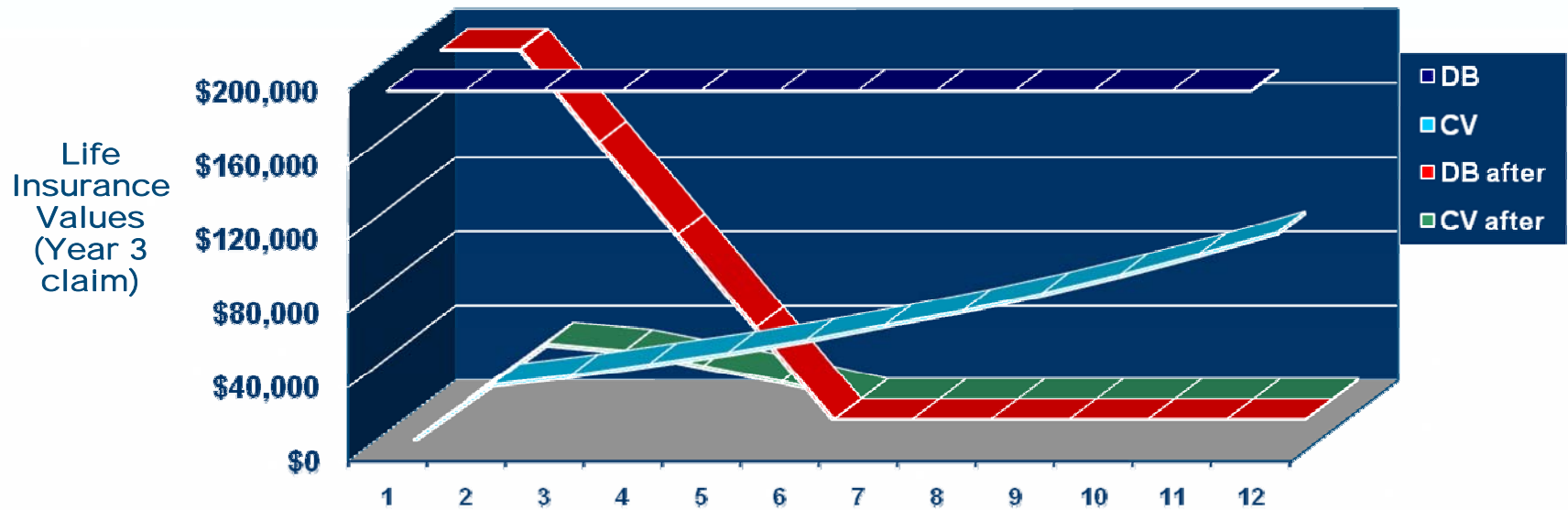
- **Companies leaving the market**
  - Lapse rates, interest rates , & mortality: low
  - Morbidity - claims quite close to pricing
- **Producer dissatisfaction**
  - Rate increases & fewer company choices
  - Product complexity
  - Rates on new products 25% to 40% above levels available five years ago
- **Consumers “put off by the price tag of stand-alone LTC product” (2007 LIMRA survey)**

# Life/LTC Product Basics

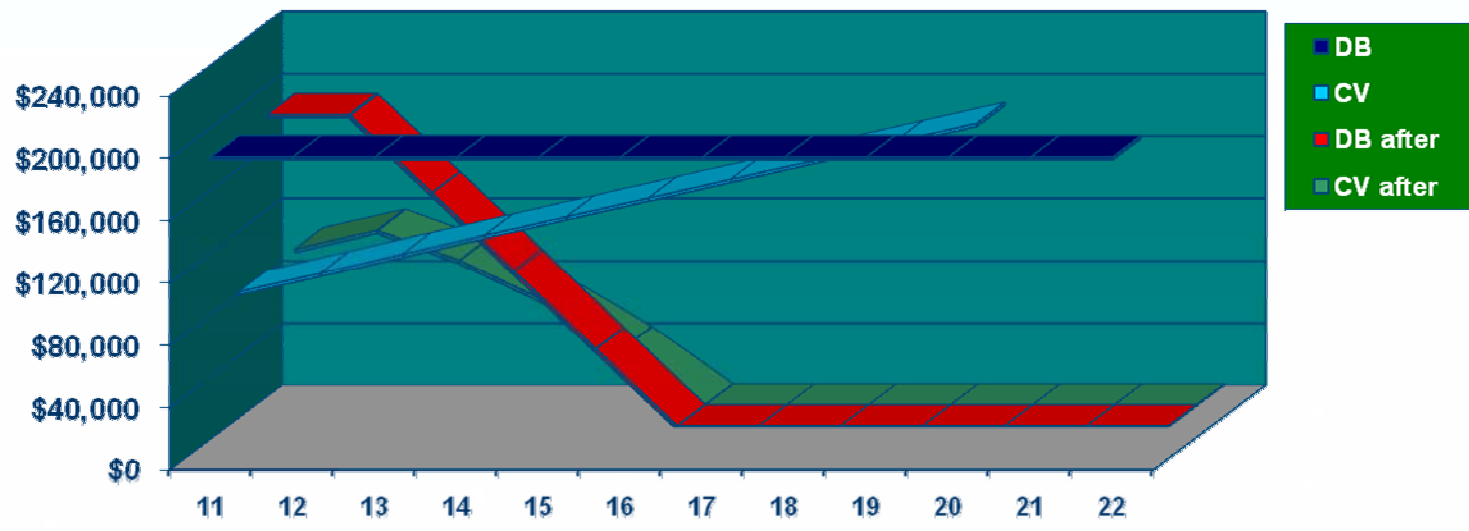
- Various base plans including single premium universal life, flexible premium UL, WL, and VUL
- Accelerated Death Benefit LTC rider (ADB)
  - Pays out a specified portion of DB per month with a proportionate reduction to CV's
  - Charge structure typically YRT per thousand of NAR, but a growing number of states (at least 5 including FL, NC, OH, CO, and HI) are imposing level charge requirements
- First generation
  - ADB only
  - Low cost
  - Self Insurance
  - Protect the producer

# Life/LTC Product Basics

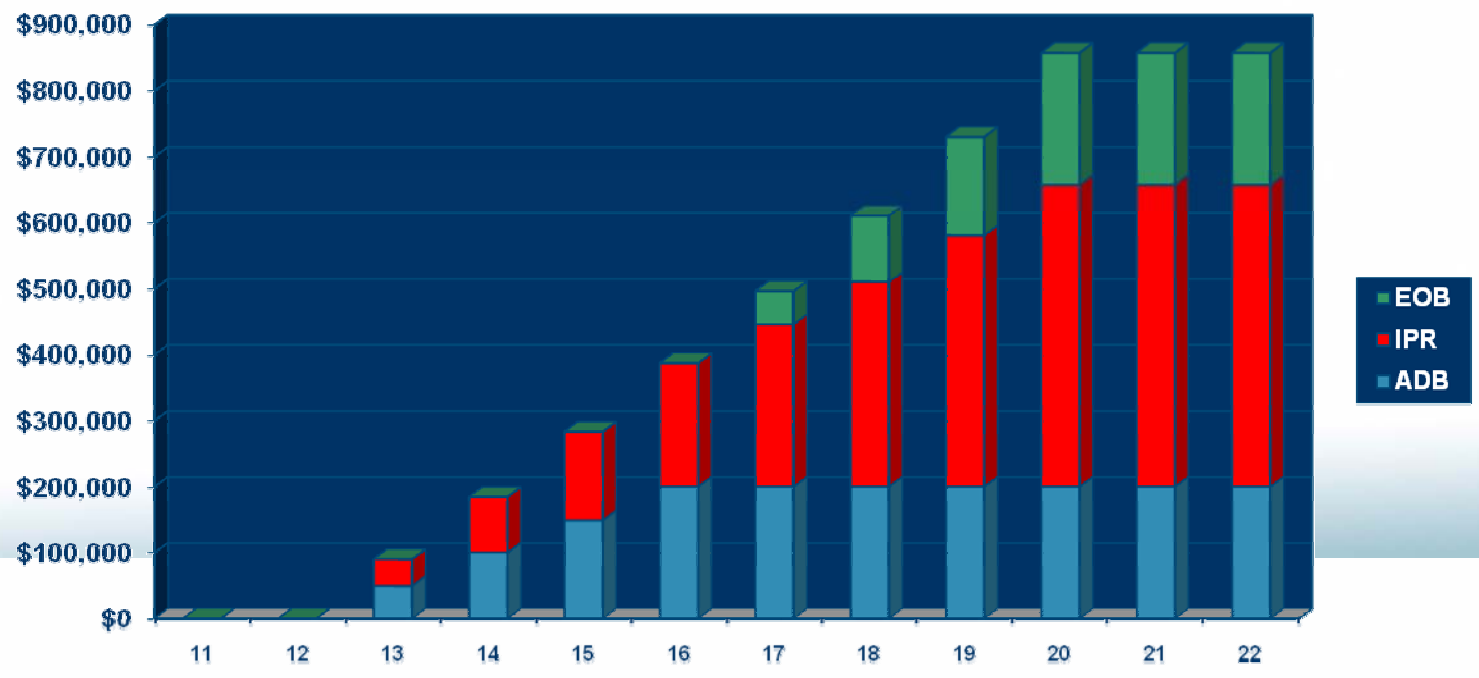
- Second generation
  - Adds EOB
  - Asset re-positioning: Return assets, a multiple of assets (DB), or a multiple of DB (EOB)
  - Inflation option rounds out the coverage and addresses the comprehensive LTC needs



Life Insurance Values (Year 13 claim)



Cumulative LTC Benefits (4 year AB + 2 year EOB)



# Why Companies like Combos

- Profit from multiple sources
  - Margins on LTC riders currently quite high
- Reduces risks to company vs. stand-alone LTC
  - Less anti-selection
  - ADB reduces risks (morbidity, lapse, possibly distribution by sex risk, and interest rate risks)
  - Risks on independent benefits are deferred until late into typical claims
- Marketable product
- Protects the producers
- Huge market need



# Regulatory Requirements

- ADB not subject to a series of LTC requirements
  - Suitability and Shopper's guide
  - Loss ratio
  - Inflation Option
  - Nonforfeiture option if charges are YRT
  - Other LTC Model Reg requirements are generally assumed to apply to ADB, including agent licensing requirements
- Common view is that EOB benefits are subject to all LTC regulatory requirements

# Company Taxation and 7702

- CVAT tests
- GPT tests
- LTC riders are not QAB's
  - Charges are deemed to be distributions
- DAC taxes
- Premium taxes
- ADB benefits may be treated as DB for taxes
  - Must qualify under 101(g) or 7702B
- EOB benefits have favored tax treatment if meeting TQ requirements
- Effect of benefit payments on 7702 calcs?

# 2006 Pension Protection Act (PPA) Changes

- “Separate Contract” treatment is clear
  - Charges are distributions
  - Technical correction to HIPAA – applies retroactively
- Charges for TQ riders reduce basis
  - Non-taxable when deducted
  - Increase gain in contract
  - Effective 1/1/2010
- Still not a QAB
- 1035 Exchanges

# PPA Impact on Life/LTC Combo

	Current Law	Under PPA
Benefits	LTC benefits are tax-free if they qualify under 7702B or 101(g)	Same
Tax Treatment of charges	The LTC rider charges are treated as distributions. MEC contracts treated as gain first.	The LTC rider charges still distributions, but not taxable; however, they reduce basis in the life contract
1035 Exchanges	Tax treatment of transaction unclear	Allowed

# Market Positioning

## ■ Price Point

- Single Premium: \$60K – \$100K, but varies by age and amounts in excess of \$100K not uncommon
- Level Premium: Varies by Age
- Target \$3,000-\$6,000/month Benefit
- Target \$100K Face Amount or higher

## ■ Literature

- Emphasis on:
  - Simple “asset repositioning” sales track
  - Control of assets
  - LTC coverage / flexibility
  - Live, die or run with the money – you’re still OK

# Future Positioning

- Expand markets to younger ages, better mix of male insureds, level premiums
  - Growth opportunity for needs based selling
  - Better profitability with more males
  - Address the affordability issue
- May take time to attune distribution outlets to these opportunities

# Life/LTC Advanced Product Variations and Guarantees

- Nonforfeiture Benefits
- Return of Premium Options
- Residual death benefits
- Waiver
- Traditional No-Lapse Secondary Guarantees
- LTC rate guarantees
- Guaranteed minimum death benefits

# Design Considerations, and Interactions Among Benefits

- Acceleration and Life
- Inflation benefits
  - Monthly maximums
  - Lifetime maximums
  - Costly at younger ages
- Partial withdrawals and Loans
  - LTC Benefits
  - ROP Benefits



# Pricing Assumptions

- LTC claim costs
  - Experience varies by product type, underwriting, marital status, and class
  - Incidence rates vary a lot by sex, with a bigger driver of claim cost differences being increased longevity of females leading to many more lifetime claims for females
  - Experience in combo market more favorable for short term claims
- Mortality
  - Disabled lives
  - Other lives

# Pricing Assumptions

- Lapses
  - Stand-alone LTC lapses in ultimate durations 1-2%
  - Combo plans, particularly those with meaningful benefits, could have lapse rates that approach these levels in ultimate durations
- RBC factors
- Reserves
  - Statutory: ADB at  $\frac{1}{2}$  cx if YRT charges, EOB and IPR use a classic active life reserve calculation per LTC standards, claim reserves for expected run-off of claims
  - GAAP: May need SOP03-1 calculations for EOB/IPR

# Illustration Requirements

- Lapse support test
- Self support test
- With or without riders
- EOB/Inflation charge structures inherently front-ended

# Pricing and Distribution of Business

- By sex (sex distinct or uni-sex rates)
- By age
- By class (life, LTC, marital, substandard)
- By LTC benefit
- Re-balancing to reduce distribution by sex risk

# Modeling Issues and Approaches

- Important to capture the interactions of benefits and track the different cohorts of policyholders moving on and off ADB claims
  - ADB claimants have high mortality, remainder of lives have better than average mortality
- Best approach to model incremental returns on ADB is to examine cash flows for life plus ADB, then for life only, and use the differences
  - The net effect will reflect ADB charges, ADB benefits, ADB reserves, reductions to future life benefits and charges, etc.
  - Premium income and benefits in later durations for life plus ADB will be less than premium income and benefits for life only, because ADB claims will reduce the future life amounts inforce
- EOB/IPR usually layered on top as another increment

# Economics of ADB/EOB

- Incremental underwriting/issuance costs for riders over life only costs are usually modest
- Commissions on ADB anywhere from a renewal rate to a standard life first year rate
- Reserves on ADB anywhere from  $\frac{1}{2}$  cx if YRT charges to a first principle reserve calculation on the net claim cost
- Charges for ADB often sloped like LTC claim costs, so net effect is often a first year outflow, a fairly short break-even period on a statutory basis, and fairly steady and attractive returns
- EOB economic characteristics more in line with stand-alone LTC, with longer break-even periods, but returns in the combo market are often 15-20%
  - Under single premium structures, break-even periods may not always lengthen

## Economics of ADB/EOB/IPR

Product (single premium)	IRR	PV Profits	% of Premium Profits	Break-even year
Life only	14%	\$55	7%	7
Life plus ADB	15%	\$55	8%	6.5
Life plus ADB plus EOB	16%	\$65	9.5%	6
Life plus ADB plus EOB plus IPR	17% (female 14%, male 19%)	\$91 (female \$67, male \$120)	10.5% (female 7%, male 13%)	4

# Risk Assessment and Risk Management

- ADB

- YRT charges largely eliminate persistency risk and interest rate risk, and sex distinct charges eliminate distribution by sex risk
- Charges are guaranteed by some companies, but may be increased for many companies (perhaps with caps defined by the company)
- Morbidity risk is mitigated by interaction with death benefits/cash values
- Morbidity risk is increased in moving from an expense reimbursement model (which caps benefits equal to expenses), to an indemnity model (which requires formal care but pays a predefined amount), to a disability model (which only is based on disability)



# Risk Assessment and Risk Management

- EOB/IPR

- Level charges create persistency risk and interest rate risk, and recommended unisex charges create distribution by sex risk
  - ALM and possibly hedging may be useful in controlling the interest rate risk
  - Persistency risk may be offset by life profits, depending on the characteristics of the base plan

# Annuity/LTC Product Variations

- **Deferred annuities**

- Design one: Payout of AV as LTC benefit, without SC, during first 2 to 4 years of LTC, with extension of benefits for a specified period after that
- Design two: Introduction of coinsurance during initial payout stage, where a portion of the monthly benefit does not reduce AV but comes from true insurance
- Either features monthly pay-outs tied to the account value at the time of initial claim

- **Immediate annuities**

- Enhanced pay-outs when LTC trigger met

- **All feature charge structures that are typically level amounts, in basis points, against account values**

# Consumer and Company Benefits

- Deferred annuity, first design:
  - Waiver of SC modest cost to company
  - Coinsurance, if any, can be modest yet still provide marketing sizzle
  - Extension of coverage addresses full LTC need, with a long elimination period
  - Package still less risky than stand-alone LTC
  - Cost of LTC benefits still less expensive than stand-alone coverage
  - Pricing synergies between annuity and LTC

# Regulatory Environment

- Requirements for riders that are clearly intended as LTC are less clear than in the life combo arena, but generally similar treatment as for life-based ADB and EOB provisions
- Since annuity-based benefits are based on account values, the inflation protection offer requirement is sometimes addressed in annuity combos by an offer to allow the policyholder to pour in more premium on an annual basis such that cash values increase by 5% or more

# Policyholder Taxation

- Treatment of charges
  - Several companies have assumed that LTC charges are to be treated as a distribution for tax purposes
  - PLR request to that effect was withdrawn in 2005 when the IRS expressed concern about whether then current tax code allowed for annuity/LTC combos
    - Led in part to PPA 2006 provisions that provide clarification
- Treatment of LTC benefits
  - Some companies have filed their riders as “intended to be TQ”, and have designed their plans to meet all of the normal TQ requirements
  - Most ADB type provisions have not been structured as TQ

# Company Taxation

- DAC taxes
  - Currently 1.75%
  - Change as a result of PPA, beginning after 12/31/2009
  - Treated as LTC, with DAC tax rates of 7.7%
- Premium taxes

# PPA Changes

- Favored tax treatment for non-qualified annuity combos if LTC rider meets TQ requirements beginning after 12/31/2009
  - “Separate Contract” treatment
  - Charges not taxable, but reduce basis
  - Benefits not taxable
  - Language in Act says that this treatment applies regardless of whether benefits paid serve to reduce remaining base plan values
    - Note: Need to meet the test of providing insurance, which requires some meaningful amount at risk to the insurance company
- 1035 Exchanges allowed beginning after 12/31/2009

# PPA Impact on Annuity/LTC Combos

	Current Law	Under PPA
Benefits	Not clearly defined. Most companies take the position that the LTC payments are taxable, with some exceptions	Favorable tax treatment of benefits if riders designed as TQ, on non-qualified annuities only  Portions (or all?) of AV currently taxable may be paid out tax-free
Tax Treatment of charges	Not clearly defined	The LTC rider charges are distributions but not taxable, however they reduce basis. No 213(b) deduction of premium allowed.
1035 Exchanges	Tax treatment of transaction unclear	Allowed
DAC taxes	1.75%, but consider IRC 848(e)(3)	7.70%



# Pricing Assumptions

- LTC claim costs
  - Utilization of independent benefits similar to stand-alone LTC
  - Incidence of claim
  - Claim termination rates
  - De minimis benefits such as waiver of charges not as likely to be utilized
- Reserves
  - Statutory: ADB using first principle ALR on net claim cost, EOB and IPR a classic active life reserve calculation per LTC standards, claim reserves for expected run-off of claims
  - Alternative might be a CARVM approach on the integrated contract
  - GAAP: May need SOP03-1 calculations for EOB/IPR

# Pricing Assumptions

## ■ Lapses

- Deferred annuities are persistency supported
- Stand-alone LTC lapses in ultimate durations 1-2%
- Combo plan lapses could approach these levels in ultimate durations with richer LTC designs
- Tremendous pricing synergies with many designs
  - If benefits of higher persistency on the base plan are attributed to LTC rider, the cost of the rider can be reduced to as low as 60-70% of that of stand-alone LTC
  - Conversely, if lapse rates are higher, ala traditional SPDA lapse rates, the LTC will still be self-supporting

# Pricing and Distribution of Business

- By sex (sex distinct or unisex rates)
- By age
- By LTC benefit

## Economics of ADB/EOB

- Incremental underwriting/issuance costs for riders over annuity only costs are usually modest
- Commissions on ADB same as annuity rate
- Reserves on ADB usually modest
- Charges for ADB flat as basis points on AV, so pre-funding involved
- EOB economic characteristics more in line with stand-alone LTC, but with lower compensation (but higher than annuity only), and returns in the combo market are often 15-20%

## Economics of ADB/EOB

Product	IRR	PV Profits	ROA	Break-even year
Annuity only, std lapses	10.9%	\$611	17 bp	7
Annuity only, low lapses	11.4%	\$1093	25 bp	6.5
Annuity plus LTC, low lapses	12.9%	\$1094	30 bp	6

# Risk Assessment and Risk Management

- ADB

- True costs of most designs are very modest, as the only real benefit is waiver of SC
- Future designs may feature reductions to account values that are less than the dollars of benefits being paid (see PPA), so risk may increase somewhat

- EOB/IPR

- Best viewed as layers of LTC benefits being purchased based on account value
  - As account values grow/decline, new layers of LTC coverage are added/subtracted
  - Charges are level basis points on AV
  - Charges for new layers are based on original age cost structure, so an added risk
- Persistency based pricing synergies as noted earlier

# Future Considerations

- Market evolution
  - More variations inevitable
  - New structures for ADB to meet the test of insurance and thus assure that pay-outs are tax-free
  - **Provide the only mechanism that allows gain in an annuity contract to be paid out on a tax-free basis**
- Upgrades and exchanges to add LTC to inforce annuity policyholders
  - Enhance persistency
  - Protect inforce business
  - **Provide the only mechanism that allows gain in an annuity contract to be paid out on a tax-free basis**

# Future Considerations

## ▪ Market evolution

- Consider 60 year old annuity purchaser depositing \$100K who needs 25 months of LTC at age 80
  - Without LTC rider, she cashes out \$265K (5% annual growth) and pays \$50K of taxes on gain (30% tax rate), with a net of \$215K after tax
  - With an LTC rider that pays out up to 150% of AV, with a cost of 50bp per year, the annuity grows to \$240K so the contract pays out \$360K tax-free
  - Note: this ignores potential tax benefits of itemized deductions for un-reimbursed LTC medical expenses



# Future Considerations

## ▪ Market evolution

- Case 2: Same client needing 6 years of care under a 2+4 plan
  - Without LTC rider, she cashes out \$265K (5% annual growth) and pays \$50K of taxes on gain (30% tax rate), with a net of \$215K after tax
  - With the LTC rider with a cost of 75bp per year, the annuity grows to \$230K so the contract pays out \$690K tax-free