

# Recent Developments in Individual Life Annuity Markets and Products

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Worldwide

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# Outline of Presentation

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- I. Background Trends in Retirement Plans
- II. Traditional Immediate Annuity Products
- III. New Annuity and Lifelong Distribution Products
- IV. Issuance in the Individual Annuity Market
- V. A Proposed Combination Product: The Life Care Annuity

## I. Background Trends in Retirement Plans

A. Social Security, a PAYGO DB plan, is not permanently solvent as currently structured.

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1. The long-run financial imbalance of the program is 3.7 percent of covered payroll.
2. Many reform proposals include personal accounts, either as carve-outs or add-ons, either as compulsory or incentivized.
3. There will be a need for some individual distribution mechanisms from the personal accounts.

## I. Background Trends in Retirement Plans

### B. Employer-Sponsored and Other Retirement Plans Are Increasingly Individual Accounts

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1. According to the BLS, the percent of all private industry employees participating in retirement plans increased from 48 percent in 1999 to 50 percent in 2005.
2. In 1998 (only data available from BLS), 98 percent of state and local government employees participated in retirement plans.
3. Surprisingly, the percent of all private industry workers in DB plans remained at 21 percent over the 1999-2005 period (90 percent for state and local government workers in 1998), although other data (from the PBGC) may indicate that an increasing number of workers are in frozen plans.

## I. Background Trends in Retirement Plans

### B. Employer-Sponsored and Other Retirement Plans Are Increasingly Individual Accounts

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4. More familiarly, the percent of all private industry workers participating in DC plans increased from 36 percent in 1999 to 45 percent in 2005.
5. Moreover, according to DOL, in 2001 (latest data available), almost 20 percent of active participants in DB plans were in cash balance plans.
6. Overall, there seems to be an increased demand for investment performance participation, flexibility, portability, liquidity, and choice.
7. Hence, it is a fair inference to draw from these trends that there will (or should) be an increased need for individual distribution mechanisms from these types of retirement plans as well.

# I. Background Trends in Retirement Plans

## C. An Aside: What We Like About Funded DB Plans

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1. Participation is mandatory.
2. Investment diversification across time and across plan participants lowers risk.
3. Life annuities are automatically paid (or at least available).
4. Employer attachment/retirement incentives are possible.
5. Some investment performance participation and inflation protection are possible.
6. Within constraints of law and prudence, funding flexibility is possible.
7. There is ease of financial planning by plan participants.
8. Depending on scale, these plans can have low administrative and investment expenses, while benefiting from sophisticated investment management.

## II. Traditional Immediate Annuity Products

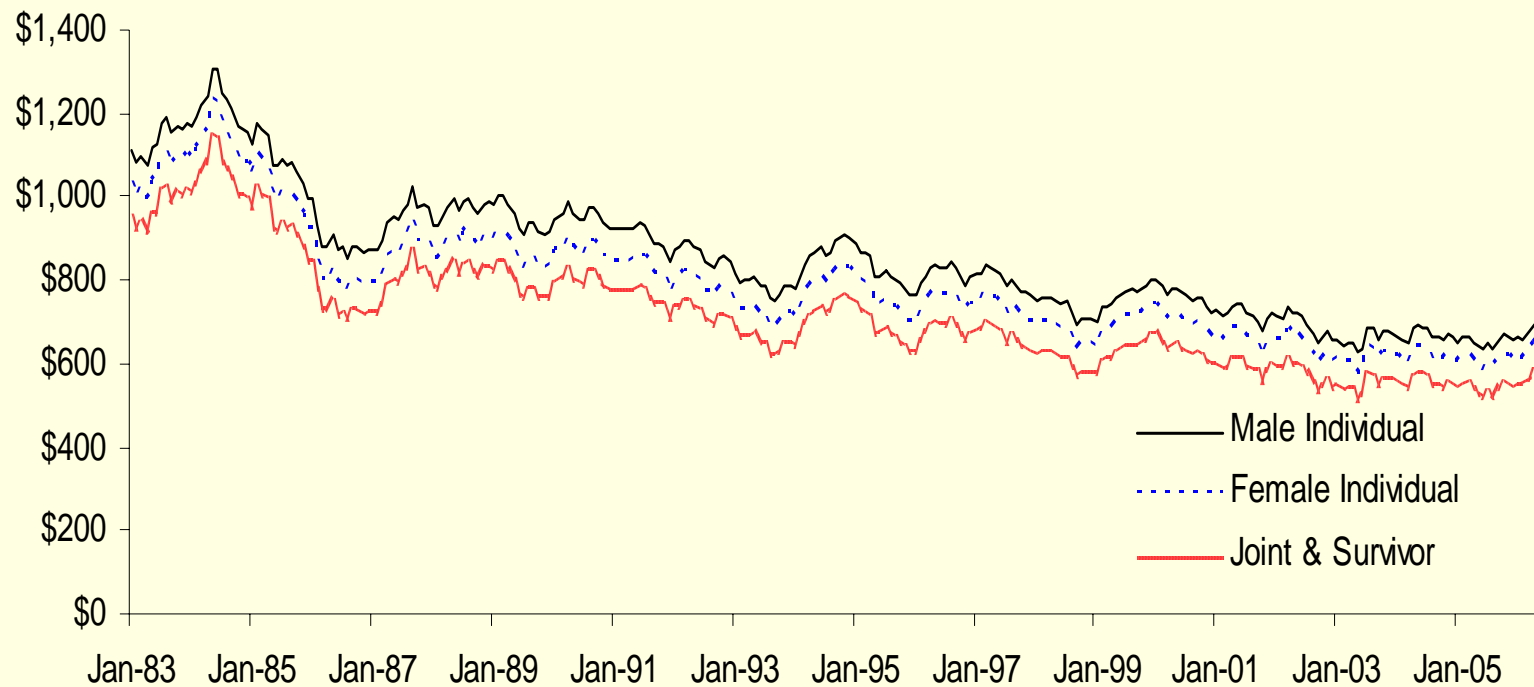
### A. SPIA

1. Basic product is quite simple—a single premium paid to a life insurance company guarantees a fixed stream of nominal payments for the life (or lives) of the insured(s). In its pure form, there is no investment (“cash”) value or liquidity.
2. Payments are determined by interest rates available in the market at time of issuance and by the age (and gender, where allowed by law) of the insured.
3. Common options available include a guarantee period, joint-and-survivor, cash refund, and, for a few companies, fixed rate of increase in future payments.
4. Research and industry pricing practices show that in voluntary markets, the mortality experience of individual annuitants is lower than general population, owing to health/wealth selection effects. This effect amounts to an increase in the annuity price of about ten percent.

## II. Traditional Immediate Annuity Products

### A. SPIA

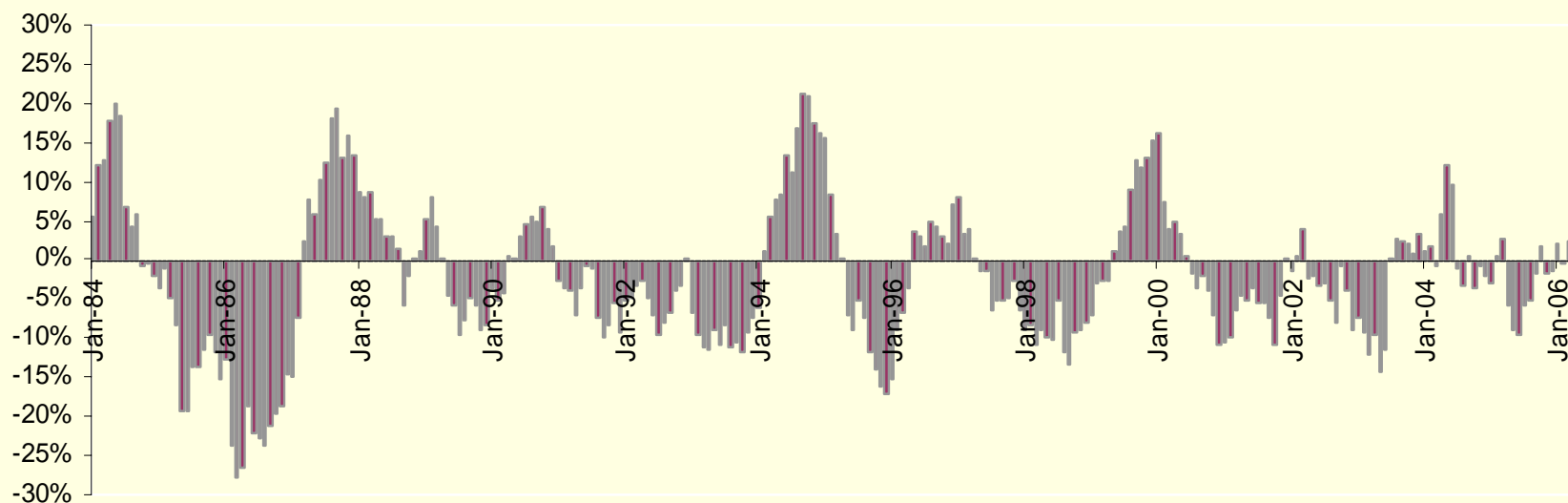
Fixed Monthly Payment for \$100,000 SPIAs with Guarantee Period  
Purchased by 65 Year Olds in January 1983-June 2006  
Simulations Based on Model in Soares and Warshawsky (2004)  
Uses end-of-month Treasury spot curve and Annuitant Mortality Table, projected using  
Social Security Trustees' Report factors



## II. Traditional Immediate Annuity Products

### A. SPIA

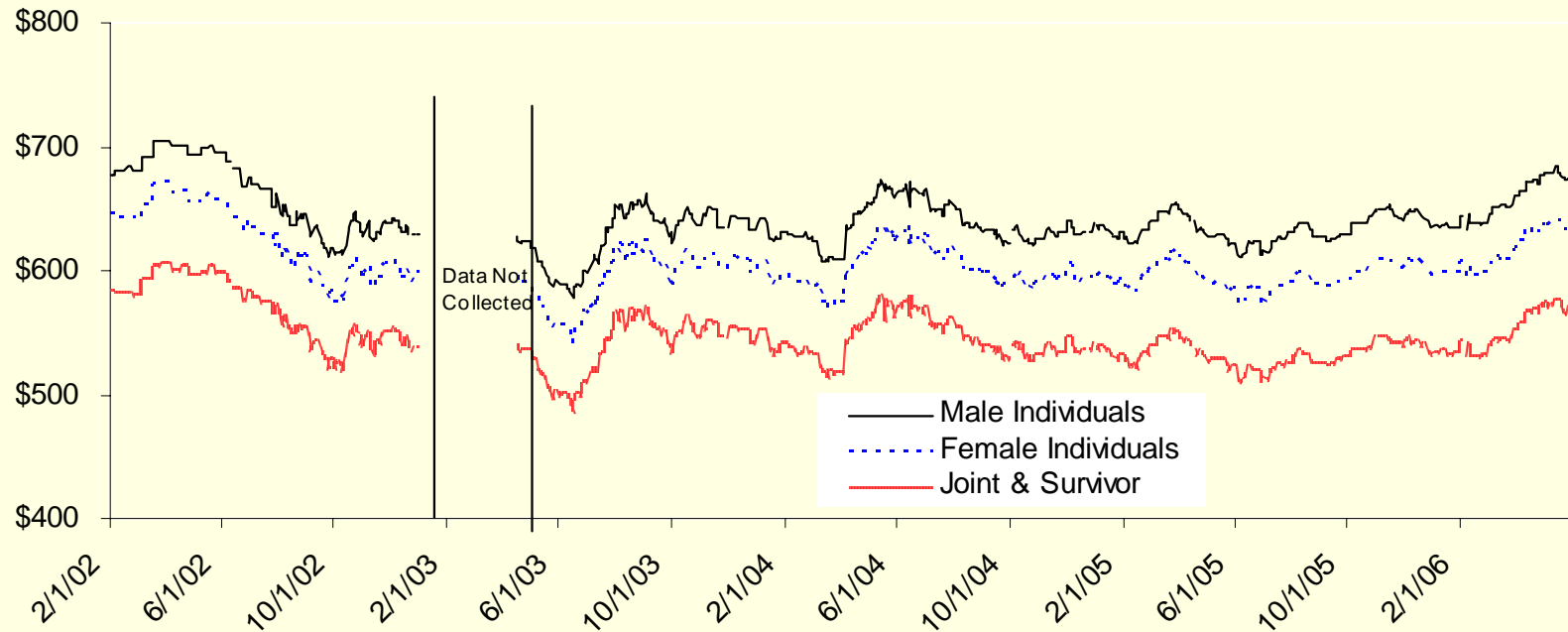
Percent Differences in Fixed Monthly Payments for  
Joint-and-Survivor Life Annuities Purchased One Year Apart  
Simulations January 1983-June 2006



## II. Traditional Immediate Annuity Products

### A. SPIA

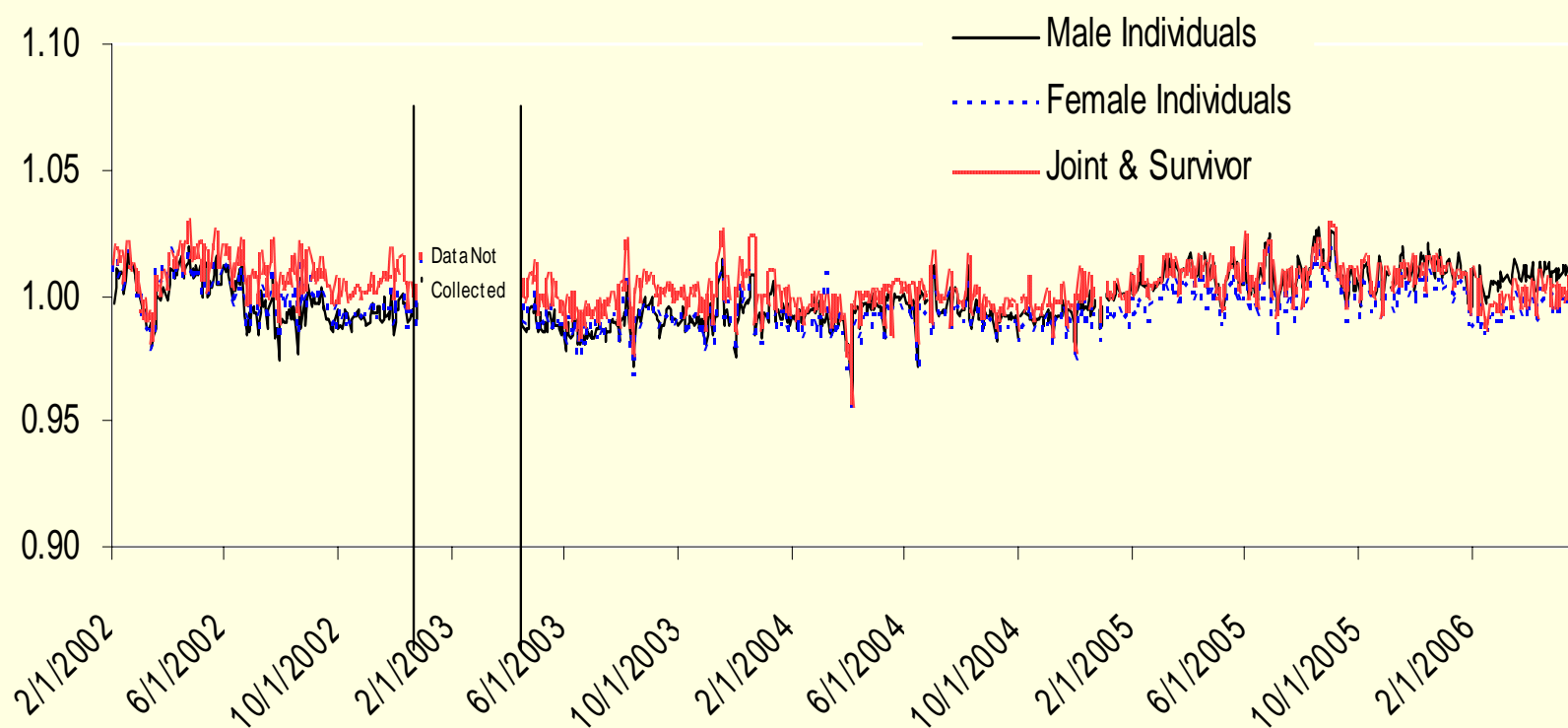
Fixed Monthly Payments for \$100,000 SPIA With Guarantee Period  
Daily Internet Quotes, Highly-Rated Insurance Company, 2/1/02 to 7/12/06



## II. Traditional Immediate Annuity Products

### A. SPIA

Money's Worth (Ratio of quoted payment to simulated payment)  
2/1/02 to 7/12/06



## II. Traditional Immediate Annuity Products

### B. Variable Immediate Life Annuity

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1. Works like a SPIA, and has similar features and options, except income payments are not fixed, but vary with investment performance of the underlying individually-selected asset portfolio.
2. Initial income is determined by an assumed rate of return (ARR), selected by the insured, generally between 3.5 and 5.0 percent.
3. For example, for one insurance company, the following are initial monthly payment amounts quoted to a 65-year-old man on June 13, 2006:
  - \$674.13 (fixed)
  - \$567.82 (variable—3.5% ARR)
  - \$653.84 (variable—5.0% ARR)

## II. Traditional Immediate Annuity Products

### B. Variable Immediate Life Annuity

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4. The lower the ARR, the more likely and more significantly future payments will increase.
5. Obviously, variable annuity payments are more volatile than for fixed annuities; volatility and expected return also depend on the specific asset portfolio selected.
6. Asset allocations may be changed at any time, with mutual fund-like restrictions on frequent trading.
7. In addition to a state premium tax and annual charges for the investment account (like mutual fund charges), the average industry charge for mortality expenses for variable life annuities is 1.22 percent.

### III. New Annuity and Lifelong Distribution Products

#### A. Inflation-Indexed Life Annuity

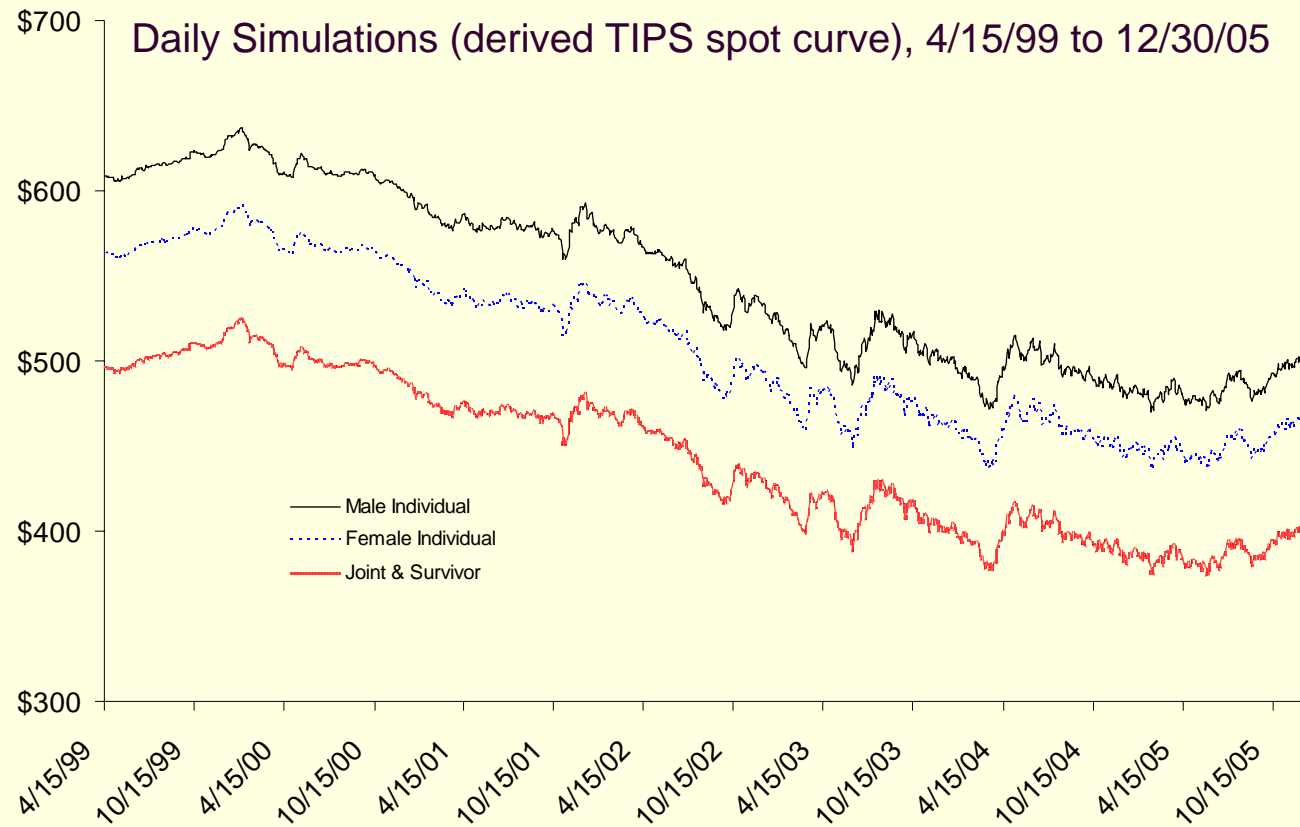
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1. The inflation-indexed life annuity is a SPIA, with its basic features and options, whose payments track the CPI.
2. More specifically, for an annuity being issued by one company, payments are adjusted each year on January 1 for changes in the non-seasonally adjusted CPI-U.
3. The increase in payments, however, is limited annually to 10% and any decrease will never reduce the payment below the initial benefit amount. Any negative changes in the CPI not applied to the payment will be used to offset future CPI increases.
4. There are apparently several issuing companies in the U.S. recently; there have been several in the U.K. for many years.
5. On July 13, 2006, this company quoted an initial monthly payment of \$501.72 for an inflation-indexed annuity compared to \$685.47 for a fixed annuity issued by the same company for \$100,000 paid by a 65-year-old man.

### III. New Annuity and Lifelong Distribution Products

#### A. Inflation-Indexed Life Annuity

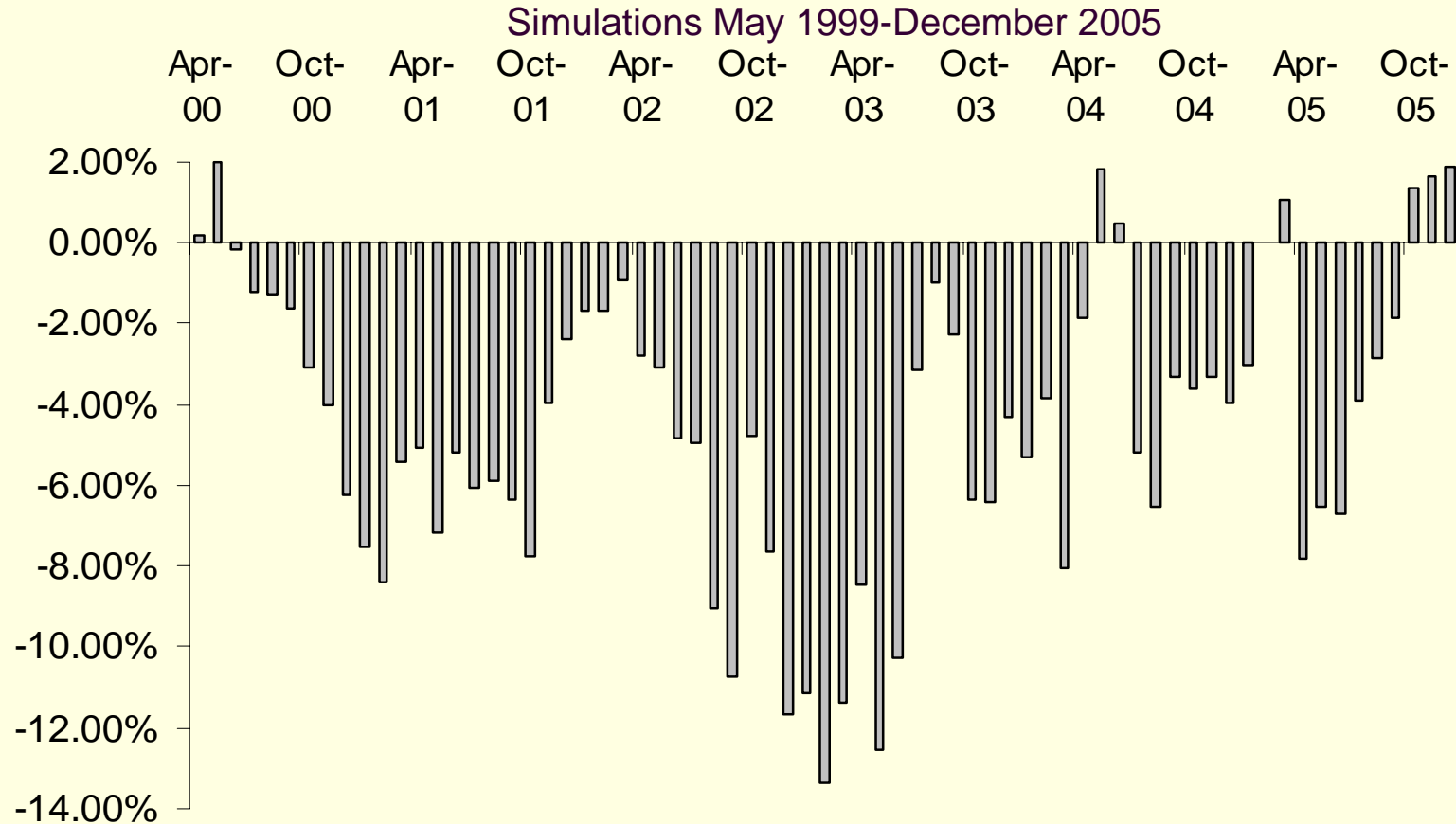
Initial Monthly Payment for \$100,000 Inflation-Indexed Life Annuities with Guarantee Period  
Purchased by 65-Year-Olds



### III. New Annuity and Lifelong Distribution Products

#### A. Inflation-Indexed Life Annuity

Percent Difference in Initial Monthly Payments for Joint-and-Survivor  
Inflation-Indexed Life Annuities Purchased One Year Apart

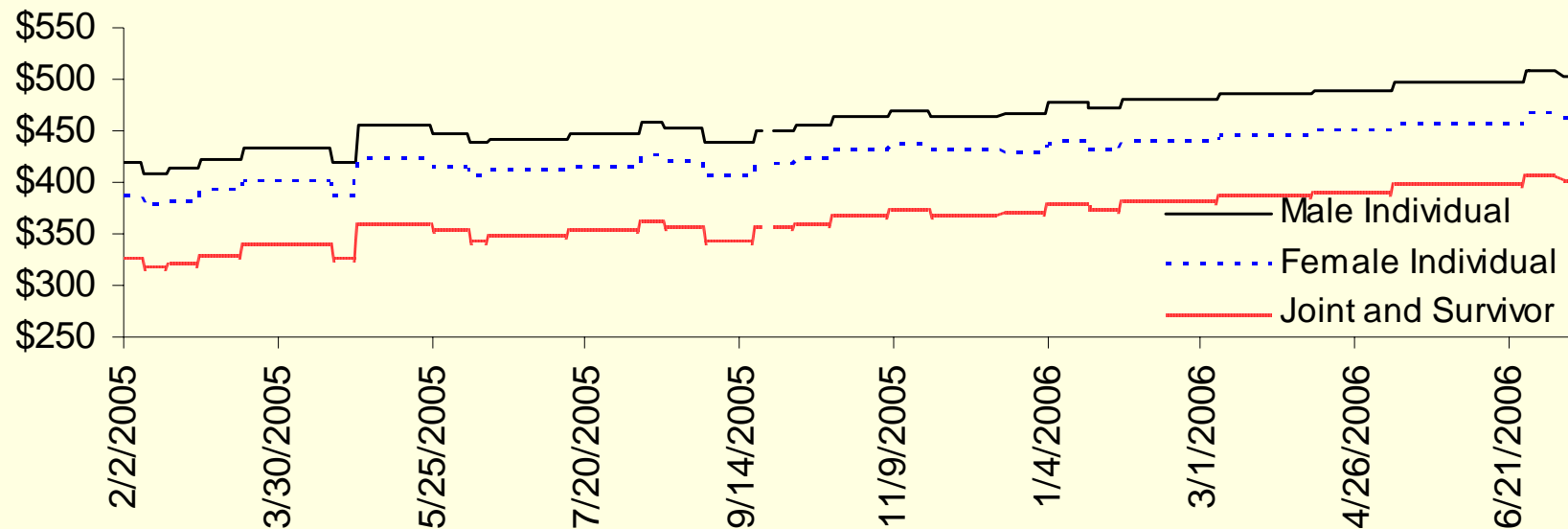


### III. New Annuity and Lifelong Distribution Products

#### A. Inflation-Indexed Life Annuity

Initial Monthly Payments for \$100,000 Inflation-Adjusted Life Annuities  
with Guarantee Period

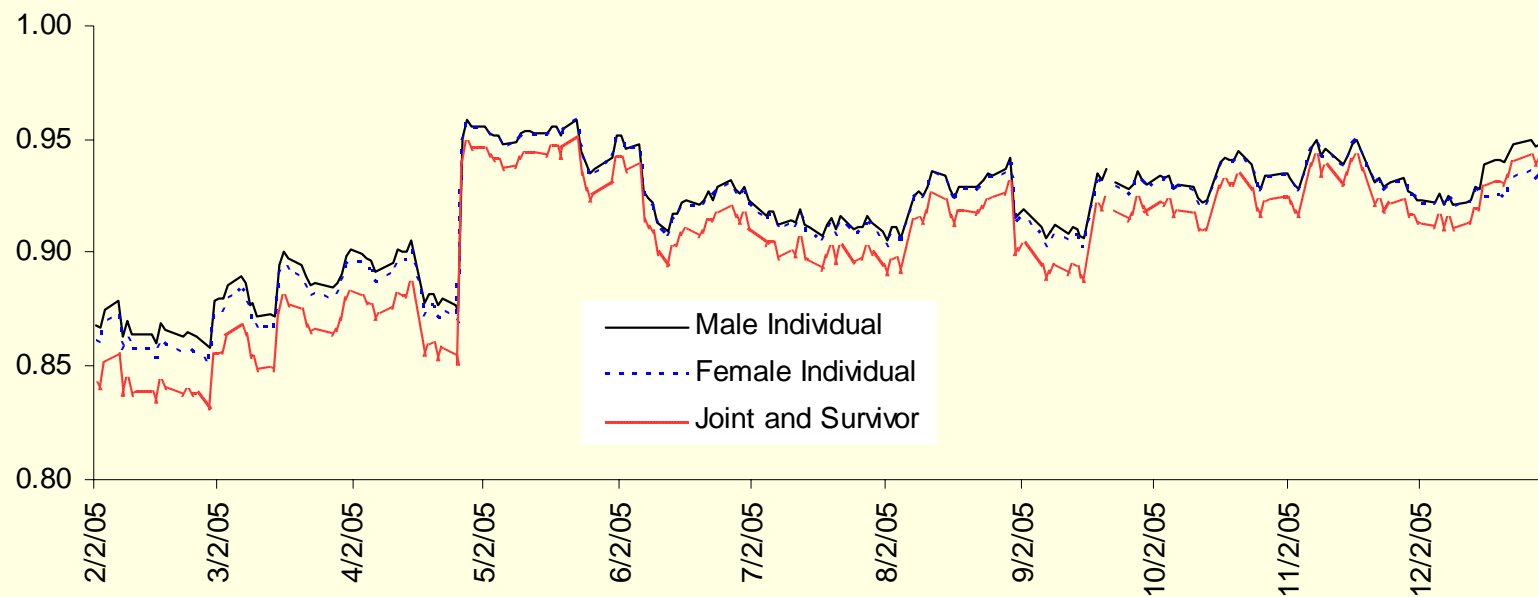
Daily Internet Quotes, Highly-Rated Insurance Company, 2/2/05 to 7/12/06



### III. New Annuity and Lifelong Distribution Products

#### A. Inflation-Indexed Life Annuity

Money's Worth (Rate of quoted payment to simulated payment)  
February 2, 2005-December 31, 2005



### III. New Annuity and Lifelong Distribution Products

#### B. Enhanced Liquidity in Fixed and Variable Life Annuities

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1. One insurance company allows for its fixed life annuity, on a one-time only basis, a withdrawal of 30% of the expected present value of the remaining payments based on life expectancy set at the time when the fixed annuity was purchased.
2. This option can only be exercised on the fifth, tenth, or fifteenth anniversaries of the first payment from the life annuity or upon proof of a significant, non-medical financial loss. Once the option is exercised, future income payments are reduced by 30%.
3. This company calculates the withdrawal amount through an adjustment in the discount rate extant at time of purchase so as to pass through to the insured, on an approximate basis, any capital gains or losses experienced by bonds held in the general account of the company.

### III. New Annuity and Lifelong Distribution Products

#### B. Enhanced Liquidity in Fixed and Variable Life Annuities

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4. Another company allows withdrawals from its variable immediate life annuity contracts through a withdrawal period set for life expectancy.
5. The withdrawal option, only available on qualified variable annuities sold by this company, divides the single premium into two parts representing the present value of annuity payments before and after the year of life expectancy, respectively.
6. The first component therefore functions just like a guarantee period with an acceleration of payments.
7. The second component, which is available only for the first five years of the contract, on a declining scale, employs the life annuity pool of assets, without proof of health status or explicit individual liquidity need, and hence exposes the company to some adverse selection to give the insured increased access to their assets.

### III. New Annuity and Lifelong Distribution Products

#### C. Individual Defined Benefit Pensions

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1. These products are deferred annuities which, however, have cash values.
2. One company offers a fixed income product, purchased with a single premium or through regularly scheduled premium payments lasting up to thirty years.
3. This company will make income payments on a pre-determined fixed date as soon as ten years from the date the annuity was issued, beginning as early as age 55.
4. The future life annuity payments are determined based on the age of the insured and prevailing interest rate at the time premium payments are made; the interest crediting rate is guaranteed to be at least 3%.
5. The cash value of the annuity prior to the income payment start date is 87.5% of premium payments accumulated at 3% interest.
6. For this company, the current interest rate on April 4, 2006 was 4%.

### III. New Annuity and Lifelong Distribution Products

#### C. Individual Defined Benefit Pensions

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7. Another insurance company offers a product that, in explicit intent, is designed to replicate many of the features of a defined benefit pension but is offered as an investment option in a 401(k) plan—a group variable annuity.
8. Each contribution to the product purchases a specific amount of guaranteed retirement income. The income is not received, however, unless the insured annuitizes on or after the retirement plan's stated retirement age.
9. Transfers and withdrawals are allowed, according to 401(k) and plan rules, but any withdrawals from the group variable annuity reduces guaranteed retirement income in proportion to the withdrawal of account value. The guarantee is preserved, however, if there is a rollover to an individual variable annuity offered by the insurance company.

### III. New Annuity and Lifelong Distribution Products

#### C. Individual Defined Benefit Pensions

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10. Contributions to this contract are invested in a fund that mimics a large corporate pension trust.
11. The investment charge is 49 bps and the guarantee charges total 80 bps.
12. Prior to retirement, the account value reflects the investment performance of the funds, less the charges mentioned above.
13. After retirement, the guaranteed lifelong payments are made; the income payments can increase if investment performance exceeds certain benchmarks.

### III. New Annuity and Lifelong Distribution Products

#### D. A Lifelong Distribution Product

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1. This product is not a Life Annuity!
2. One insurance company is offering a distribution option on its individual deferred variable annuity, guaranteeing a 5% annual stream of withdrawals for life or 7% for at least 14.2 years based on an account value which is the greater of:
  - a. 5% compounded rate of return for ten years from election of the option or until first withdrawal, if sooner,
  - b. The highest anniversary value for the first ten years or until the first withdrawal, if sooner,
  - c. The account value at first withdrawal.
3. Only certain asset investment fund combinations are allowed in this option.

### III. New Annuity and Lifelong Distribution Products

#### D. A Lifelong Distribution Product

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4. As early as three years after income withdrawals begin, and for every three years thereafter, if investment performance causes an increase in the account value, the protected account value and the withdrawal stream will increase.
5. The insurance company currently charges 60 bps for this option for an individual and 75 bps for a married couple, in addition to insurance and investment charges for the variable annuity.
6. The protected account value is reduced by the amounts withdrawn until it reaches zero. If the amounts withdrawn are cumulatively equal to the 5% stream of withdrawals, then the insured must choose to continue receiving 5% income payments for life or, at the higher level, for the remainder of the 14.2 years.

## IV. Issuance in the Individual Annuity Market

- A. Despite the great potential and innovative development in the market for individual life annuities and some growth, issuance of immediate annuities is still modest.

- B. Total issuance of individual annuities in billions of dollars

Year	Total	Variable	Variable	Variable	Fixed	Fixed	Fixed
		Total	Deferred	Immediate	Total	Deferred	Immediate
1999	\$164.7	\$123.0	\$122.7	\$0.3	\$41.7	\$35.3	\$6.4
2005	\$212.3	\$133.4	\$132.8	\$0.6	\$78.9	\$67.7	\$11.2

Source: 2006 NAVA Annuity Fact Book

- C. At the end of 2005, from a third to a half of deferred variable annuities issued offered some form of the guaranteed income and withdrawal benefit options described above.

## V. A Proposed Combination Product: The Life Care Annuity

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- A. My own research with Spillman and Murtaugh (2001) proposed combining an Immediate Life Annuity with the disability form of long-term care insurance (LTCI).
  - 1. Single Premium
  - 2. Streams of income payments increased significantly when insured is disabled in ADLs or cognitively impaired.
- B. Advantages of Combination
  - 1. LTCI underwriting is substantially reduced, allowing those currently shut out from LTCI—as many as a third of the retired population—to get coverage.
  - 2. Attraction of those in impaired health enables a higher life annuity payment stream—about five percent.
  - 3. LTCI purchase decision can be made at retirement.
  - 4. Can be designed to be fixed or inflation-adjusted, after-tax or qualified.
- C. The new pension law gave favorable tax treatment to the LTCI segment of after-tax combination products.