

Biennial Convention 2009

Go for Gold

19–22 April 2009 • Sydney



Institute of Actuaries of Australia



The Retirement Village Industry- Opportunities for Actuarial Improvement

Dennis Barton



Agenda

- History
- Market
- Participants
- Legislation
- Product
- Taxation
- Accounting
- Actuarial
- Current practice
- Ideal practice
- Experience
- Practicalities
- Assumptions
- Insights



History

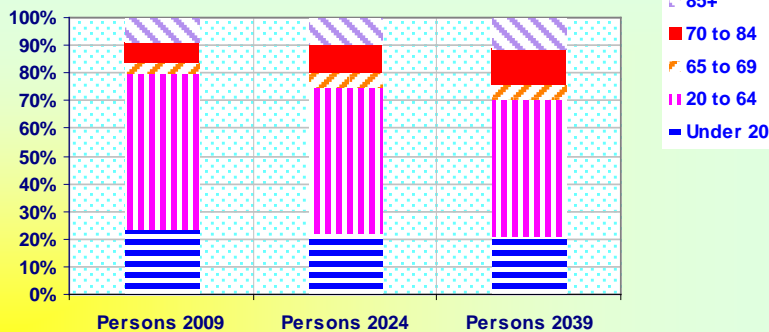
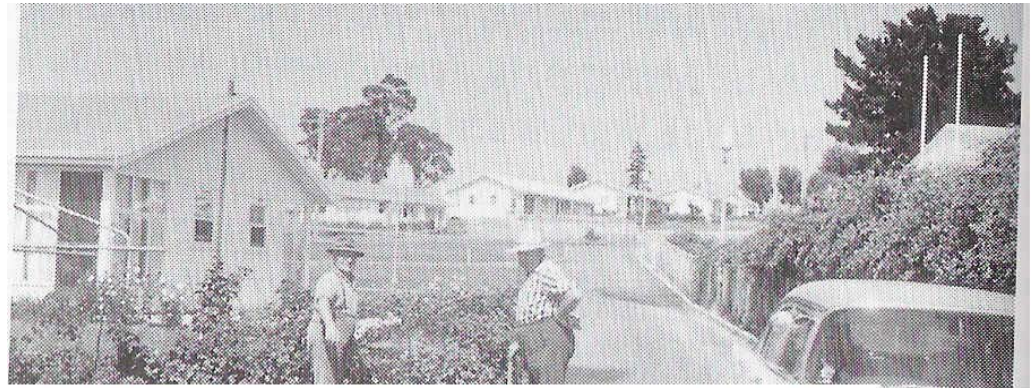
- 1954 Act
- 1974 withdrawal
- Private sector





Market

- Gross
- Subsets
- Penetration
- Future





Product

- Tenure
- Contract
 - Recurrent
 - Capital
 - Other care level
- Quality





Participants

- Developers
- Family companies
- Church & charitables
- Corporates





Legislation

- States
- Responsible Minister
- Common features
 - Registration
 - Disclosure
 - Cooling off
 - Recurrent expenses
 - Disputes





Taxation

- Income

| | Pre 1994 | 1994 | 2002 |
|--------------------------|----------------|----------------|-------------------|
| Land | Not deductible | Deductible | Not deductible |
| Construction | Depreciable | Deductible | Depreciable |
| Interest paid | Deductible | Deductible | Deductible |
| Incoming payments | Not assessable | Not assessable | Not assessable |
| Rental / DMF | Accrual | Receipt | Accrual / receipt |

- GST





Accounting

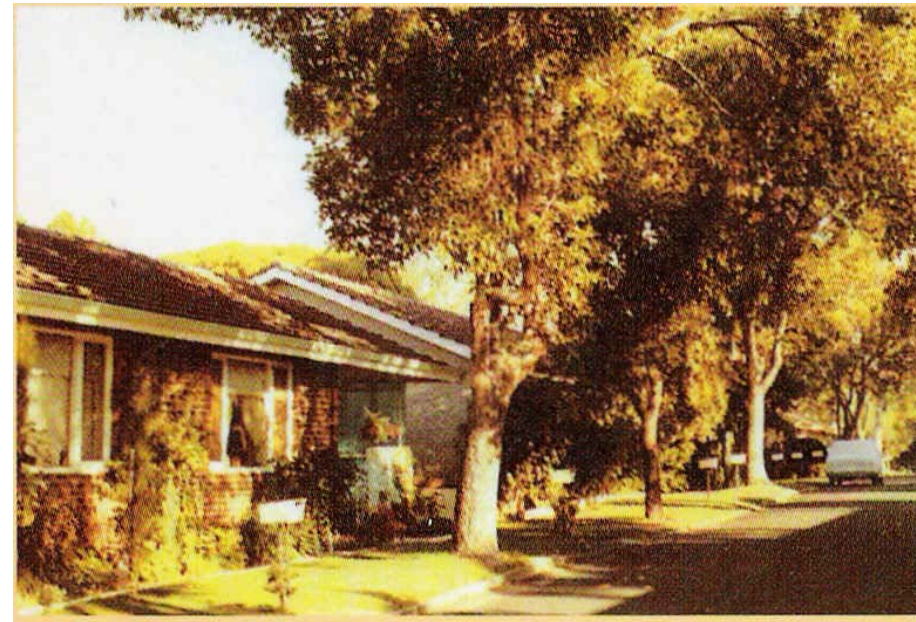
- Standards
 - 7
 - 132
 - 139
- Auditors
 - Discount receipts
 - Undiscounted liabilities





Actuarial

- Known but uncommon
 - Multiple decrements
 - Last survivors
- Differences
 - TVF
PV Cashflow / (1 - A')
 - Case Shiller
$$\ln(\text{Price}_{x+t} / \text{Price}_x) = \sum a_i z_i$$
$$a_i = \ln(\text{index}_i) \quad z \text{ uniformly } 0 \text{ except}$$
$$z_{x+t} = 1 \quad z_x = -1$$





Current valuation practice

- Who
- Global exits
- Standard life tables
- No voluntary exits
- Last survivors
- Terms certain





Ideal practice

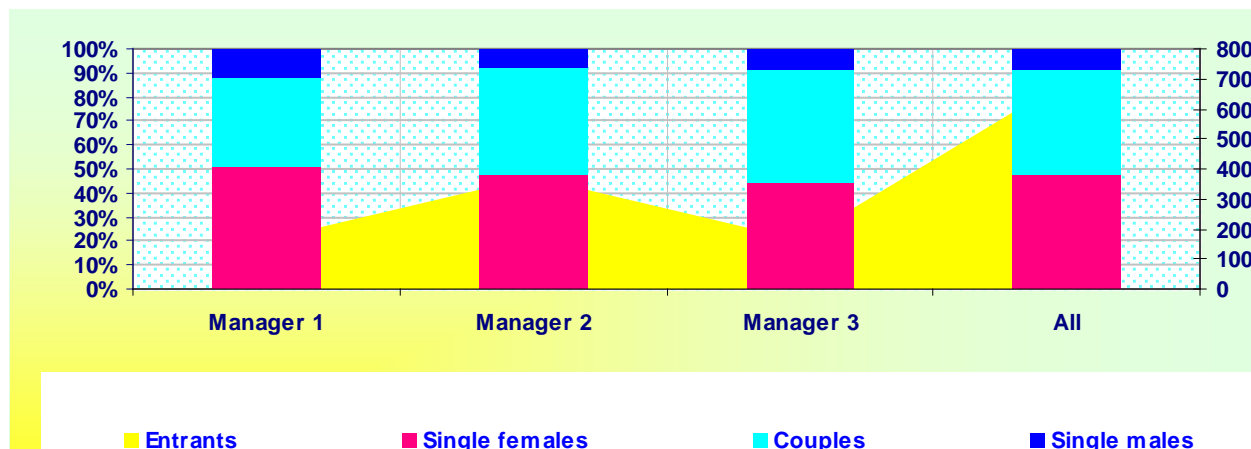
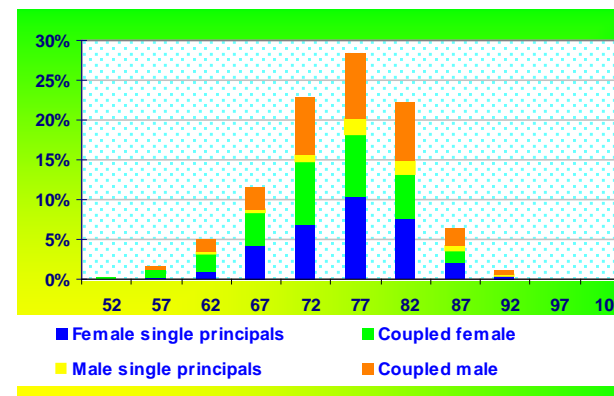
- Contracts
- Entry experience
- Exit experience
- Value growth
- Assumptions
- Individual calc's
- Sensitivity
- Reconciliation





Experience

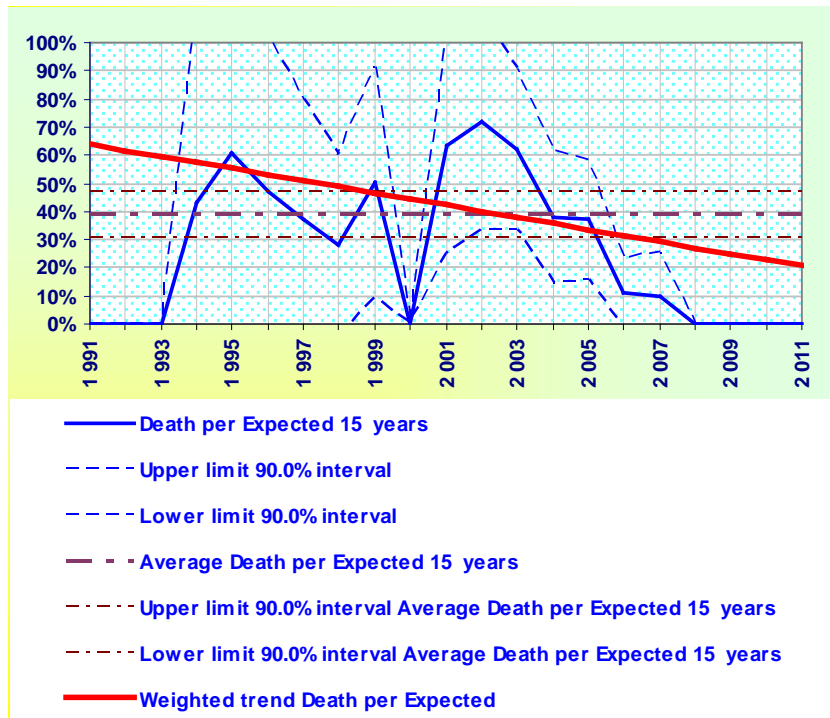
- Source
- Entry distribution
 - Average
 - Trends
 - Differences





Experience (2)

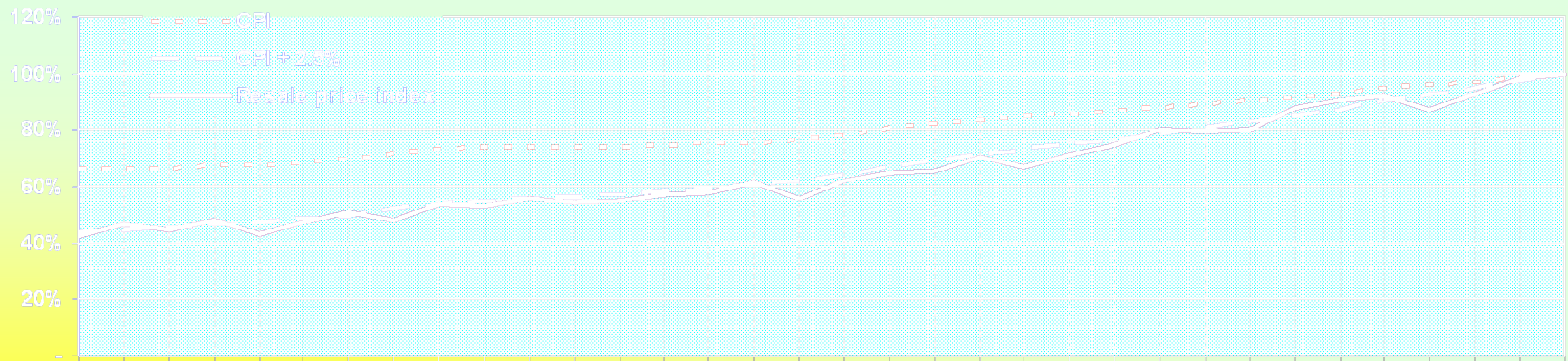
- Exit distribution
 - Involuntary
 - Voluntary
 - Trends
 - Differences





Experience (3)

- Value growth





Practicalities

- Difficulties with commutation columns
 - Duration related
 - Last survivors
 - Reuse of unit
- Each unit each year under macro
 - Payments
 - Probabilities
 - Present values



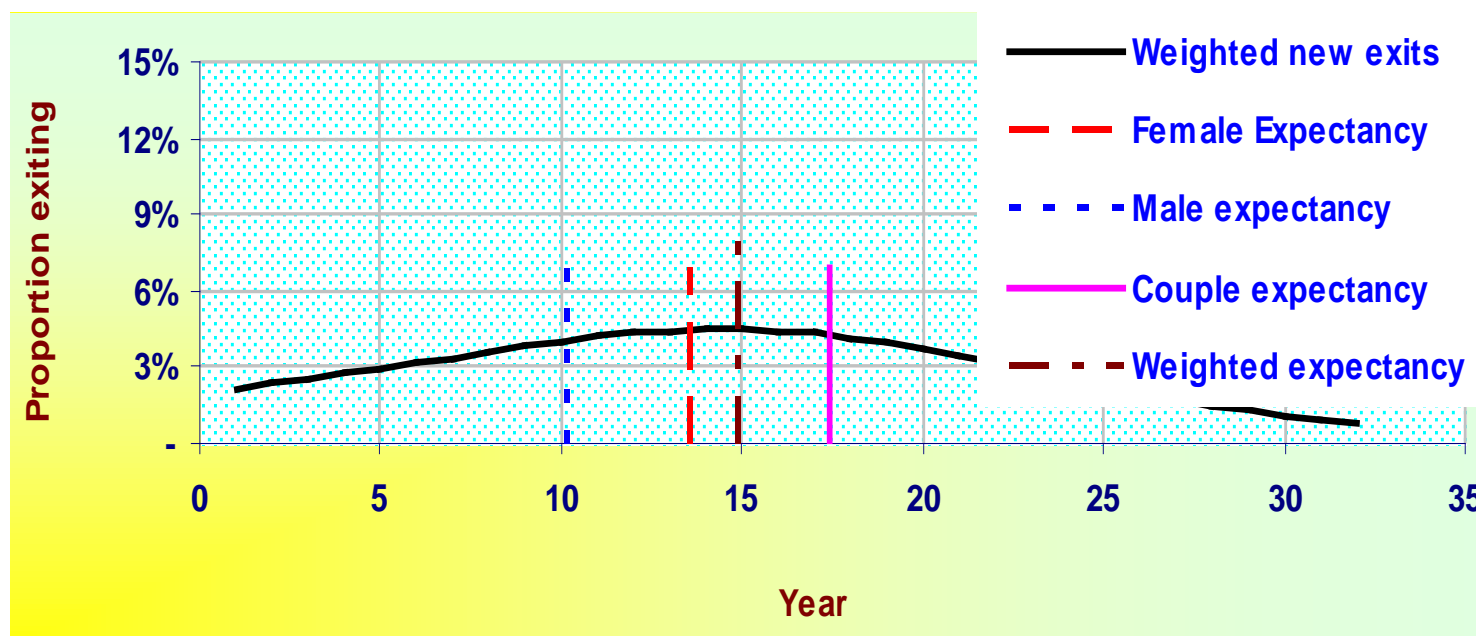
Assumptions

- Entry
 - Single F 48% aged 76
 - Single M 9% aged 77
 - Couple 43% F 74 M 76
- Exits involuntary
 - F Death 29% ALT
 - M Death 54% ALT
 - M Other 32% ALT
 - F Other 22% ALT
- Exits voluntary
 - 1.9% per annum
- Value growth
 - CPI + 5% pa
- Discount rate
 - 10% pa
- Contract
 - DMF 4% realloc to 28%
 - 5% refurb
 - 0.25% realloc pa maint



Insights

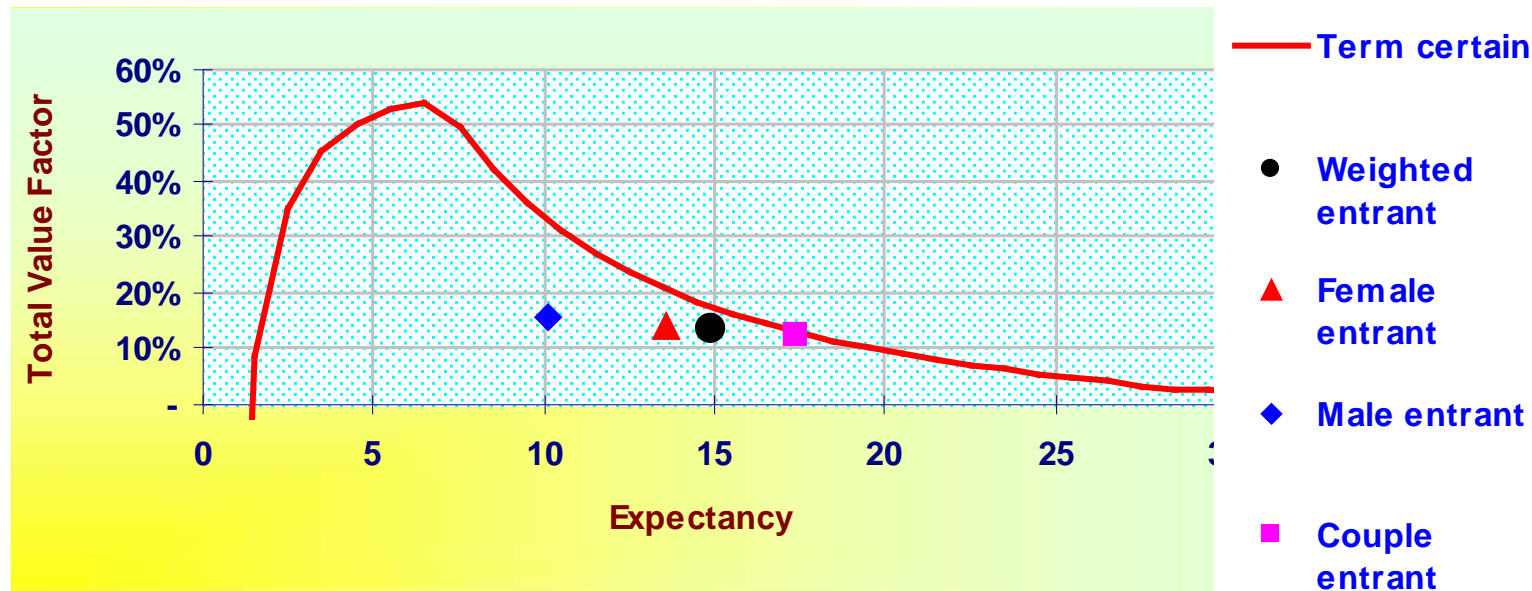
- Exits have a distribution, not a number





Insights (2)

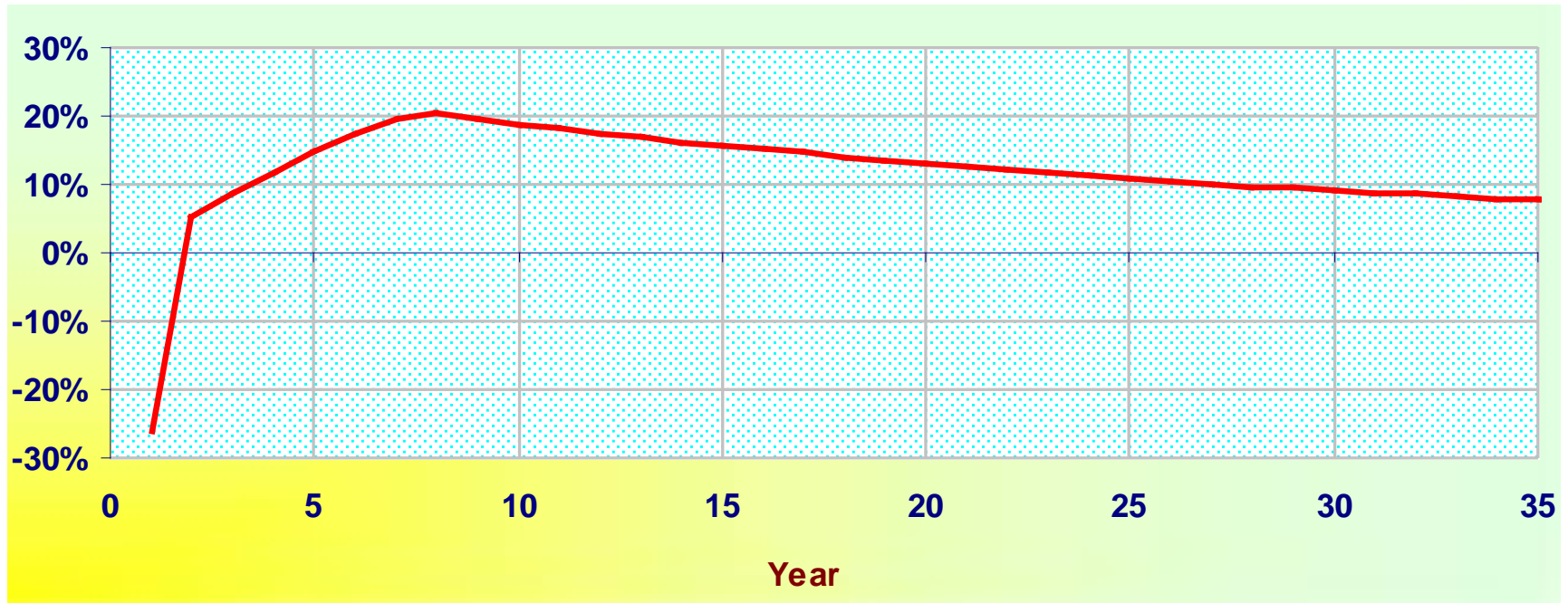
- Consequences of distribution (TVF)





Insights (3)

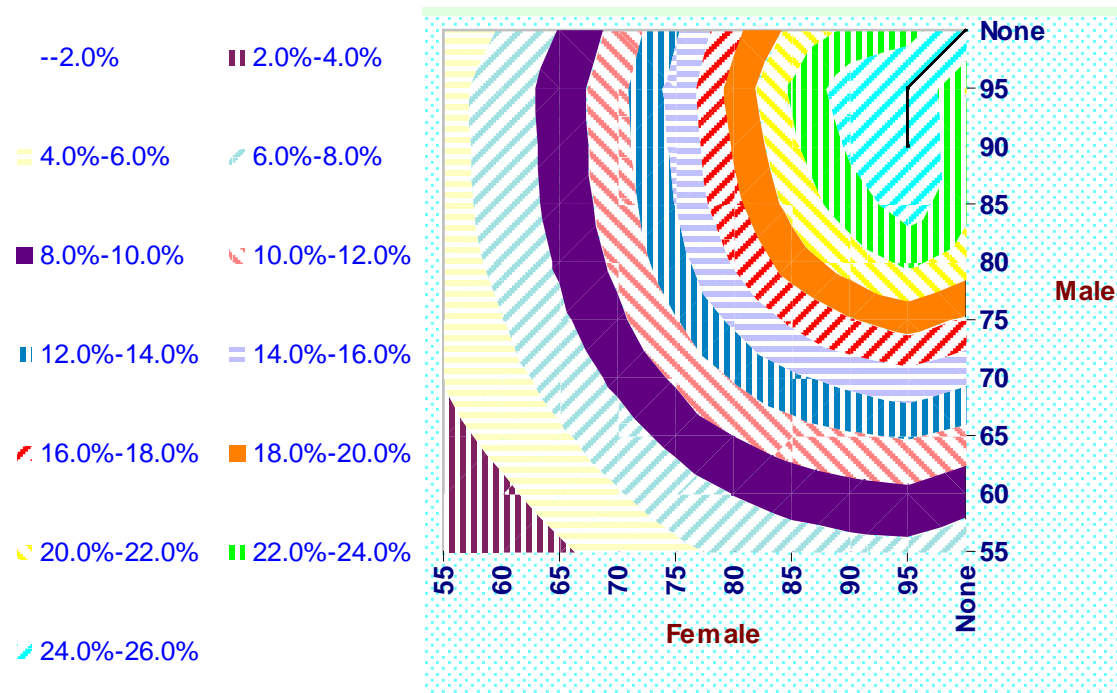
- Curve of PV of payments





Insights (4)

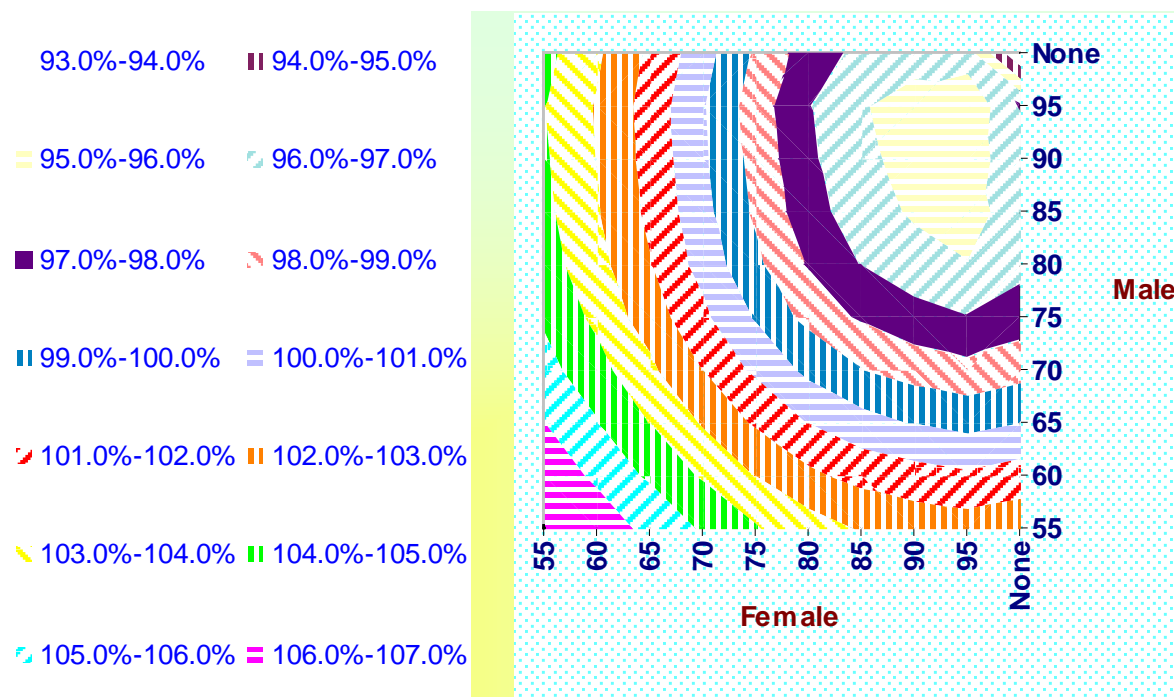
- Use TVFs for targeting





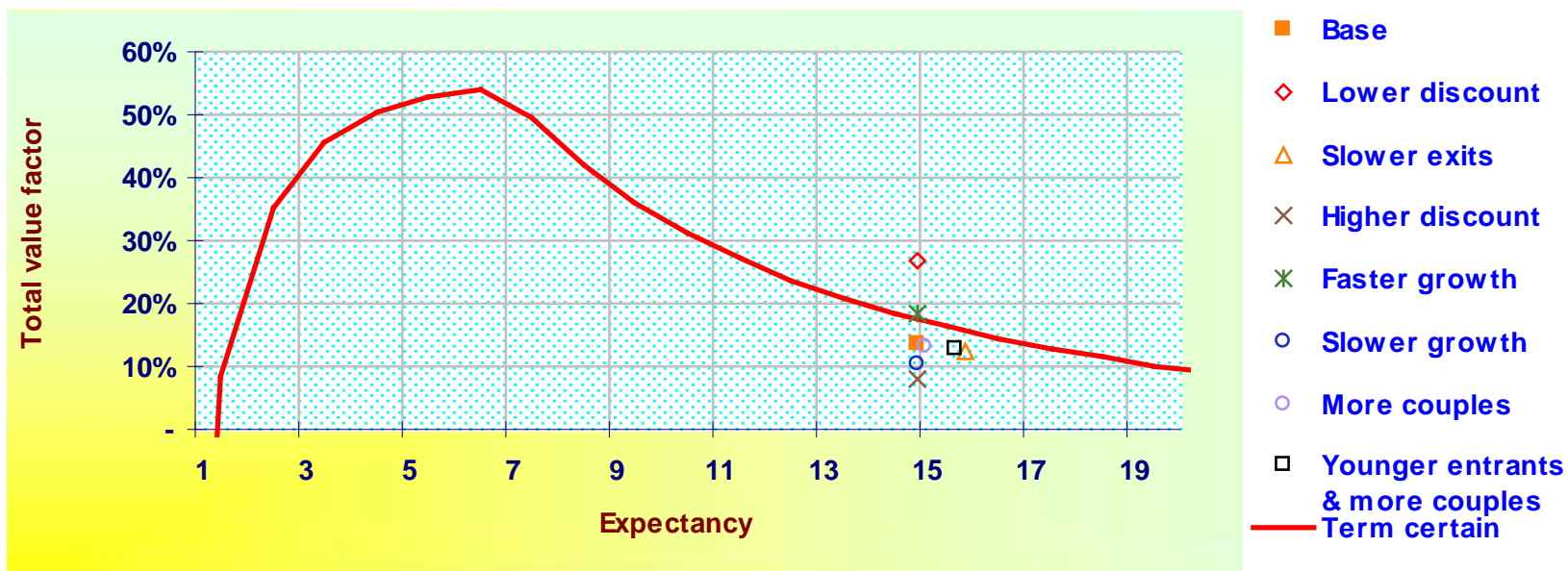
Insights (5)

- Individual sales by age



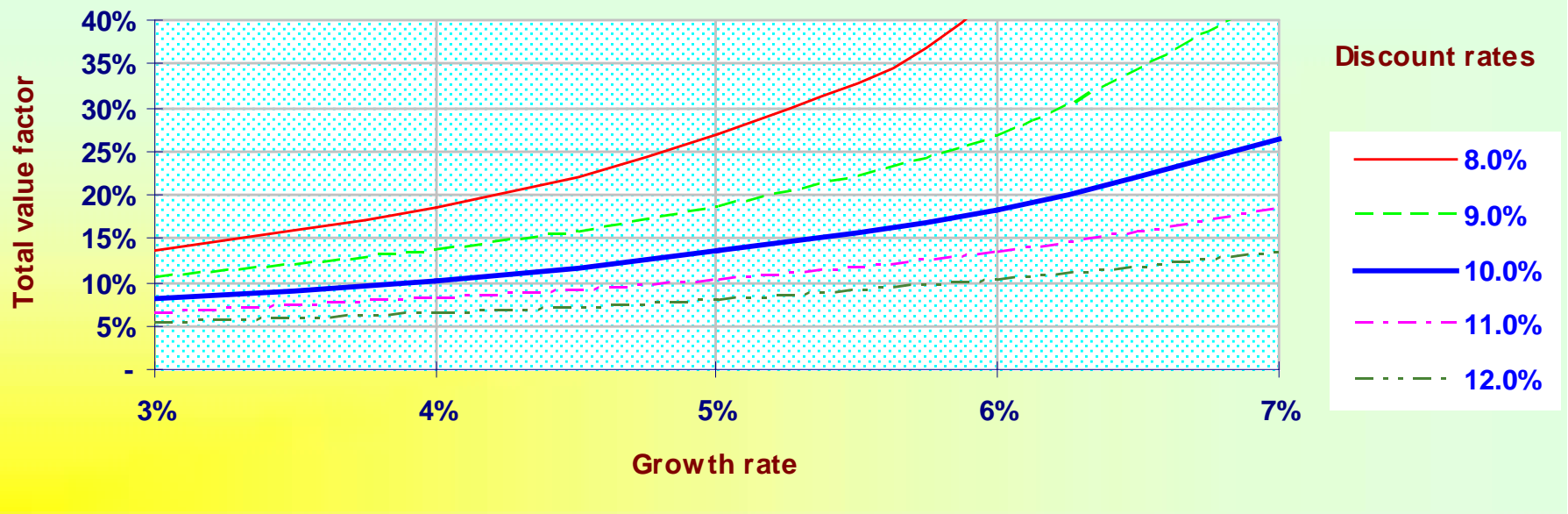


Sensitivity



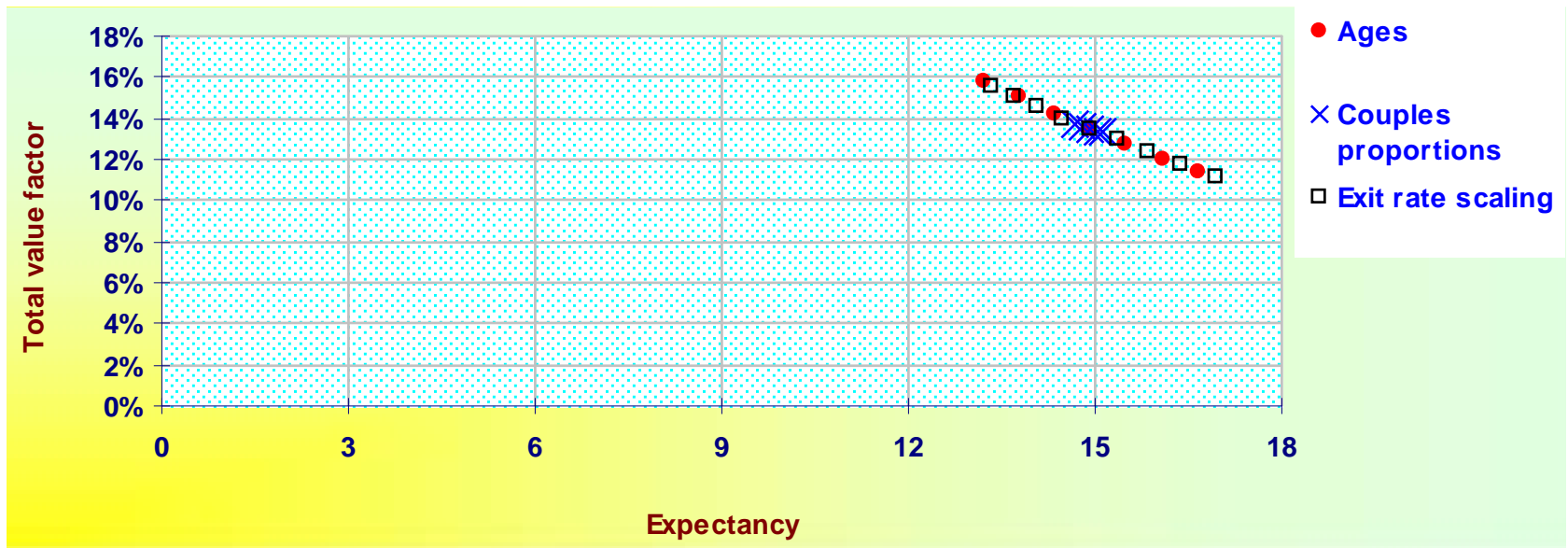


Sensitivity (2)





Sensitivity (3)





Insights (5)

- Cash flow is for capital valuations, not annual budgets



Wish we had done this sooner

- Residents
- The profession
 - Has lost ground
 - Knows demography
 - Understands distributions
- Where now?

Biennial Convention 2009

Go for Gold

19-22 April 2009 • Sydney



Institute of Actuaries of Australia



Questions

