SOCIETY OF ACTUARIES

International Financial Reporting for Insurers: IFRS and U.S. GAAP Seminar September 2009

Session 8: Insurance Product Classification and Investment Contracts/SPDA's – SFAS 97 & IFRS4

Michael Lockerman

Actuaries
Risk is Opportunity.℠

Session 8: Investment Contracts

Michael Lockerman

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.℠

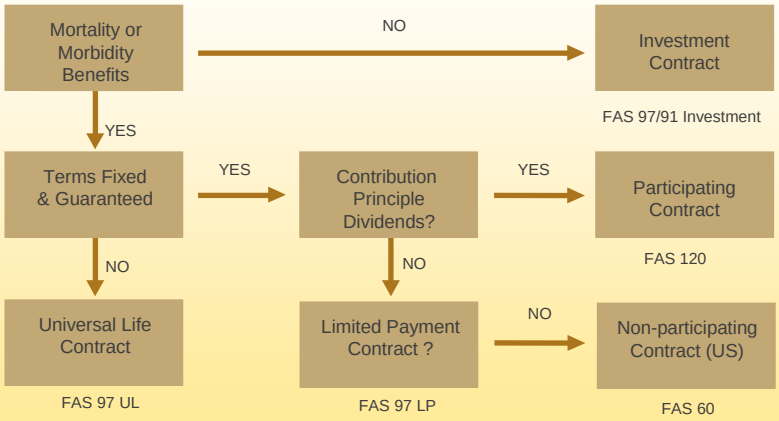
Introduction

- We have already discussed traditional products, universal life products, participating products and payout annuities
- In each of these cases there was generally a protection component
- However, insurers have also offered savings products for some time
- This section covers how to identify these as well as how to account for them

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

So What's Left?



Actuaries
Risk is Opportunity.™

Agenda

- Types of Products
- Accounting Guidance
- USGAAP Product Classification
- IFRS Product Classification
- LAT and LRT

Actuaries
Risk is Opportunity.™

Types of Products

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Types of products

- SPDA (single premium deferred annuities)
- Endowments
- Fixed annuities
- Variable Annuities
- Juvenile savings products
- Tax preferred savings products

SOCIETY OF ACTUARIES

Accounting Guidance

Accounting Guidance

- USGAAP
  - Topic 944-20-15 "Scope and scope exceptions" for product classification formerly:
    - SFAS 97
    - AICPA Practice Bulletin 8
    - SFAS 91
    - AICPA SOP 03-1
- IFRS
  - IFRS 4

Actuaries
Risk is Opportunity.℠

Product Classification for USGAAP

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.℠

Determining Mortality Risk

1987

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Determining Mortality Risk

- SFAS 97 paragraph 39
  - "The Board concluded that contracts issued by insurance enterprises that do not incorporate significant risk from the death or disability of policyholders (mortality or morbidity risk) are more comparable to financial or investment instruments issued by other financial institutions than to the insurance contracts contemplated by Statement 60…"
- SFAS 97 paragraph 40
  - "…A nominal mortality risk-a risk of insignificant amount or of remote probability-is not sufficient to permit that a contract be accounted for as an insurance contract."

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Determining Mortality Risk

- Historical Method
  - Although no other guidance was available, the practice of comparing the insurance and non-insurance cash flows emerged
  - Using the single best-estimate assumptions, actuaries projected the cash flows to the policyholder
  - These would include insurance cash flows such as death benefits, morbidity benefits and life-contingent annuity benefits and well as non-insurance cash flows such as surrender benefits and maturity benefits

SOCIETY OF ACTUARIES

Determining Mortality Risk

- Historical Method
  - The following formula developed:

$$\frac{\text{PV of insurance cash flows}}{\text{PV of total cash flows}}$$

  - Significance factors were generally set between 5% and 10%
  - If this ratio was less than the company's determined "significance factor" then the contract was classified as an investment contract.

Determining Mortality Risk

Simplified Example of 7 year endowment product. Death benefit equals the endowment benefit.

Year	Account Value	Mortality Rate	Surrender Rate	Surrender Charge	Mort cash flows	Surr Cash flows
1	100,000	0.5%	5%	7%	670	4,627
2	105,000	0.7%	5%	6%	887	4,632
3	110,250	0.9%	5%	5%	1,075	4,628
4	115,763	1.1%	5%	4%	1,238	4,613
5	121,551	1.3%	5%	3%	1,374	4,589
6	127,628	1.5%	5%	2%	1,487	4,556
7	134,010	1.7%	100%	0%	1,577	91,165
	Ratio = 7.6%		**Present**	**Values =**	**6,696**	**88,185**

Actuaries
Risk is Opportunity.™

Determining Mortality Risk

2003

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Determining Mortality Risk

- SOP 03-1 paragraph 25
  - "The determination of significance of mortality or morbidity risk should be based on a comparison of the present value of expected excess payments to be made under insurance benefit features (that is, insurance benefit amounts and related incremental claim adjustment expenses in excess of the account balance, herein referred to as the "excess payments") with the present value of all amounts expected to be assessed against the contract holder (revenue)…"
  - "…In performing the analysis, an insurance enterprise should consider both frequency and severity under a full range of scenarios that considers the volatility inherent in the assumptions, rather than making a best estimate using one set of assumptions…"

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Determining Mortality Risk

- Motivation for change was primarily to address equity and other guarantees that may only have value in certain scenarios
- Resultant differences between the historical method and the SOP 03-1 method
  - Greater focus on risk
  - Move from a focus on insurance cash flows as a % of total cash flows to benefits as a % of assessments
  - Move from a single scenario to a range of scenarios
- Due to difficulties in identifying "assessments" for traditional products, some companies still use the historical method

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Determining Mortality Risk

- SOP 03-1 Method
  - The following formula is used:

$$\frac{\text{PV of excess benefits}}{\text{PV of total assessments}}$$

  - Assessments are generally the positive components of the EGPs
  - Assessments include interest spreads
  - Like with the historical test, the most significant factor is the "significance factor"

SOCIETY OF ACTUARIES

Determining Mortality Risk

Same 7 year endowment product example. Assume the mean interest spread on the product is 1%. This and the surrender charges make the assessments.

Year	Account Value	Net amount at risk	Interest spread	Surrender Charge	Excess Benefit	Assessment
1	100,000	36,391	1%	7%	182	1,316
2	105,000	31,510	1%	6%	208	1,258
3	110,250	26,385	1%	5%	212	1,197
4	115,763	21,003	1%	4%	194	1,136
5	121,551	15,353	1%	3%	157	1,074
6	127,628	9,420	1%	2%	105	1,012
7	134,010	3,191	1%	0%	38	905
	Ratio = 14.1%			Present Values =	933	6,604

Annuitization Options

- For US products, deferred annuities always have a guaranteed annuitization option. However, these options are rarely exercised. These options were addressed in SFAS 97.
- SFAS 97 paragraph 7
  - "…A contract provision that allows the holder of a long-duration contract to purchase an annuity at a guaranteed price on settlement of the contract does not entail a mortality risk until the right to purchase is executed. If purchased, the annuity is a new contract to be evaluated on its own terms."
- Therefore, it is common to exclude any mortality risk of the annuitization option in the mortality assessment for US products
- However, in some countries, products like retirement income are purchased for this annuitization benefit and therefore the benefit should be considered in the mortality assessment as well as the reserving of the product

Actuaries
Risk is Opportunity.™

Product Classification Choices

- Once it is determined that mortality risk is nominal, there are two possible classifications:
  - Investment Contract (SFAS 97)
  - Investment Contract (SFAS 91)
- This classification determines the method in which DAC is amortized

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Product Classification Choices

- AICPA Practice Bulletin 8
  - The amortization method described in FASB Statement No. 97 for universal life-type contracts should be used for investment contracts that include significant surrender charges or that yield significant revenues from sources other than the investment of contract holders' funds. This method matches the amortization of DPAC with the recognition of gross profits. Otherwise, DPAC on investment contracts should be amortized using an accounting method that recognizes acquisition and interest costs as expenses at a constant rate applied to net policy liabilities and that is consistent with the interest method under FASB Statement No. 91, *Accounting for Nonrefundable Fees and Costs Associated With Originating or Acquiring Loans and Initial Direct Costs of Leases* (interest method).

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Constant Yield Method

- If the product does not have *significant* surrender charges or other *significant* sources of revenue, then it will be classified as SFAS 91 and the constant yield method will be used.
- Reserve interest rate determined at issue so that PV of payments and maintenance expenses = Gross premium less deferrable expenses
- Reserve (net of DAC) = PV of future payments and expenses, using this interest rate
- This was further discussed in the payout annuity section

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Product Classification for IFRS

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

IFRS 4 - Insurance Contracts

- Definition of an Insurance Contract
  - (IFRS 4, Appendix B)

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

IFRS 4 - Insurance Contracts Definition

– A single definition of insurance contracts

> *"a contract under which one party (the **insurer**) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the **insured event**) adversely affects the policyholder."*

– "A reinsurance contract is a type of insurance contract."

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

IFRS 4 - Insurance Contracts Insurance Risk

- Distinction between insurance risk and other risks
  - Financial risk: Change in interest rate, security price, commodity price, etc.: NOT insurance risk
  - Lapse, persistency or expense risk: NOT insurance risk in direct contract
  - Contracts including both financial risk and significant insurance risk have insurance risk
  - Must relate to uncertain future event that adversely affects the policyholder
  - Must be Pre-existing risk vs. risk created by the contract (e.g. gambling contract)

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

IFRS 4 - Insurance Contracts Significant Insurance Risk

- What is a <u>significant</u> insurance risk?

  "*Insurance risk is significant if, and only if, an insured event could cause an insurer to pay significant additional benefits in any scenario, excluding scenarios that lack commercial substance (ie have no discernible effect on the economics of the transaction). If significant additional benefits would be payable in scenarios that have commercial substance, the condition in the previous sentence may be met even if the insured event is extremely unlikely or even if the expected (ie probability-weighted) present value of contingent cash flows is a small proportion of the expected present value of all the remaining contractual cash flows.*"

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

IFRS 4 - Insurance Contracts Insurance Risk

- Insurance risk evaluated at inception of contract
- A contract that initially does not meet the definition of insurance may subsequently do so.
  - Example: Annuity options
- Once insurance always insurance until all rights and obligations extinguished

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

IFRS 4 - Insurance Contracts Significant Insurance Risk

Significance test:

– Compare:

(1) Cash flows that would be paid if the insured event occurred

Versus

(2) Cash flows that would be paid if no insured event occurred

- Are cash flows under (1) > (2)?
- Are additional benefits significant?
- Does the scenario have commercial substance?

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Determining Insurance Risk

Simplified Example of 7 year endowment product. Death benefit equals the endowment benefit.

Scenario 1

- Policyholder dies in first policy month and received 134k

Scenario 2

- Policyholder survives to endowment and receives 134k, PV = 90k

SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

IFRS 4 - Insurance Contracts Insurance Risk

- Lapse risk
  - Not a pre-existing risk for the insurer
  - Becomes an insurance risk if transferred to a reinsurer

– Financial guarantees
  - Either under IFRS 4 or under IAS 39

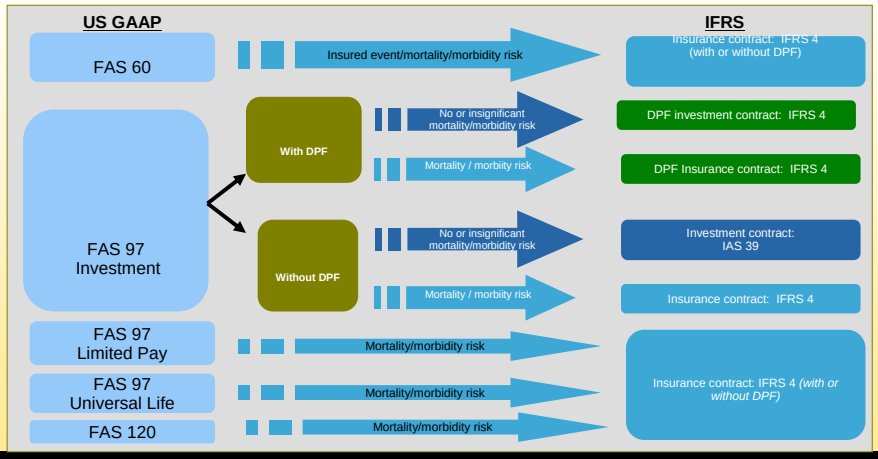
– Mortgage guarantees
  - Either under IFRS 4 or under IAS 39

SOCIETY OF ACTUARIES

IFRS 4 Product Classification

Actuaries
Risk is Opportunity.™

Relationship between US GAAP and IFRS contract classification



Actuaries
Risk is Opportunity.™

Loss Recognition Test and Liability Adequacy Testing

Actuaries
Risk is Opportunity.™

USGAAP Loss Recognition Test

- SFAS 97 Investment products are also subject to loss recognition tests (LRT)
- However, losses are only recognized to the extent DAC is written-off.
- No additional liability should be established for anticipated investment losses. (No recognition of anticipated "negative spreads" should be made.)
- No test is performed on SFAS 91 contracts
- Both of these cases are consistent with loan accounting and these investment losses are expenses as incurred

However, these may need to be included for the IFRS LAT even if USGAAP is used as the local accounting policy


SOCIETY OF ACTUARIES

Actuaries
Risk is Opportunity.™

Investment Contracts

Michael Lockerman


SOCIETY OF ACTUARIES