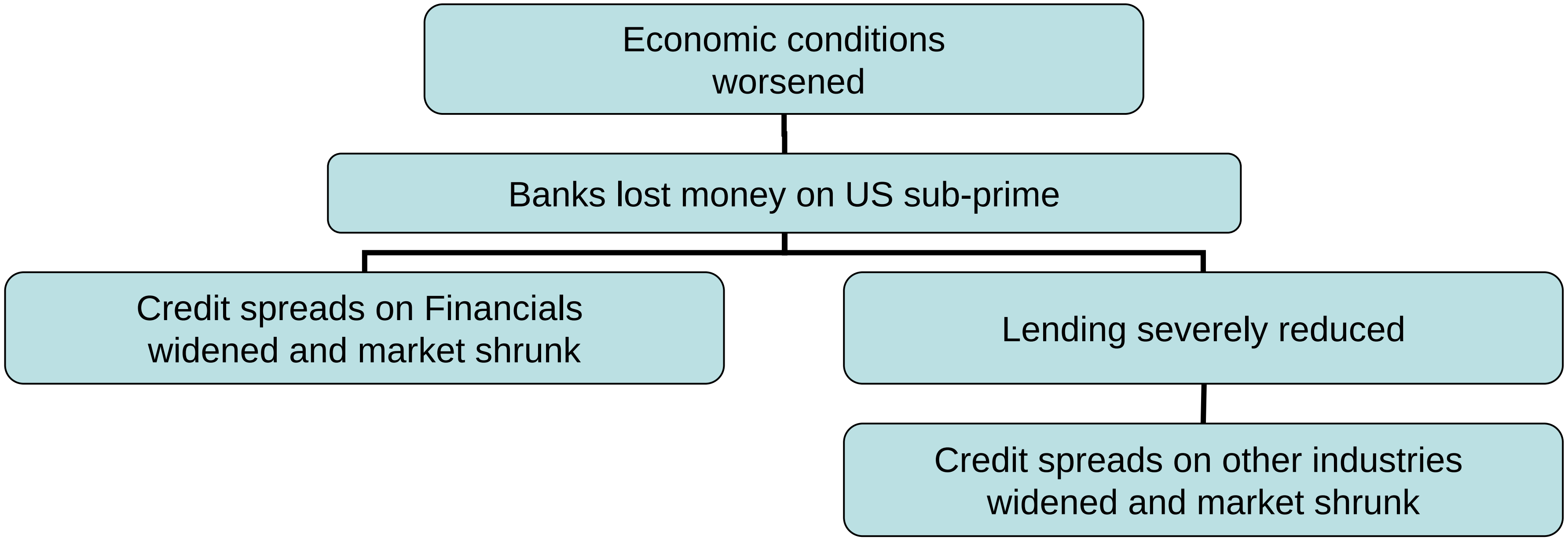
The Actuarial Profession
making financial sense of the future

IMPACT OF CREDIT MARKETS - LIFE OFFICE PERSPECTIVE

Scott Eason

30 May 2008

Simplistic model of credit crunch



Big losses for banks

Bank	Writedowns, $m
Citigroup	34,500
UBS	27,900
Merrill Lynch	23,800
Royal Bank of Scotland	16,600
Morgan Stanley	12,900
Other	66,567
Total	**182,267**

Source: www.efinancialnews.com, May 2008

…but not so for life insurers

"Conservative balance sheet not materially affected by global credit concerns"

Aviva, February 2008

"The strength of our balance sheet is unimpaired by the credit crunch. We have no material exposure to credit-impaired securities"

Legal & General, March 2008

"…high quality credit portfolio with no direct exposures to the US mortgage markets, minimal exposure to leveraged structures"

Standard Life, March 2008

SO NO ISSUES FOR LIFE INSURERS ??

A few things worth thinking about..

- Reporting issues
- Pricing issues
- Asset Management Issues

Reporting – Asset Valuation

GENPRU 1.3.26R : In addition to making to market or marking to model, a firm must perform independent price verification

GENPRU 1.3.27G : Where independent pricing sources are not available or pricing sources are more subjective, prudent measures such as valuation adjustments may be appropriate.

If there is no market for assets held, may need to assign a prudent value

Reporting – Liquidity requirements

GENPRU 1.3.34R (2) : [assets held should] be of a sufficient amount … to ensure that the cash inflows from those assets will meet the expected cash outflows

SYSC 14 requires companies to have adequate liquidity policy and governance

If asset sales are required to meet cash outflows, should consider whether sales will be possible and at what price

Reporting – Discount rate

- For corporate bonds, yield – default assumption
- Generally, yield is market level
- Default assumptions usually derived from historic data
- Any prudence introduced through higher default rates

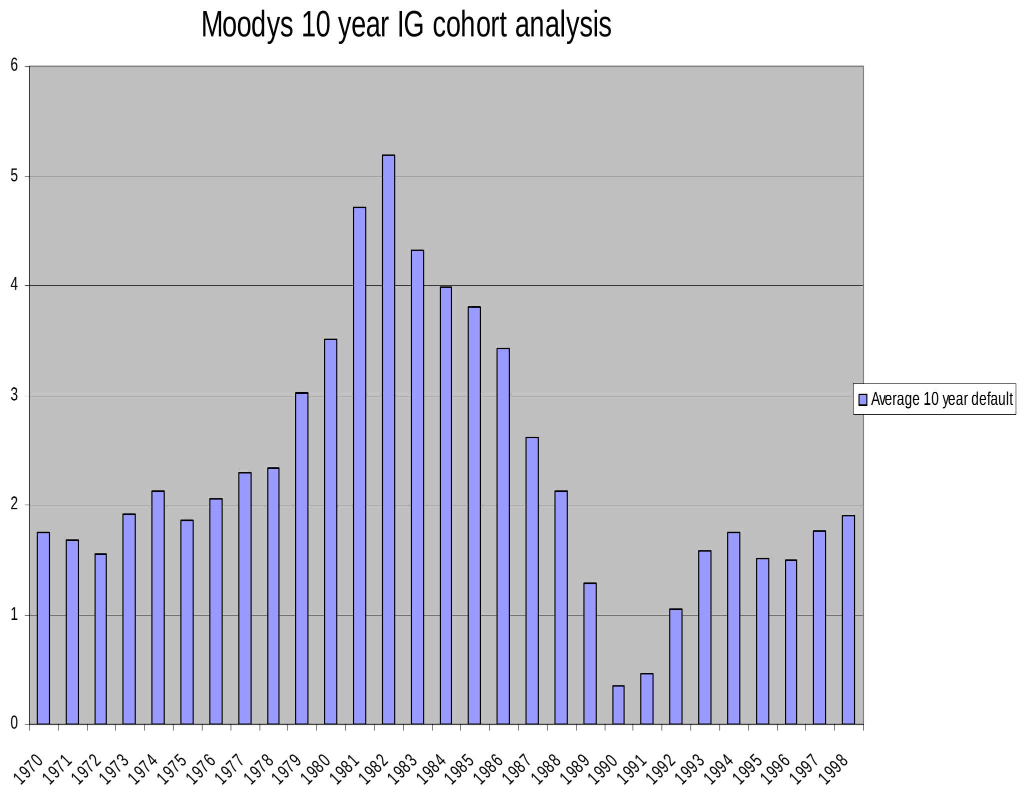
Is it still appropriate to use historic average default assumptions when spreads are at historic wide levels?

Default assumptions (10 year bonds)

	Current spread (Fins)	Current Spread (Non Fins)	Historic Default (net of recovery)
AAA	105	53	6
AA	246	159	7
A	351	318	11
BBB		477	36

Sources: BarCap April 08, Moodys

Default assumptions – historic data



- Average : 23bps
- St Dev: 12bps
- 3 St Dev event: 61bps (256% average)

Default assumptions (10 year bonds)

	Current spread (Fins)	Current Spread (Non Fins)	Historic Default (net of recovery)	3 ST DEV Event
AAA	105	53	6	15
AA	246	159	7	18
A	351	318	11	28
BBB		477	36	92

Sources: BarCap April 08, Moodys

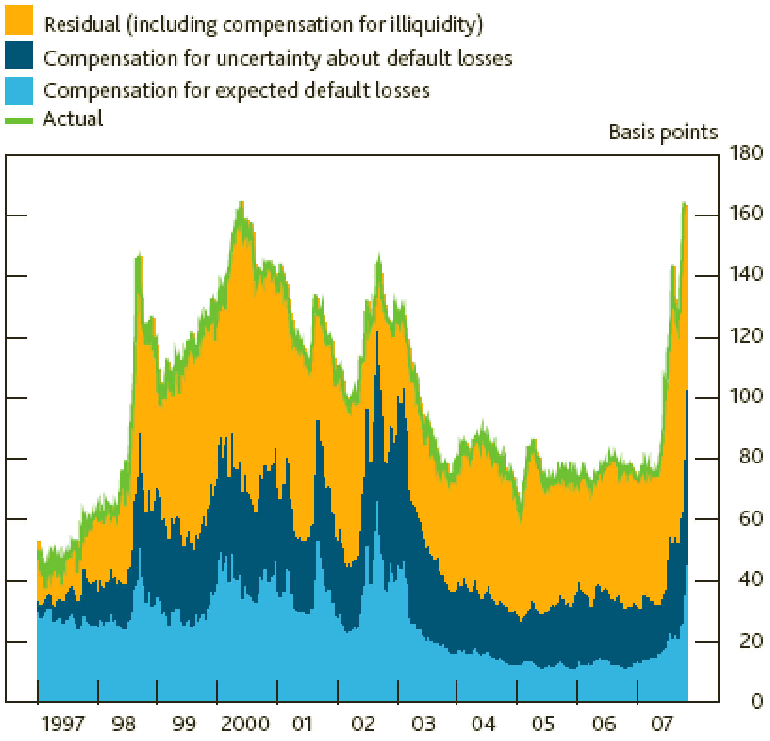
Default assumptions – BoE research

- Bank of England have published research into the determinants of credit spreads

- They identified 3 components of spread
  (i) compensation for expected default losses
  (ii) compensation for uncertainty about default losses
  (iii) residual (including compensation for illiquidity)

- Used a Merton model to break spreads into these 3 components over the past 10 years

Default assumptions – BoE research



Source: www.bankofengland.co.uk/publications/quarterlybulletin/qb070403.pdf

Default assumptions – BoE research

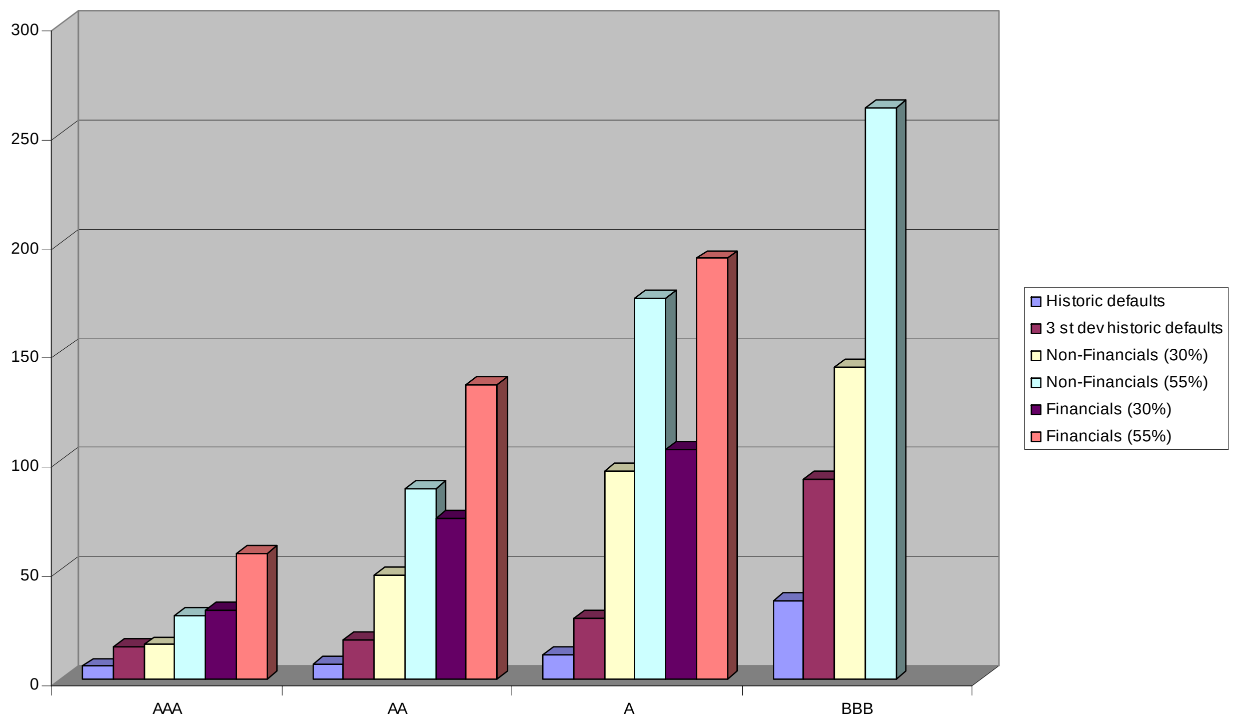
- No strong relationships between any of the components or the total spread level
- However, on average

  (i) compensation for expected default losses – approx 30%

  (ii) compensation for uncertainty about default losses – 25%

  (iii) residual (including compensation for illiquidity) – 45%
- Presented to Groupe Consultatif as a possible methodology for Solvency II

Default assumptions



Wide range of theoretically justifiable default assumptions!

Reporting – other issues

- Impact of spreads widening will have had significant MCEV impact
- Do ICA stresses need to be re-calibrated to include recent history in data?
- RBS has prescribed tests based on current spread levels. For AA and below, maximum stress (5% market value fall) bites.

Pricing issues (annuity business)

- Default assumptions again
  - current market is very aggressively priced
  - should the compensation for risk of defaults not being as expected be passed on to customers?

- Reinvestment rate
  - what levels can be assumed?

- Availability of current spreads?

Pricing issues – availability of spreads

- Currently £168bn Sterling Corporate Bonds 0-15 years, AA-BBB rated (source: BarCap)
- “2008 could see the market reach around £10bn …. but it would still represent less than 1pc of all DB scheme liabilities in the UK”
  Aon, May 2008
- If regulations or other drivers increase bond holdings of DB schemes, then supply will exceed demand and push down yields
- £10bn is still over 5% of current market – is this really available?

Asset Management issues

- Do we understand the benchmarks we are setting our asset managers?

- Are our investment guidelines reflective of what we want in extreme conditions?

  - do they truly reflect risk appetite?

  - do they allow the investment managers to take advantage of market dislocations?

Asset Management issues

- Finally, do we have enough asset expertise within life companies?
- Banks and hedge funds have been burnt this time but they have also made a lot of money where insurance companies haven't (eg commodities, infrastructure)
- Life companies are generally asset managers. We need to embrace new assets and be able to assess and model them.

Questions ??

Scott Eason
Eason Consulting & Resources Ltd
scott.eason@ecractuaries.com
Tel: 07758 346968
www.ecractuaries.com