Company Pension Plans And Financial Crisis: Lessons Learned?

Prof. Dr. Raimund Rhiel
Appointed Actuary to various German Pensionskassen

Munich, September 9, 2009
The economic situation:

• Huge losses of pension funds in 2008:
  – OECD reports worldwide losses of 5.4 trn. USD, i.e. 23% of their previous market values
  – Many US 401(k) plans lost 30% and more of their value
  – UK pension funds:
    • losses of over one third of their value
    • Equity ratio of 80% decreased to 50%
  – Contrary, German Pensionskassen and Pensionsfonds with very moderate losses.

• Should well accepted “solutions” and “actuarial tools” be questioned?
Questions should be raised to:

- regulators, e.g. accounting bodies (like IASB, FASB and local bodies)
- employers and pension plan managers
- employers and employees (questioning their relation)
- investment consultants on their “tools”
Questions to regulators (accounting bodies)

• Fair Value Accounting as a catalyser of the crisis?
• The long-term nature of pension obligations requires long-term financing.
• Should accounting rules (like IAS 19) support that?
  – No volatile accounting measures (fair value at balance sheet date) with respect to pension obligations and pension plan assets in the financial statements of the employer!
• Or should asset allocation obey accounting rules?
• Should pension plans be reported “off balance”, although not “off risk”? 
Questions to employers and pension plan managers

• Must pension obligations be funded at all, or has the traditional German way of unfunded (but reserved) pensions its merits?
• Do long term hedging instruments really exist?
• Shouldn’t companies limit their risks to their core business, where they are experts?
• Should pension funds invest their monies in equities...
• ... or only in bonds, even in nearly risk free bonds?
• ... and put equity investments preferably in the private sphere of well informed individuals (tax, risk appetite)
Questions to employers and employees

• Is the trend from DB to DC a “solution”? For whom?
• Can employees bear the pension risks?
• Modern DC plans are even “individual savings accounts”.
• Aren’t collective DC plans and collective hybrid plans (with more insured elements) better?
• What about “employer responsibility” when pure DC plans turn out as poor DC plans?
• Are pure DC plans really “risk less” to the employer?
  – Employees are forced to work longer as planned?
Questions to investment consultants

• All seven years a “one in hundred event”!
• Are ALM (and VaR) models really “correct”?
  – The right probabilities to bad scenarios (which then last for several years, and not only one year)?
  – Increasing correlation in bad scenarios!
    • The parameters (e.g. correlations) should depend on the outcome (realisation, path) of the scenario. Nothing new?
    • What are reliable dependencies on correlation?
    • Diversification useless?
    • counter-cyclical instead of pro-cyclical investment regulations.
  – Is the influence of behaviour (greed and panic) reflected in the model?
Questions to investment consultants and plan managers

- What is a “worst case scenario”?
  - It should be the “worst tolerable case” (without being ruined).
  - In traditional VaR:
    - Even worse cases are tolerated with a probability of (e.g.) 2%!
  - No pension fund or employer should bear such risk with such high probability (provided such probability is “correct”!)
  - Pension plan managers request (and always understood it this way) that worse scenarios than “the worst case” should have a tolerable probability of nearly zero.
  - Even if plan members “accept” higher risk, plan managers should avoid it (moral risk)!
IAA papers February/July 2009

• “The model, the modelling assumptions and their results need to be transparent, understood and regularly debated by management and regulators.”
• Re-estimation of many parameters.
• VaR = minimum amount of loss with given probability
• More reliable: TVaR = Tail VaR = expected loss.
• Use of fat-tailed non-normal distributions to avoid underestimating real risk exposures. “But does that help?”
• Sensitivity analysis to extreme or outlier events.
• Assessment of the consequences of uncertainty.
IAA paper February/July 2009

• Only “off risk” activities should be reported “off balance”.
• Reduce pro-cyclical effects.
• “Counterparty risk” should be understood and measured carefully (and reflected into all risk measures, e.g. VaR).
• Strengthen financial regulation on rating agencies, hedge funds etc.!
• Remuneration incentives should not focus excessively on short term results.
• Re-opening the DB versus DC debate.
Summary

• “The model, the modelling assumptions and their results need to be transparent, understood and regularly debated by management and regulators.”
• ... and by all those people “who finally bear the risks”
• ... and be a bit more prudent than requested!