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making financial sense of the future

Is LDI the answer?

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Investment Strategy for Pensions Actuaries
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Agenda

- Narrow LDI:
  - *Minimise* risk relative to liabilities using bonds and swaps
- Broad LDI:
  - *Manage* risk relative to liabilities
  - Hedge out interest rate risk
  - Diversify away from equity (property, private equity, hedge funds, commodity futures)
  - Greater focus on "alpha"

Background

- Changing nature of UK pensions
- From risk-sharing to guaranteed:
  - 1994: mandatory LPI increases
  - 2003: wind-up => debt on employer to fund buyout
- Accounting changes – FRS17, etc
- Pensions Regulator
- Death of DB

The case for full matching

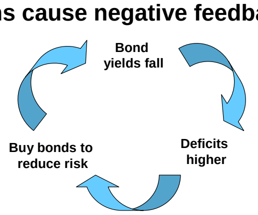
- Financial economics arguments
- “Economic cost” not related to investment policy
- Widget manufacturers should focus on making widgets
- Removes pension fund headache and agency costs

The case against full matching

- Traditional arguments:
  - Long-term investment horizons => equities
  - Need high return to meet pension obligations
- Most schemes not sufficiently funded to fully match
- Bubble in long-dated bonds

Bubble in long-dated bonds

Regulations cause negative feedback loop



- Supply of long-term debt should rise if yields are low…
- …it has but far short of what is required
- The flaw in the financial economists’ arguments?

Factors influencing risk appetite

- Maturity
- Size of scheme relative to sponsor
- Financial stability of sponsor
- Funding position
- M&A
- Corporate versus public sector
- **Behavioural factors**

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Other issues

- Pensions Regulator and PPF levy
- Interests of members vs shareholders
- Insurance company solution?

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The case for matching: conclusions

- Increasingly attractive in principle to Finance Directors…
- …if bubble in long-dated bonds deflates
- Catch 22?
- Heavily influenced by:
  - specific circumstances of scheme
  - beliefs of key decision-makers

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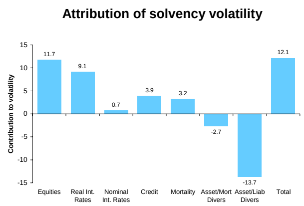
Sources of solvency risk



Source:Baillie Gifford/Barrie & Hibbert

- Attribution of risk based on typical pension fund
- Equity and real interest rate risk dominate over 1-year horizon
- Over longer horizons real interest rate risk reduces in importance

Hedging out interest risk

- Interest and inflation swap overlay can hedge interest rate risk
- Reduces solvency risk, but not by as much as one might expect
- Reduces returns, given low real long bond yields
- Not the no-brainer that some might suggest

Alternative assets

- In vogue – “Let’s be like Yale” mentality
- Property is a good diversifier
- Hedge funds and private equity rely on ability to select and access good managers

Property

- A good diversifier to equities:
  - Prospective returns between equities and bonds
  - Low correlation with equities
- Yields are at historic lows, possibly indicating overvaluation
- Direct property investment provides (artificially) low short-term volatility from lack of marking to market
- Indirect investment (e.g. REITs) may be cheaper and more flexible
- An allocation to property should improve a typical pension fund's risk-return trade-off

Private equity: positives

- Attractive rationale:
  - Venture capital: explosive growth
  - Buyout: realising value
- Perception of:
  - High returns
  - Diversification to listed equities
- Illiquidity premium
- Best managers deliver stellar returns

Private equity: negatives

- Historic returns lower than listed equities*
- High fees (on capital committed): "2 and 20" = 6.8%
- Timing:
  - Saturated market?
  - Sweetspot of credit cycle
- Not a true diversifier
- Difficult to access best managers

**Source: The Performance of Private Equity Funds, Phalippou and Gottschalg*

Private equity: conclusions

- Average manager unlikely to add value over listed equities
- Some artificial short-term diversification benefit from lack of marking to market
- Ability to select, and access, skilful managers is key

Commodity futures: positives

- Historic returns have been extremely attractive (12.4% p.a. since 1970).
- Harvest "risk premium" commodity producers are willing to pay for hedging their exposure to commodity prices
- Super-cycle arguments
- Significant diversification benefits to equities

Commodity futures: negatives

- Over the long-run commodity prices have lagged inflation
- Over the past 10–15 years the "risk premium" has disappeared
- Recent performance has been driven by increasing spot prices
- In recent years the correlation with equities has increased

Commodity futures: conclusion

- Attractive investment if believe in super-cycle argument
- …but not otherwise
- Unwise to invest based on:
  - Risk premium argument
  - Historic returns

Hedge Funds: positives

- Historic returns (after fees) have been extremely attractive (7.7% p.a. since 1994)
- Unconstrained approach allows skilled managers to deliver high returns
- Diversification to listed equities and low volatility

Hedge Funds: negatives

- Historic returns are overstated due to:
  - biases in the data
  - beta and other risk exposures
- High fees
- Saturated market?
- Accessing best managers?
- Complexity and lack of transparency

Hedge Funds: conclusion

- Some hedge funds will deliver stellar returns
- …but many will disappoint
- The ability to select (and access) highly skilled managers is crucial
- Synthetic hedge fund replication?

Greater focus on alpha

- Return from "alpha" feeds through to bottom line whilst risk is diversified away
- Scope to exploit inefficient markets (e.g. active currency)
- Scope to improve alpha from existing mandates:
  - Longer-term, less benchmark-constrained
  - Allow shorting (e.g. 130/30)

Greater focus on alpha – drawbacks

- Alpha is typically a zero sum game gross of fees and costs
- Move to higher fee alpha reduces overall net returns
- …especially if beta is sold expensively as alpha
- Behavioural biases may constrain implementation

Summary

- Liability matching increasingly attractive in principle
- …but many put off by low bond yields in practice
- Hedging interest rate risk is not cost-free at current bond yields
- Alternative assets in vogue – "Lets be like Yale"
- …but Yale were contrarian and have considerable experience in alternatives
- ...not a panacea for pension funds as a whole
- Scope to achieve greater alpha
- …but easier said than done, and may increase costs