



Institute of Actuaries of Australia

XVth GENERAL INSURANCE SEMINAR

Evolution of the Industry

Asset-liability matching in an environment of declining Government bond supply

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Executive Summary

- **Since 2000 there has been substantial de-risking of GI investment portfolios.**
- **This has coincided with an environment where the supply of Government bonds has declined by 48% since 1997.**
- **This investment void has been filled by non-government bonds which has impacted regulatory capital.**
- **This paper studies this phenomenon, its impact and looks at alternative ALM solutions.**



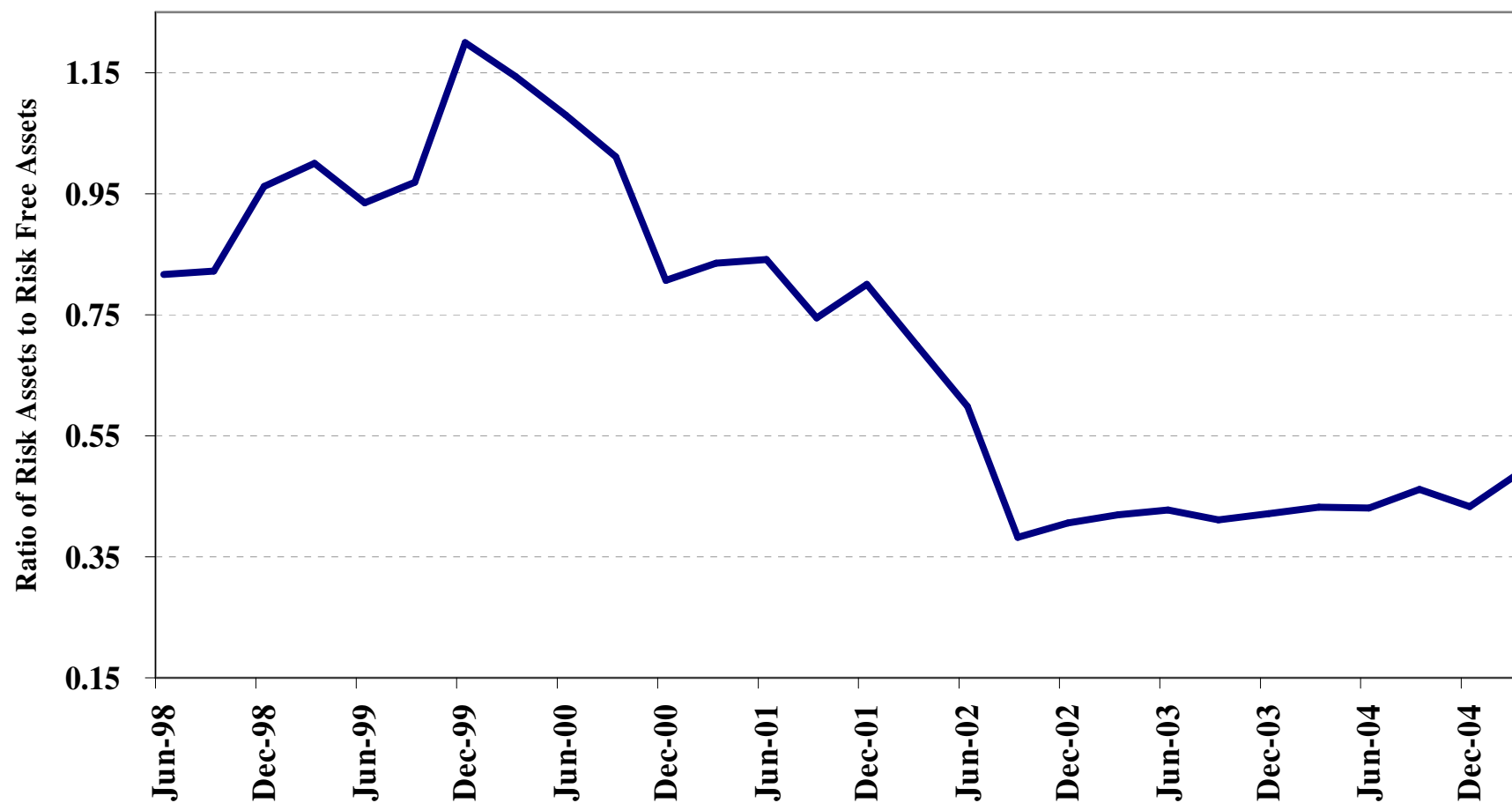
De-risking of GI Investment Portfolios

DRIVERS

- | | |
|---------------|---|
| 1996 | AASB 1023 Financial Reporting of General Insurance activities. |
| 2000/1 | Sharemarket downturn and large rally in bond yields. |
| 2002 | Guidance Note GGN 110.4 – Investment Risk Capital Charge |



Direct Insurers' Asset Allocation¹ (Ratio of Risky Assets to Risk Free Assets²)



1: Source - 1995-2002 APRA General Insurance Trends, 2002-2005 APRA Qly General Insurance Performance Statistics

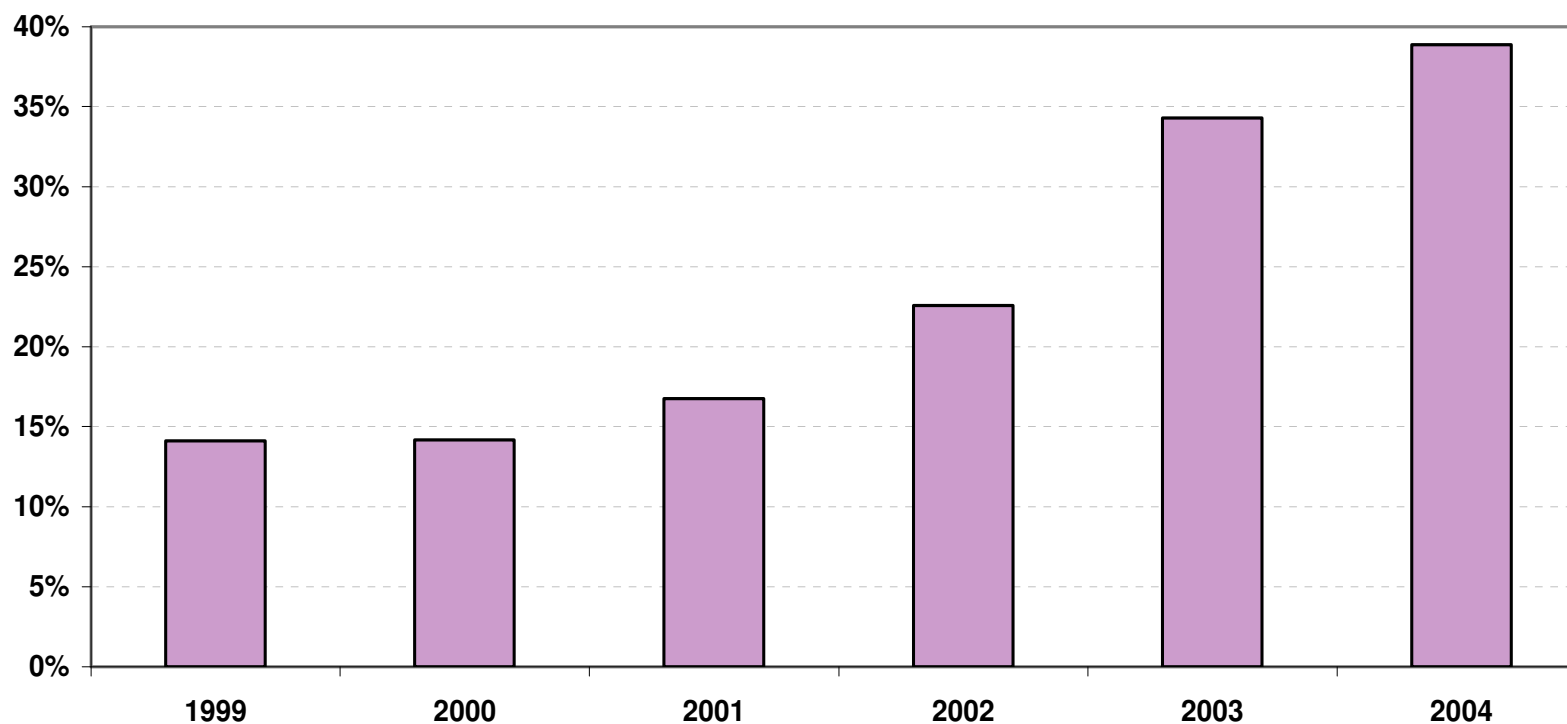
2: Risk Free Assets = Cash, Liquid Assets and Interest Bearing Investments



Supply/Demand of Risk Free Bonds

Since 1997 : Supply down by 47%. GI demand up by 270%.

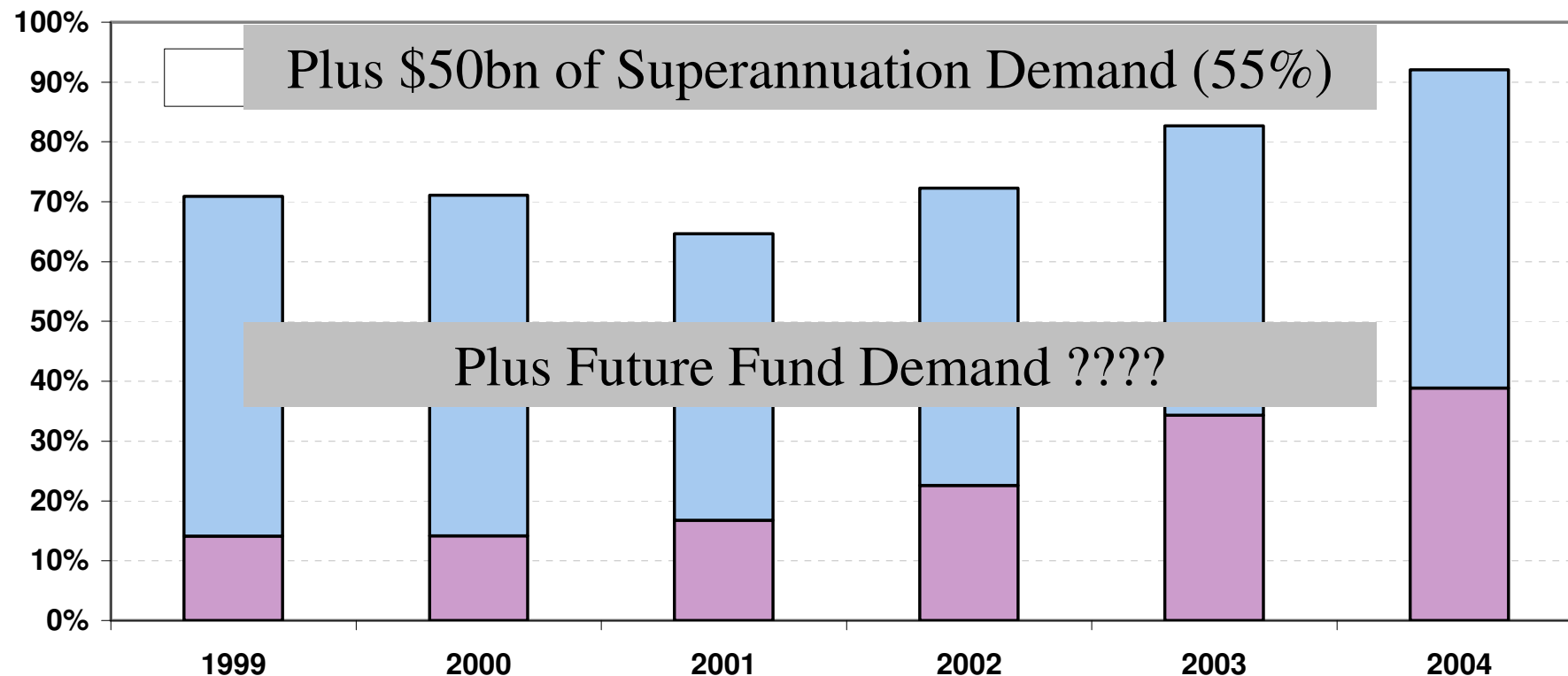
General Insurers Holdings of Interest Bearing Securities as a percentage of Commonwealth and Semi-Govt Bonds on Issue





Supply/Demand of Risk Free Bonds

General + Life Insurers Holdings of Interest Bearing Securities as a percentage of Commonwealth and Semi-Govt Bonds on Issue



Source: APRA, Reserve Bank of Australia, Queensland Treasury Corp, NSW Treasury Corp, Treasury Corp Victoria, Tascorp, WA Treasury Corp, SA Financing Agency



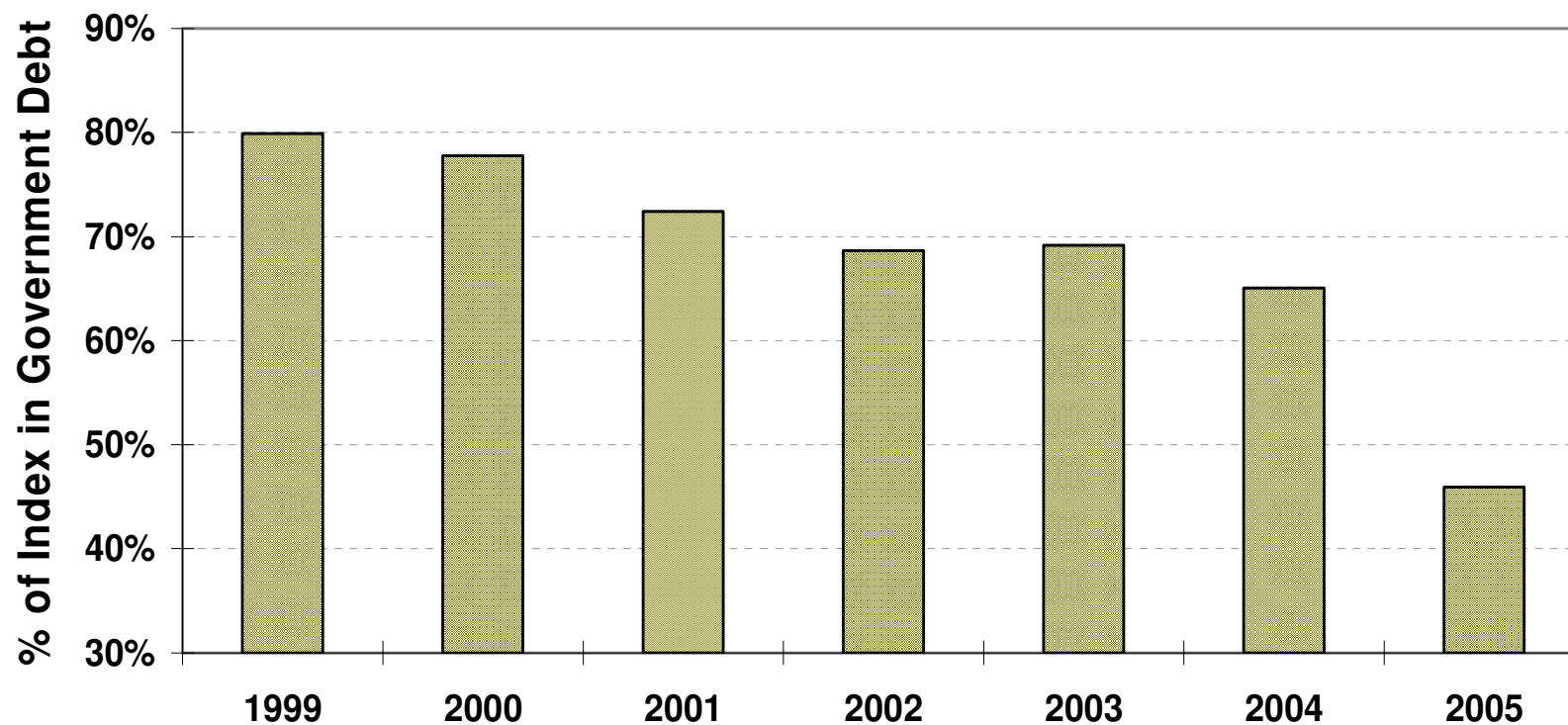
Filling the demand/supply gap

- **The most commonly used investment performance benchmark for FI managers is the UBS Composite Bond index.**
- **Components of this index are often used to benchmark GI bond portfolio managers.**
- **54% of the UBS Composite Bond Index is comprised of non-government bonds.**
- **The compositional shift in the UBS Index has significant implications for a GI's Investment Risk Capital Charge.**



Filling the demand/supply gap

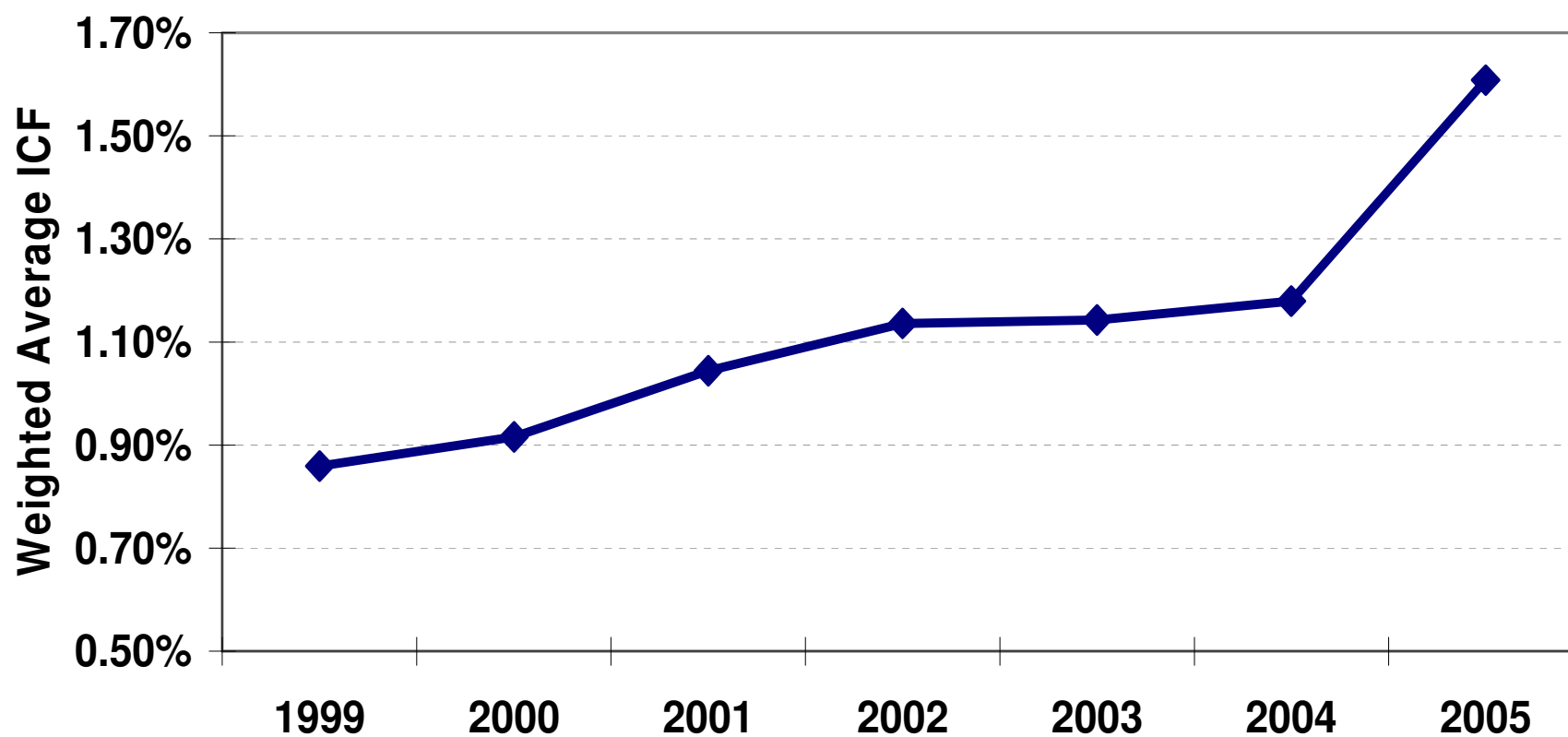
Government Bonds (CGL + Semi) as a % of UBS Composite Index



Source: UBS, Westpac



Weighted Average Investment Capital Factor of the UBS Composite Index



Source: UBS, Westpac



Benchmarking Investment Returns

- Incorporating the impact of the IRCC into the bond investment decision changes the relativities of various securities.

Returns after Capital Charges - 3 Year Bonds

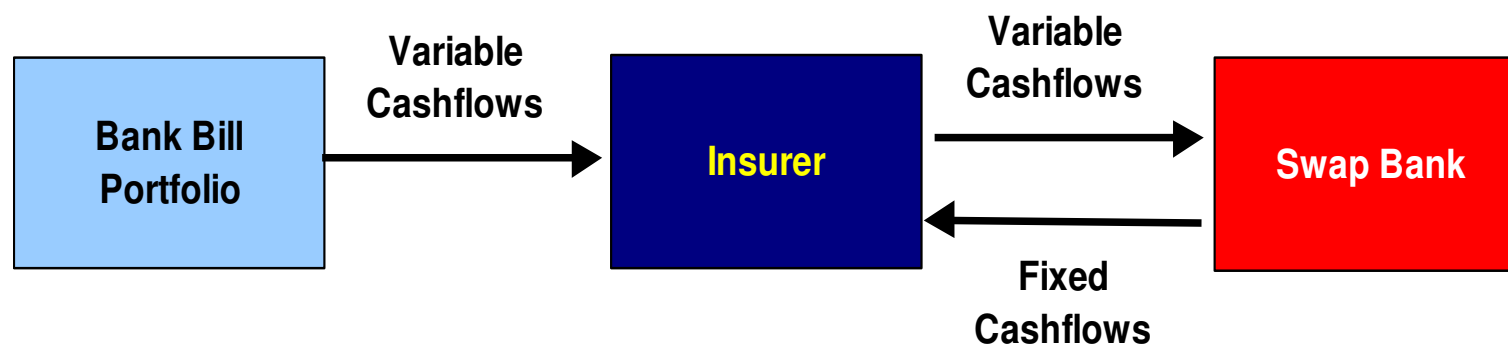
Yield Curve	APRA Investment Capital Factor	Minimum IRCC \$ per M	Target MCR (x 1.5 min) \$ per M	Cost of Capital to support MCR \$ per M	Cost of Capital to support MCR (bps equiv)	Actual Incremental Return (bps)	Net Return to insurer (bps)	Returns relative to CGL Benchmark (bps)
Credit (BBB)	6.00%	\$ 60,000	\$ 90,000	\$ 10,800	108.0	86.0	-22.0	-13.0
Credit (A)	4.00%	\$ 40,000	\$ 60,000	\$ 7,200	72.0	66.8	-5.2	3.8
Credit (>AA-)	2.00%	\$ 20,000	\$ 30,000	\$ 3,600	36.0	48.8	12.8	21.8
Swap	1.00%	\$ 10,000	\$ 15,000	\$ 1,800	18.0	42.9	24.9	33.9
Semi	0.50%	\$ 5,000	\$ 7,500	\$ 900	9.0	22.9	13.9	22.9
CGL	0.50%	\$ 5,000	\$ 7,500	\$ 900	9.0	0.0	-9.0	0.0

Analysis based on: 1) yields prevailing on 11 April 2005, 2) WACC of 12%, and 3) Targeted MCR of 1.5 times



Synthetic Bonds

Synthetic Bonds involve creating individual portfolios through the use of derivatives (i.e. interest rate swaps)



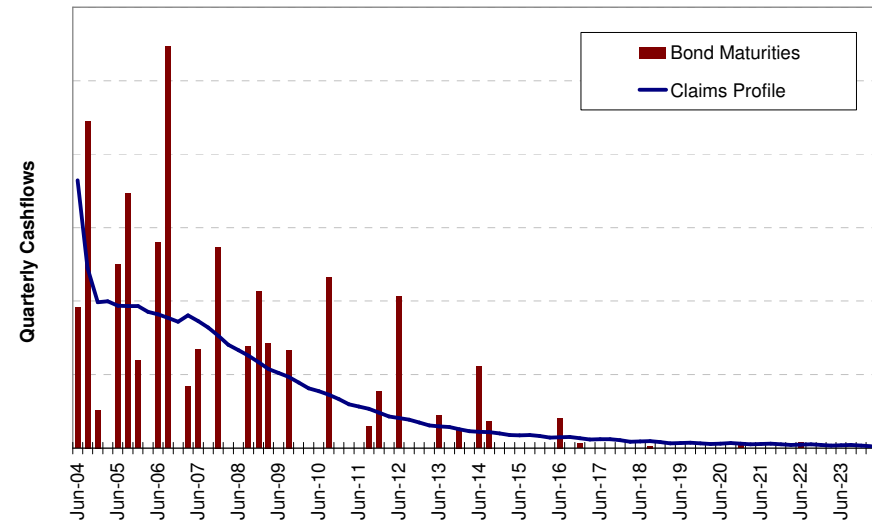


Current Approach

Attempts to construct bond portfolios to match the profile of the underlying liabilities are compromised by availability of suitable bonds.



Asset-Liability Maturity Profile

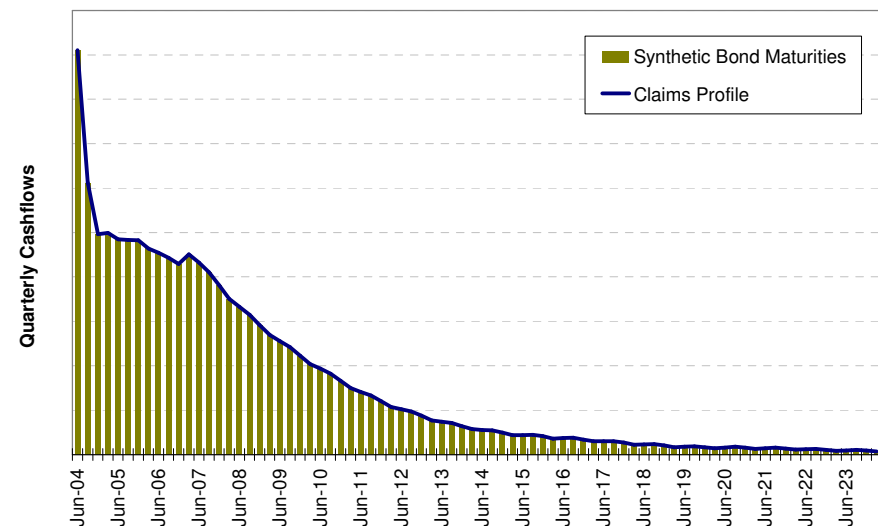


Synthetic Approach

Flexibility of interest rate swaps enable to insurer to specify what cashflows they require on what dates.



Asset-Liability Maturity Profile





Selective Derivative Strategies

- **IRS can be used to hedge specific long-dated liabilities.**
- **Enhanced running yield can be used to fund equity participation. E.g. current yield enhancement is sufficient for 5% equity participation.**
- **Inflation derivatives can be used to hedge inflation-indexed liabilities.**



Summary

- **The compositional shift in the bond universe has capital and ALM implications for GI's.**
- **Bond portfolio benchmarks need to include capital costs to reduce sub-optimal investment decisions.**
- **Explore whether the derivative offerings of financial intermediaries can enhance the ALM process.**



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Questions?