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Market-Consistent Valuation Workshop

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Contents

- Recap of theory
- Practical aspects
- Market practice to date

Traditional valuations

- Single discount rate
- Best estimate distributable profits
- Deterministic
- Discount rate is typically set at a company level
- Allowance for risk is made via the risk discount rate

Traditional valuations

- Risk discount rate is typically set using a CAPM framework:

  RDR = Rf + beta * MRP

- MRP is typically set with reference to a broad equity market index
- Beta measures the correlation of changes in the value of the entity with changes in that market index

Traditional valuations

- Single discount rate can create problems
  - value at product line
  - changes in the risk profile of the business
- These problems limit the usefulness of the valuation for informing decision making

Market-consistent valuations

- Component approach to valuation
  - “economic” assets and liabilities are valued individually
  - riskiness of each component is allowed for directly
  - corporate structure effects are allowed for explicitly

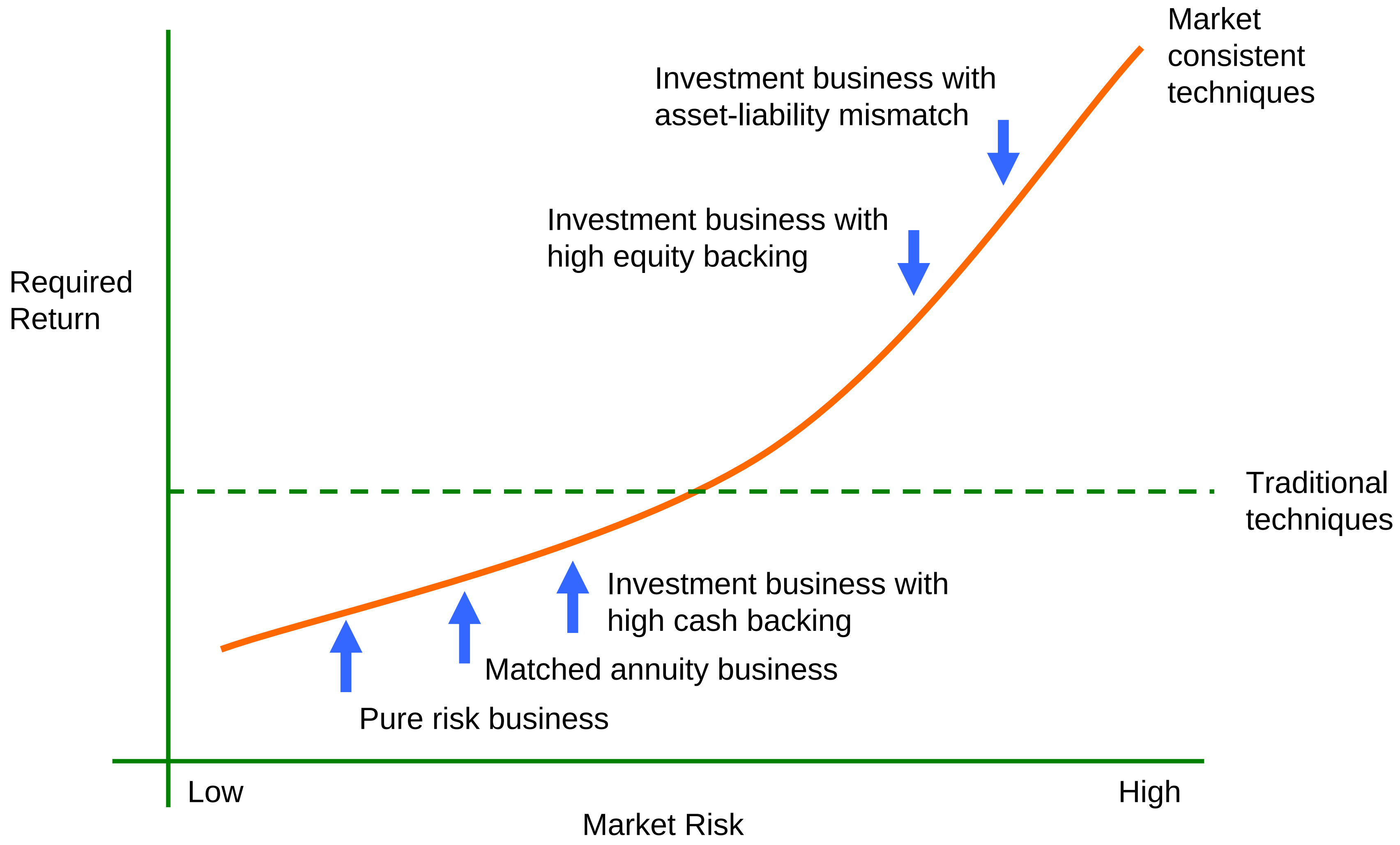
Market-consistent valuations

Assets		**Liabilities**	
MV of tangible assets	XXX	PV insurance liabilities	XXX
Limited liability put option	XXX	Cost of double taxation	XXX
Tax shields	XXX	Agency costs	XXX
Franchise value	XXX	Cost of financial distress	XXX
			XXX
		Economic equity	XXX
	XXX		XXX

Market-consistent valuations

- Fair value of liabilities
  - treat existing liabilities as market tradeable instruments
  - apply financial market pricing techniques
    - certainty-equivalent valuation
    - explicit allowance for costs of options granted to policyholders
- Certainty-equivalent valuation
  - identify “risk” in cashflows and remove it
  - discount using risk-free rate

Market-consistent valuations



Practical aspects

- Definition of “market”
- Market risk in cash flows
- Impacts of corporate structure
- New business multipliers

Definition of “market”

- Under both CAPM-style and MCV valuation frameworks, a “market” needs to be defined
- Typically, a broad equity index is used, although this is not perfect
- Should something else be used?

Market risk in cash flows

- What cash flows are exposed to “market risk”
  - asset cash flows are clearly impacted
  - future new business volumes
  - others?
    - mortality/morbidity claims
    - surrender claims
    - expenses

Impacts of corporate structure

- A company is not just the sum of assets and liabilities
- The corporate structure has an impact on value:
  - franchise value
  - benefit of limited liability structure
  - frictional costs (double tax, financial distress, agency costs)
- How to allow for these?

Impacts of corporate structure

- Franchise value
  - under a traditional valuation framework, the “goodwill” is typically based on a value of one year’s sales times a multiplier
  - the same approach can be used in a market-consistent valuation, but
    - the value of one year’s should be determined using market-consistent principles
    - the multiplier should be determined using market-consistent principles

Impacts of corporate structure

- Limited liability
  - shareholders have the option to walk away if liabilities exceed assets (ie the value of a limited liability company to a shareholder cannot ever become negative)
  - this represents an option for shareholders, and this option is valuable
  - in normal circumstances, that value may be negligible

Impacts of corporate structure

- Double tax
  - under the imputation system, double tax is minimised
  - imputation credits typically valued at 70% of face value, implying there is still some double tax effect

Impacts of corporate structure

- Financial distress
  - for most well capitalised life insurance companies operating in Australia, the probability of entering into a state of financial distress is likely to be very small
  - the impact of this risk on value is likely to be small
  - the same is not necessarily true for all general insurance companies, where claim volatility could generate not insignificant probabilities of financial distress

Impacts of corporate structure

- Agency costs
  - “the cost to shareholders of ceding control of their capital to management”
  - a body of academic research has focussed on agency theory in recent years
  - it does appear that markets apply a charge against capital held in a company
  - what level is appropriate? and should this vary by company?

New business multipliers

- For traditional valuations, a parameterised approach is often used
- The same approach can be used for a market-consistent valuation, but the parameters need adjustment (to be “certainty-equivalent”)

Market practice

- Valuations utilising the new market-consistent techniques are being used and reported in Australia
  - AMP demerger and subsequent EV / VOYS reporting
  - as a check of traditional valuations for reporting and M&As
  - annuity pricing and traditional valuations of annuity books will often partly make use of these techniques
  - the new AASB1038 will require liabilities that are unrelated to asset cash flows to be discounted at a risk free rate

Market practice

- Views on discount rates for traditional valuations are changing
  - recognition that risk business portfolios deserve lower risk discount rate than investment portfolios

Market practice

- Market-consistent techniques can be used to set discount rates under a traditional valuation framework
  - results can then be presented in the traditional way
- Impacts on valuations:
  - for a typical well-diversified book in Australia, there may not be a significant change in aggregate value
  - in other markets, the traditional framework has broken down at times
- Real interest in the new techniques in Australia
  - business decision making at the margin

Topics for discussion

- Is “value” a consideration in decision making?
- Components of economic value
- What is an appropriate definition of the “market”?
- Diversifiable and non-diversifiable risk
- Market risk in cash flows
- Agency costs
- Changes in market practice
- Views of others in the market