



Institute of Actuaries of Australia

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Renovating the Financial System

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Illiquid Assets

– Are They Worth It?

(Managing liquidity and valuation risk)

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Overview

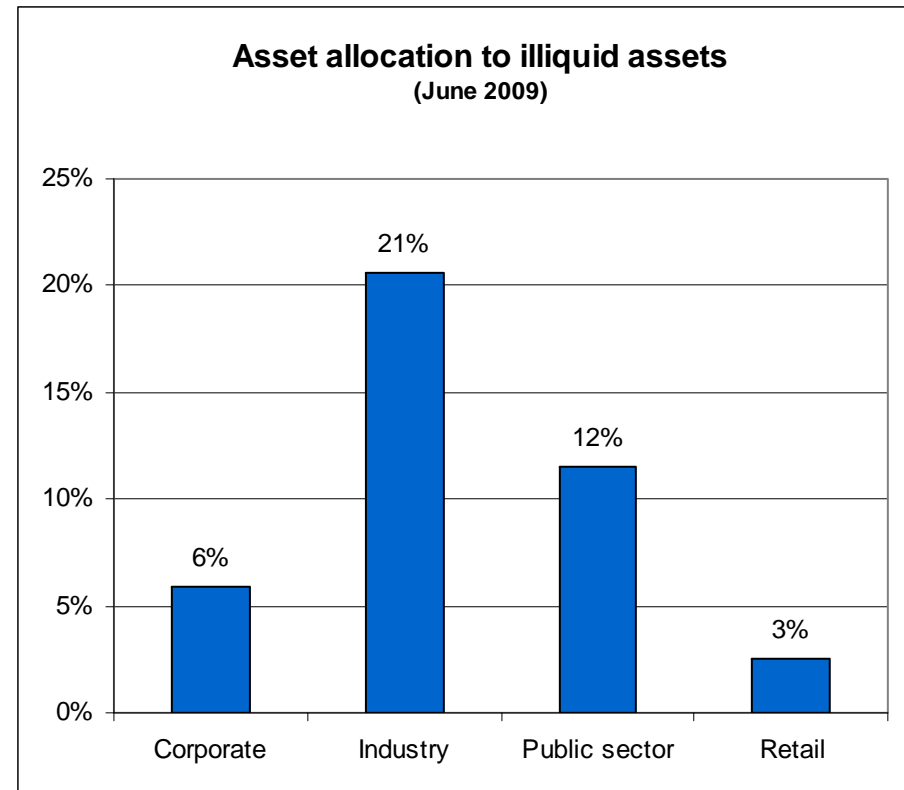
- Risks and issues that are presented by illiquidity:
 - financial risks
 - operational risks
 - governance issues
- Frameworks that address:
 - liquidity risk management
 - valuation issues and inequity
- Approaches to deal with mismatch issues
- Value actuaries can add in these areas
- Question time



Illiquid assets – risks and issues

Illiquid assets – so what?

- Illiquid assets generally include:
 - commercial property
 - infrastructure
 - private equity holdings
 - non-exchange traded securities (e.g. mortgages, OTC derivatives, etc)
- We will focus on the use of illiquid assets in sector specific and diversified unit linked funds (i.e. not listed funds)
- Significant illiquid investments now made
- Complex governance issues
- Difficult technical issues
- Customer behaviour is a factor
- Is it worth it?
- How can we help as actuaries?



Source: APRA June 2009 Annual Superannuation Bulletin
("unlisted property" and "other assets")

So what can go wrong ?

- Inherent risks
 - Cash flow
 - Projections
 - Valuations
 - Gearing
- Political
 - Product design
 - Wholesale access – safety valves
 - Lack of data
 - Lack of market info
 - Valuation techniques
 - Adjustment for risk
 - Valuation lag

Who's worrying?

- Life Co Boards
- Super Trustees
- RE Boards



Fiduciary Responsibilities to **customers** and **shareholders**

There is guidance available ...

- ASFA Best Practice Paper 35 – Managing Liquidity
- IFSA Guidance Note 26 – Infrequently Valued Assets
- APRA's Prudential Approach to ADI Liquidity Risk
- Accounting Standards

... but it is not enough

Guidance needed...

- Illiquid assets? Why? If yes, what %? What type?
- What are the risks? How can they be mitigated?
- What is a “correct value” and how is it determined?
 - How does this change in stressed conditions?
 - How do you allow for risk?
 - How does product design affect risk and value of asset to you?
 - How do you allow for customer behaviour?
- Informed decisions: How to be fair and open for new investors?
Existing Investors?
 - Expectations, risks, restrictions
 - True to label
- Intergenerational fairness?



Fair criticism?

Threat of buyback freeze on unlisted property
(July 1990)

Managers rush to calm nervous investors
(July 1990)

Financial shocks teaching investors some
hard lessons
(October 1991)

Run on trust as investors panic
(April 1990)

Need a better match between assets and
liabilities (July 1990)

Many trusts have frozen withdrawals, others have
suffered a big slump in performance, while yet others
have severely depleted their available liquid funds
(February 1991)

The main concern is the need to avoid the
forced-sale of a large number of properties which
would result if investors continue to make heavy
withdraw from the trusts (July 1990)



For / Against

For

- potential superior long term return (although this may be diminished by strong demand for illiquid assets)
- diversification benefit / low correlation to traditional assets
- reducing overall portfolio volatility? (is this a result of valuation practices?)
- offering expanded range of product options
- provides capital / funding to important economic development ...
- increasing system capacity to handle future volume of super

Against

- risks manifest differently and can be complex (relatively stable, then period of extreme movement / illiquidity)
- not readily convertible to cash
- less flexibility
- long term commitment
- less transparent / lack of disclosure
- potential higher cost
- requires specialist skills
- lack of independence of management
- may be heavily geared



Liquidity risk management framework

Liquidity risk management framework

1. Liquidity risk appetite establishment / assessment

Through member behaviour analysis and stress testing; consideration for customers vs. other stakeholders; different by investment options

2. Ongoing monitoring

e.g. liquidity monitoring and ongoing cashflow forecasting;

Escalating and reporting in the event of a breach in liquidity.

3. Managing illiquidity

e.g. suspending redemptions, modifying asset mix, in-specie redemptions, etc.

4. Governance

e.g. making informed decision, formal governance process over liquidity issues, contingency plan, regulator dialog, disclosure etc

Trustee / board

Operations



1. Establishing liquidity risk appetite

- Establishing risk appetite by different investment options
- Membership profile (current and forecast)
- Robust cashflow analysis – current and projected liquidity position / ratios
- Multi-faceted stress testing / scenario testing, including:
 - customer behaviour
 - illiquidity in underlying funds
 - assets not performing as expected (e.g. enhanced cash)
 - exchange movement
 - volatility / predictability of cashflows

2. Liquidity monitoring

“Asset” considerations

Anticipated:

- distributions, maturities, etc

Unanticipated:

- currency hedge close-outs / calls (development, embedded options)
- asset value movements, rebalancing
- underlying fund liquidity changes (e.g. freezes)

“Liability” considerations

Anticipated:

- SGC, pension payments, rollovers etc

Unanticipated:

- stress behaviours
- lead indicators – call centre volumes / balance enquiries / rollovers
- concentrations – members / financial planners / asset consultants

Customer based segmentation

“Stickiness”

employer default
with insurance top-up
retail fund
legacy fund
young member
smaller balances
inactive members
no adviser
...

May vary due to:

- individual fund circumstances
- stress environment

“Flightiness”

member’s choice
no insurance top-up
wholesale fund
open fund
old member
larger balances
active members
adviser
...

Know your customers, and your customer’s customers!

3. Managing illiquidity

Immediate

- suspend transactions / redemption windows (regulator approval?)
- cancel reinvestment of distributions
- review / modify asset mix (potentially at a penalty)
- in-specie transfers (for wholesale classes)
- fund manager support / “buyout” (at what price?)

Medium term

- revise disclosures (and supporting processes) around redemption acceptance, processing and timing, suspension and liquidity risk
- widen asset allocation ranges – “true to label”
- restructure assets – remove illiquidity from underlying assets (e.g. list/segment assets)

Long term

- More fundamental / structural changes
- product design – limits on illiquid assets, commit customers
- system / structural changes
 - limit portability
 - liquidity guarantee
 - liquidity insurance

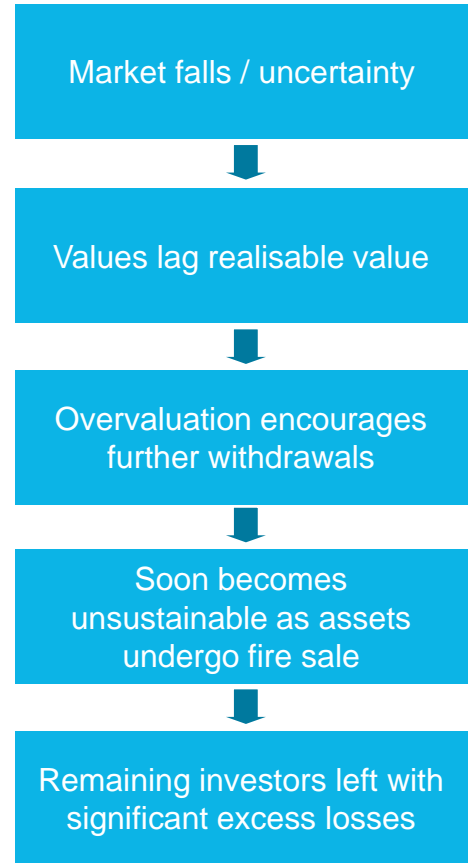


Valuation issues

Asset valuations

	Current valuation approaches	Limitations
Infrastructure	<ul style="list-style-type: none"> external / independent valuation discounted cashflow method (DCF) full valuation on infrequent basis roll-forward valuation on quarterly basis 	<ul style="list-style-type: none"> valuations can lag behind realistic realisable asset values lack of independence?
Private equity	<ul style="list-style-type: none"> often in-house valuation by PE firm multiple of earnings method (value company as going concern) internal valuation on quarterly basis superfund may require external valuation if significant exposure 	<ul style="list-style-type: none"> difficulty in selecting from multiple valuations / ranges rigour around DCF assumptions? insufficient market data / lack of comparable sales
Property	<ul style="list-style-type: none"> external panel valuation comparable market transaction or “capitalisation rates” method full valuation on infrequent basis roll-forward valuation on quarterly / semi-annual basis 	<ul style="list-style-type: none"> use of averages / best estimate (inadequate allowance for risks / asymmetry)

Issues with inappropriate valuations



“We are looking to ensure that it is not a case of first out, best dressed.”

National Companies and Securities Commission - July 1990



Dealing with the mismatch of long term assets with short term liquidity requirements

A range of possible approaches

“Caveat emptor”		“Paternal”
Basic unitised approach	Informed decision – Sector Specific	Investor commitment – Diversified Fund
<ul style="list-style-type: none"> • Boom / bust cycle • Seemingly sound in growth period • Not resilient in times of stress 	<ul style="list-style-type: none"> • Allows informed decisions by trustees/investors • More transparency • Supplements other available arrangements (closed end, gates etc) • Does not prevent inequities 	<ul style="list-style-type: none"> • Investor forgoes short term portability in exchange for increased exposure to illiquid assets • Introduces adjustment if investor “breaks” time horizon

Informed decision

- Initial valuation of infrastructure has sometimes proved wildly wrong.
- Best estimate valuations should be supplemented with “stress scenarios”:
 - reduced cashflows
 - interest rate shocks
 - economic uncertainty

These stress scenarios are designed to highlight the “**1 in 20 years**” nature of liquidity/valuation crises in illiquid assets.

- The outcome of the stress scenarios can be assessed against risk tolerances:
 - trustees investment risk tolerance
 - risk / return expectation of customers - “**High returns, nice and safe**”
 - assessing illiquidity risk / reward

These scenarios can provide information to investors and help them make informed decisions.

Member commitment

- Member can choose to forgo short term portability in exchange for increased exposure to illiquid assets within a diversified super fund
- “Safeguard adjustments” allow member to exit if their time horizon changes, but with constraints
- Adjustment is retained for the benefit of remaining members, whose time horizons match the long term nature of the assets

1. Simple Adjustment

- Buy/sell spread or early exit penalty

2. Considered Adjustment

- Smoothing / investment fluctuation reserve

3. Dynamic Adjustment

- Restricted release – members given access to a portion of their benefit
- Remainder is held until valuation/liquidity uncertainty is resolved

These approaches do not adequately deal with inequity and require a lot of judgement

Member commitment - Dynamic adjustment

1. In benign times

- Members are free to enter / leave without penalty

2. In times of stress and valuation uncertainty

- Members can withdraw a proportion of their benefit, based on assets that have liquidity and valuation certainty
- Trustees may choose to allow additional amounts to be withdrawn
- In either case, remainder is held “at-risk” for the full illiquid amount until valuation uncertainty is resolved (e.g. liquidity is restored, market stability etc)

3. When valuation certainty returns

- Remainder is adjusted to reflect the new reasonable value of the illiquid / uncertain assets and returned to members

Ensures fairness by requiring those demanding liquidity to “keep some skin in the game”

Member commitment

Pros

- Short term members are discouraged from “day-trading” illiquid assets at the expense of others (prevented from gaining benefits without risk)
- While long term members can continue to benefit from illiquidity premium

Cons

- Only works in diversified funds where other liquid assets are available
- Likely to require complex fund/product restructure/redesign
- Requires overhaul of superannuation portability standard
- May discourage funds and investors from these asset classes

This approach allows members to benefit from the long term advantages of a illiquid asset allocation in a diversified fund, by allowing ready access to the liquid allocation, and preventing inequities in times of uncertainty.



Values actuaries can add



Role of actuaries

- Application of statistical and data mining techniques to model customer segmentation (similar to those used in general insurance)
- Application of stress testing and scenario analysis (e.g. those used in capital and business planning)
- Application of control cycle in the identification, measurement, monitoring and management of liquidity
- Embedded value / DCF techniques
- Quantification of risks / risk margins
- Pricing of risks that are periodic, severe and correlated with each other

Conclusion

- Illiquid assets represent an important sector, however risks can be misunderstood and underestimated
- Potential for inequity, crisis in confidence, or worse!
- Further guidance needed, both from a practical and governance perspective
- Alternative approaches can attribute long term risks and rewards of illiquid assets to investors more equitably
- Actuaries can contribute, using their existing skill set

***“...This was in recognition of the inherent flaw in unlisted trusts, offering both a long-term investment and the guarantee of short-term withdrawals...”
SMH on BT’s call for much needed liquidity in property trusts...***

in September 1991 !



Thank You

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Please note: the views expressed in this presentation are the authors' own and do not necessarily represent the views of the profession or the authors' employer.

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