International Financial Reporting Standards

Present value measurements – discount rates

Research findings

Education session 1 – Present value measurement components and methodology

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Research objective

- Review discount rate requirements in IFRS and:
  – Identify any inconsistencies
  – Consider whether the IASB should address those inconsistencies.
- The research considered the following aspects:
  – Scope of present value measurement
  – Measurement objectives
  – **Discount rate components**
  – **Measurement methodology**
  – Presentation and disclosure

To be discussed at this session

Objectives of the session

- Discuss staff findings relating to
  - Discount rate components
  - Measurement methodology
- Findings discussed on pages 36 – 64 of draft research paper (AP15B from September 2015, reproduced as AP17B for this meeting)
- Next session(s): discuss findings relating to scope of present value measurement, measurement objectives, presentation and disclosures, and the way forward.

Approach to the session

- A brief introduction by the staff emphasising potential problems identified
- Discussion by the IASB:
  - Whether they agree with staff depiction of IFRS requirements
  - Whether they agree with potential financial reporting problems identified
  - Whether they have identified any relevant additional potential financial reporting problems
- Not a decision-making session

Potential financial reporting problems identified in research paper

Issue no	Research area	Description of the potential financial reporting problem	Consequence of not addressing the problem
1	Use of present value	Relationship between present value measurement and historical cost measurement basis not explored	No principle for the time value of money in cost-based measurements, lack of comparability of financial and non-financial assets at cost
2	Use of present value	Discounting of deferred taxes not permitted	Lack of comparability, goodwill overstated/understated
3	Measurement basis	IAS 19 lacks a measurement objective	Application of Standard is limited to the set of circumstances covered by rules, any change prompts calls for further rules
4	Measurement basis	IAS 19's measurement reflects the credit risk of third parties; dual rates used	Rate used is not relevant in all aspects to the liability measured, lack of comparability
5	Measurement basis	IAS 37's measurement objective unclear	Different understanding of objectives could lead to inconsistent measurement
6	Components	Application of entity-specific perspective in measurement	Value in use is hard to audit and enforce and some say not relevant
7	Components	Liquidity risk not consistently reflected in entity-specific measurements	Loss of comparability, for example pensions and provisions versus insurance liabilities
8	Methodology	Pre-tax and post-tax meaning and conversion	Errors in conversion and interpretation lead to misstatements
9	Methodology	Allowing only a particular method, for example pre-tax inputs requirement for the value in use in IAS 36	Additional complexity, potential misstatements
10	Methodology	Mixed use of entity and market perspective in accounting for tax	Overstatement of deferred tax balances
11	Presentation	Inconsistent use of other comprehensive income vs profit or loss in reassessment	Lack of comparability, unclear meaning of profit or loss
12	Disclosure	Inconsistent disclosure requirements; rate(s) and method used, impact on P&L and sensitivity analysis	Lack of comparability and insight in judgements made in measurement

To be discussed at this session

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Components of present value measurement

- Section 4 in research paper (Paper 17B), pages 36 – 55
- Reference list based on IAS 36/IFRS 13:
  - an estimate of the future cash flow(s);
  - expectations about possible variations in the amount or timing of those cash flows;
  - the time value of money, represented by the current market risk-free rate of interest;
  - the price for bearing the uncertainty inherent in the asset;
  - other factors (such as illiquidity) that market participants would take into account; and
  - for a liability, the non-performance risk relating to that liability, including the entity's (ie the obligor's) own credit risk

Components of PVM in IFRS - review

IFRS / Project	Item measured	Measurement description	Central estimate of cash flows	Time value of money	Risk premium	Liquidity premium	Own non-performance risk
IFRS 13	Assets and liabilities at fair value	Fair value	Yes	Yes	Yes	Yes	Yes
IAS 36	Non-financial assets (impairment)	Value in use	Yes	Yes	Yes	Yes	n/a
Insurance Contracts	Insurance contract*	Present value of net cash flows expected to fulfil	Yes**	Yes	Yes (separate)	Yes	**No**
IAS 37	Provisions	The amount to settle or transfer	Yes	Yes	Implicit	**Not explicit**	**Not explicit (in practice no)**
IAS 19	Defined benefit plan obligation	Present value of ultimate cost	Yes	Yes	**No**	**Some*****	**Some*****

* Insurance contract can be a liability or an asset
** Includes both a cash flow component and a contractual service margin (CSM). The table does not mention the CSM.
*** Included to the extent that these are included in the rate of bonds used; the components are not entity or obligation-specific.

Central estimate of cash flows

- What, when, probabilities
- Variations in amount of future cash flows
  - Expected value (mean)
  - Maximum amount more likely than not (median)
  - Most likely (mode)
  - Also ‘Best estimate’
- Variations in timing of future cash flows

No potential financial reporting problems identified

Estimate of cash flows - profit margin

Standard / Project	Item measured	Measurement attribute	Profit margin included
IFRS 13	Assets and liabilities at fair value	Fair value	Yes (implicit)
IAS 36	Non-financial assets (impairment)	Value in use	Yes (implicit)
Insurance Contracts	Insurance contract	Present value of amount to fulfil	Yes
IAS 37	Provisions	The amount to settle or transfer	Not clear
IAS 19	Defined benefit plan obligation	Present value of ultimate cost	No (implicit)

Profit margin does not capture price for bearing uncertainty

No potential financial reporting problems identified

Time value of money

- Minimum risk rate, ‘risk-free’ rate
- Government bond rate usually used as proxy
- Some regulators publish risk-free rates to be used for regulatory purposes (eg calculation of Weighted Average Cost of Capital)
- Growing presence of very low and negative rates

No potential financial reporting problems identified
Noted that sometimes it is difficult to determine rate in practice

Risk premium

- Risk premium:
  - reflects price for accepting risk that cash flows may differ from central estimates.
    (central estimates – such as expected value - do not adjust for risk)
  - can increase or decrease value of assets and liabilities = in financial reporting generally decreases assets and increases liabilities
- In finance, different theories on whether and how risk impacts values.

Potential diversity in practice related to inclusion of risk in IAS 37.
Reported compliance issues with risk in value in use in IAS 36
We are investigating further

Liquidity premium

- Bond investors can be seen as buying two components:
  - Underlying non-tradable instrument, with higher return
  - An embedded option to trade, or liquidity premium, which reduces the return on investment
- In addition, for liabilities, cash flows may vary due to one party making use of this liquidity in the contract.
- Several methods for determining liquidity premium exist but determining it in practice is a challenge.

Liquidity premium – issue identified

- Liquidity not consistently reflected in entity specific current value measurements which affects comparability –difference will be more pronounced once new Insurance Contracts Standard is out.
- Reflecting liability-specific liquidity would have a material impact on measurement of defined benefit liabilities and provisions (for illiquid instruments, illiquidity premium could increase discount rate by several hundred basis points)

Issue 7 in draft Research Paper (para 175-176)

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Own non-performance risk

- The risk that the entity may default on its financial obligations – mostly relevant to liabilities only
- Generally not included in entity-specific present value measurements (apart from some IAS 37 measurements in practice)
- Included in fair value measurements

No potential financial reporting problems identified so far (we are collecting further evidence on where credit risk is included in IAS 37 rate in practice)

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Entity vs market perspective

Standard / Project	Item measured	Measurement atribute	Cash flow perspective	Rate perspective
IFRS 13	Assets and liabilities at fair value	Fair value	market	market
IAS 36	Non-financial assets (impairment)	Value in use	entity	market
Insurance Contracts	Insurance liability (or an asset)	Present value of amount to fulfil	entity (consistent with market)	entity for risk, market for the rest
IAS 37	Provisions	The amount to settle or transfer	entity (implicit)	market
IAS 19	Defined benefit plan obligation	Present value of ultimate cost	entity	market

- Prevalence of companies with book value of equity in excess of market value who recognise no goodwill impairment indicates there may be a problem with applying entity perspective in practice

Issue 6 in draft Research Paper, para 145-147

Measurement methodology

- Main principles identified
  - Do not double-count
  - Use internally consistent assumptions
  - Include everything
- Main aspects considered
  - How are risk adjustments reflected?
  - How is impact of tax reflected?
  - How is impact of inflation reflected?

We have identified several methodology issues relating to tax

Measurement methodology in IFRS

Standard/ Project	Item measured	Measurement attribute	Adjustment in rate or cash flows	Rate pre-tax/ post-tax or either	Rate real/nominal or either
IFRS 13	Assets and liabilities at fair value	Fair value	either	either	either
IAS 36	Non-financial assets (impairment)	Value in use	either	pre-tax	either
Insurance Contracts	Insurance liability/asset	Present value of amount to fulfil	either	pre-tax (implicit)	either
IAS 37	Provisions	The amount to settle or transfer	either	pre-tax	either (implicit)
IAS 19	Defined benefit plan obligation	Present value of ultimate cost	n/a	pre-tax	nominal (unless real more reliable)

Measurement methodology – risk adjustment

- Required* in IAS 36 and implicit in IAS 37, either as adjustments to the rate or cash flows.
- In principle, does not matter if adjustment made to the rate or the cash flows – as long as it is not made twice. However, method affects amount reported as periodic unwinding of discount, where relevant.
- In practice adjustments to cash flows encouraged because of greater accuracy. However, some see adjustment to the rate as being more transparent (and easier to compare).

No potential financial reporting problems identified
(but clarification of how risk is reflected could be helpful)

*risk adjustment also proposed for insurance contracts, but as a separate measurement

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Measurement methodology – tax

	Pre-tax cash flows	Post-tax cash flows
Pre-tax rate	Post-tax measurement	double-counting of tax effect
Post-tax rate	Pre-tax measurement	Post-tax measurement

- IFRS measurements are usually fully on a post-tax basis, except when deferred tax arises and some or all of tax effect is recognised separately
- Two ways to arrive at the (same) post-tax basis measurement, method used matters when unwinding of discount reported separately (to make interest expense comparable)
- IFRS 13 is the only standard that explicitly allows use of either pre-tax or post-tax inputs.
- Misunderstanding of what pre-tax inputs represent lead to misstatements

Measurement methodology for tax – issues identified

- Issue 10 in draft Research Paper (para 221 – 222)
  - Pre-tax rate should reflect the rate of tax and the cash flows which are to be taxed, so using a pre-tax rate from an instrument that is taxed differently leads to misstatement (eg bonds and provisions are sometimes taxed differently so using bond rate to discount provisions leads to error).
- Issue 8 in draft Research Paper (para 213 – 215)
  - Converting post-tax to pre-tax rate is not a simple grossing-up exercise, misstatements occur through misunderstanding;
- Issue 9 in draft Research Paper (para 216 – 217)
  - Requirement to only use pre-tax inputs in IAS 36 burdensome and seems unnecessary.

Measurement methodology – inflation

- Mostly nominal inputs used; real rates (and corresponding, real CFs) in practice used for long-term liabilities in IAS 37

No potential financial reporting problems identified

Measurement methodology – other

- We have found evidence that, in few jurisdictions, instead of current rate, a moving average rate is used (over a number of years) for measuring provisions.
- This can be materially different to the current rate (for one company we looked at, the difference amounts to billions).
- The issue is not discussed in draft Research Paper, we are performing further research at the moment.

Next steps

- Discuss scope, objectives and presentation and disclosures for current entity-specific measurements
- Decide on publication of research paper

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