

Insights into PAS 36

Value in use: applying the appropriate discount rate

PAS 36, *Impairment of Assets*, sets out the requirements entities should follow prior to concluding if an asset should be written down in the financial statements (i.e., impaired). However, due to the complex nature of the standard, the requirements of PAS 36 can be challenging to apply in practice.

The articles in our ‘Insights into PAS 36’ series have been written to assist preparers of financial statements and those charged with the governance of reporting entities understand the requirements set out in PAS 36, and revisit some areas where confusion has been seen in practice.

This article is the final in a three-part series on Step 4 of the impairment review on estimating the recoverable amount and discusses how to estimate an appropriate discount rate in value in use (VIU) calculations.



Estimating the appropriate discount rate

The discount rate applied to the estimated cash flows should reflect the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing and risk profile equivalent to those the entity expects to derive from the asset. PAS 36 prescribes that management should apply a pre-tax discount rate(s) that reflects the current market assessment of both:

- the time value of money; and,
- the risks specific to the asset for which the future cash flow estimates have not been adjusted.

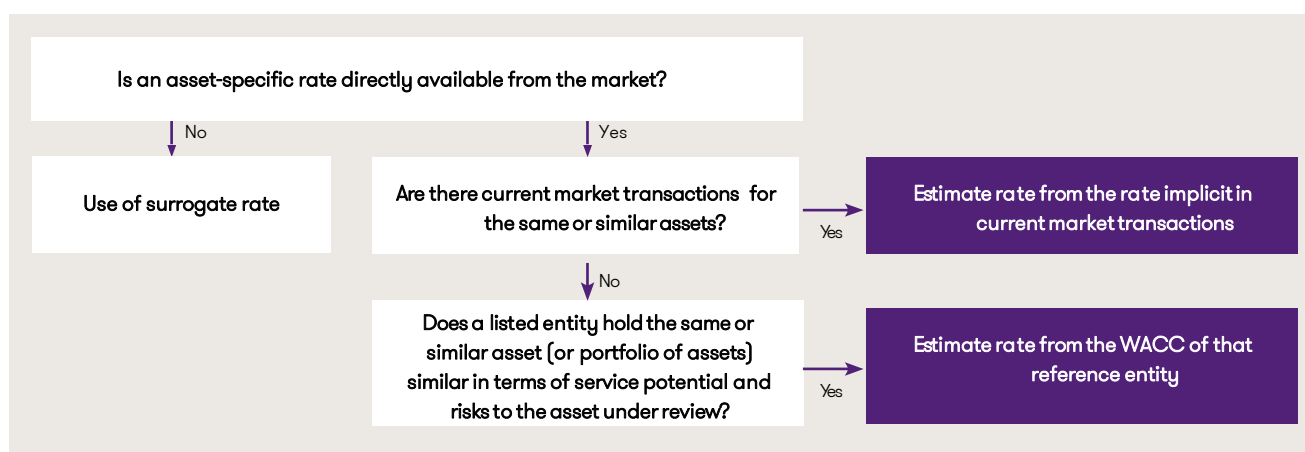
This rate may be estimated:

- from the rate implicit in current market transactions for similar assets, or,
- from the weighted average cost of capital (WACC) of a listed entity that has a single asset (or a portfolio of assets) similar in terms of service potential and risks to the asset under review.

In the event that neither of the above are available, the entity estimates the discount rate using surrogates.

The discount rate should reflect assumptions consistent with the estimated future cash flows. For example, a nominal discount rate should be used if the cash flows are estimated in nominal rather than real terms. Both the cash flows and the discount rate should be prepared on a pre-tax basis (but see practical guidance below).

The following flowchart illustrates PAS 36's guidance on determining an appropriate discount rate.



Using a surrogate

When an asset-specific rate is not directly available in the market (as is usually the case), the entity should use a surrogate to estimate the discount rate. The objective is to derive a market assessment reflecting factors such as:

- the time value of money through the end of the asset's useful life;
- the risk relating to possible variances in the amount and timing of the cash flows;
- the price for bearing the uncertainty inherent in the asset; and,
- other, sometimes unidentifiable, factors (such as illiquidity) that market participants would reflect in pricing the future cash flows from the asset.

One common approach is for the entity to determine a market-consistent discount rate for the entity as a whole, then adjust this rate to take into account factors specific to the asset or cash generating unit (CGU) being tested. For example:

- start with the entity's WACC; and,
- adjust these rates to reflect a market participant's view of the specific risks associated with the asset's estimated cash flows (considering country risk and currency risk).

Adjustments might also be necessary to exclude risks that are not relevant to the asset's estimated cash flows or for which the estimated cash flows have already been adjusted.

Estimating the discount rate when no asset-specific market rate is available:



Practical insight – Determining the discount rate in practice

In our experience, entities most often estimate a risk-adjusted discount rate starting with the entity's WACC. The WACC is a post-tax measure of the overall required return on the entity as a whole – essentially the rate an entity is expected to pay on average to all its capital providers to finance its assets. This calculation proportionately weighs each category of an entity's capital (e.g., equity and long-term debt) to derive an entity-wide cost of capital.

Keeping with the objective outlined for deriving an appropriate discount rate, an entity also needs to adjust the entity-wide WACC to achieve a discount rate for each asset or CGU, consistent with a market participant perspective.

Cost of Equity

In practice, the most common method of calculating the cost of equity is the Capital Asset Pricing Model (CAPM). This is a model which describes the relationship between an investment's risks and its returns. The basic CAPM takes into account two factors:

- the return on an investment that is risk-free (based on long-dated government bonds which are assumed to be virtually risk-free); and,
- the equity risk premium that would be required by an investor in the subject asset, over and above the risk-free rate.

In practice, most valuers break the risk premium down into sub-factors which might include elements like country risk-premium, size premium and 'alpha' factors. Alpha in this context is a term used in investing to describe an investment strategy's ability to beat the market.

Risk-free rate

The risk-free rate is typically based on yields on government bonds in developed economies, which should be in the same currency and of the same or similar duration as the cash flows of the asset or CGU. In practice, 10-year or 20-year bonds are used as a proxy for long-term rates. Adjustments may be required if government bond yields of the appropriate currency or duration are not available.

Some valuers also consider a 'normalized' risk-free rate rather than spot rates due to the current low rates compared to historical levels. This typically considers analysis of government bond yields over a period, such as the last 10 years. Whether or not a normalized rate is used, the results should be considered along with the market risk-premium.

Equity Risk Premium

The equity risk premium is calculated based on:

- A market risk premium (the long-term expected rate of return for equities in excess of the risk-free rate), multiplied by
- The 'beta', reflecting the industry or sector risk of the subject company relative to the market as a whole.

The market risk premium is typically based on historical studies of stock markets, covering long-periods of time. This is considered in conjunction with the risk-free rate (total market return).

The beta for the subject company can be estimated based on analysis of a set of comparable listed companies or a sector average. The most common approaches involve calculation of the 5-year or 2-year betas based on historical share prices. Selection of the appropriate beta is subjective and should consider the situation of the subject company compared to the benchmark companies used.

Practical insight – Determining the discount rate in practice (continued)

Country risk-premium

Where the operations of the subject company are in a country (or countries) other than that used for the estimation of the risk-free rate and equity risk premium, then a country risk premium may be considered to reflect the difference in risk perception of investing in those countries. For example, if cash flows are denominated in USD but the subject entity operates in Peru, then a country risk premium is included to reflect the additional return expectation from investing in Peru over a similar investment in the US.

Note that this relates to situations in which the cash flow currency is the same as the currency used to calculate the WACC. See ‘Practical issues related to cash flows in a foreign currency’ below, for further details on adjusting for foreign cash flows.

Size Premium

Various studies indicate that there is an additional risk of investing in the equity of small companies over large companies. Data from the Duff & Phelps Stocks, Bonds, Bills and Inflation® (SBBi®) Yearbook is used by many valuers as a source for determining the appropriate size premium.

Alpha factor

The valuer should assess whether the overall cost of equity determined is consistent with the risk in the cash flows. It may be necessary to include an additional ‘alpha’ factor to capture risks in the cash flows which are not captured by the ‘market’ cost of equity. This may include higher than average expected revenue growth or margins compared to the peer group.

Given the inherent difficulty in assessing such an ‘alpha’ factor, the preference is typically to adjust the cash flows instead.

Cost of Debt

The cost of debt should be based on the long-term borrowing rates for the entity, consistent with the long-term cash flows. This is driven by factors such as the gearing of the business (higher gearing is riskier to debt investors) and the return expected by the market in general for debt with a similar level of risk.

The gearing should be based on the long-term, optimal capital structure for the business, which may not be the same as the current capital structure. Consideration may be given to longer-term sector averages to determine an appropriate long-term level.

Adjustments for country risk should also be considered in the assessment of the cost of debt.

Finally, given the WACC is a post-tax rate, it needs to be adjusted to a pre-tax rate. See next page for a discussion about making this adjustment.



Pre-tax and post-tax discount rates

PAS 36 requires the discount rate(s) used in estimating VIU to be a pre-tax rate(s). If the rate is derived initially on a post-tax basis, it must be adjusted to reflect a pre-tax rate. This is often necessary because many observable market rates and the entity's WACC are post-tax rates.

Using a post-tax discount rate to discount post-tax cash flows should lead to the same result as discounting pre-tax cash flows using a pre-tax discount rate if the pre-tax discount rate reflects an adjustment to take into account the specific amount and timing of the future tax cash flows. Calculating a pre-tax rate involves applying a post-tax rate to post-tax cash flows (tax cash flows being based on the allowances and charges available for the asset and related non-tax cash flows). The effective pre-tax rate is then calculated by removing the tax cash flows and using an iterative technique to calculate

the rate that makes the present value of the adjusted cash flows equal the VIU calculated using post tax cash flows.

In the Basis for Conclusions of PAS 36, there is an example of how to calculate a pre-tax discount rate from post-tax calculations using the iterative method.

Practical insight – Deriving pre-tax discount rates from post-tax rates

Despite PAS 36 calling for a pre-tax discount rate, we note a post-tax analysis is often undertaken in practice. This is because most rates that are observable in the market and the entity's WACC are post-tax. Computing a 'true' pre-tax discount rate starting from a post-tax rate can be complex, requiring information about the specific timing of tax-related cash flows for the asset or CGU and also iterative or goal-seek calculations. When using market inputs, such as sector betas, it is not possible to calculate this on a pre-tax basis.

PAS 36 highlights the '...pre-tax discount rate is not always the same as the post-tax discount rate grossed up by the standard rate of tax'. This is because the tax cash flows do not normally occur proportionately with or at the same time as the pre-tax cash flows (e.g., due to temporary differences, tax loss carry-forwards and the timing of tax payments).

In our view, a gross-up approach may provide a reasonable approximation in some circumstances (although consideration should be given to any facts and circumstances that would impact the relationship between the pre-tax and post-tax rate). If a simplified approach results in a VIU significantly above the carrying amount, management may reasonably conclude it is unlikely that an impairment exists.

Alternatively, when there is a risk of impairment, valuers often rely instead on a post-tax discount rate with post-tax cash flows to perform the impairment analysis. The pre-tax rate can then be determined using pre-tax cash flows and then goal seeking the discount rate to reach the same concluded VIU.

PAS 36 requires disclosure of information about the discount rate and this is discussed in our article '[Insights into PAS 36 – Presentation and Disclosure requirements](#)'.

Foreign currency issues

PAS 36 requires an entity to estimate future cash flows in the currency in which the cash flows will be generated and then discount the cash flows to present value using a discount rate appropriate for that currency. The entity then determines the VIU in its functional currency by translating the present value using the spot exchange rate at the date of the VIU calculation.

Example 1 – Estimating VIU for a foreign investment

Entity P's functional currency is the Philippine Peso. P has an equity-method investment (Investment I) in an investee located in the United States with USD functional currency. Entity P determines there is a need to estimate the recoverable amount of Investment I, having identified an impairment indicator at 31 December 20X2. Entity P calculates Investment I's VIU using cash flows based in USD and a discount rate that reflects USD. The present value so derived is translated to Philippine Peso using the spot exchange rate at 31 December 20X2.

Practical issues related to cash flows in a foreign currency

Typically, if it is not practical to calculate a WACC using the currency of the cash flows, two options are available to valuers. This involves calculating a WACC in an alternative currency (such as USD) and either:

- converting the WACC into a local currency discount rate considering differences in inflation between the currencies (i.e., the international Fisher Effect), or
- converting the cash flows into the WACC currency at the forecast exchange rate, thus capturing inflation differences.

However, in accordance with PAS 36, the use of the forward rate for converting foreign currency cash flows is prohibited. This is because the time value of money is taken into account by discounting the foreign currency cash flows at a rate appropriate for that currency. Converting expected foreign cash flows at estimated future spot exchange rates is also prohibited on the grounds of the unreliability of those future estimates.

Practical Insights – Estimating the WACC in a foreign currency

Estimating a WACC in a foreign currency can be challenging. Typically, information used to determine the cost of equity and cost of debt is based on market data from a limited number of developed economies, in particular the US, UK and certain European countries, which have a long history of established debt and equity markets. For cash flows in currencies other than USD, GBP and EUR, there are a number of complexities in determining the appropriate discount rates:

- **Risk-free rate:** for some countries, local government bonds may not be a reasonable proxy for a 'risk-free' rate. Typically, if the country does not have a very high sovereign credit rating (i.e., AAA or AA), the government bonds may not be considered to be truly 'risk-free', and,
- **Market Risk Premium:** Estimates of the market risk premium are typically based on very long-term studies of the stock market. Most countries' stock markets do not have the 100+ year history of the US and UK, for example, which can mean there is not sufficient reliable data.

As a result, the valuer should consider the following approaches to estimating a local currency WACC:

- **WACC based on local currency inputs:** This may be a reasonable approach if sufficient and reliable data can be sourced, and,
- **USD WACC converted into local currency:** This method is used by valuers to determine a WACC based on US (or UK or Euro) inputs and assumptions and including a country risk premium. The US WACC is then adjusted for local currency based on applying the inflation differential between the currencies based on the Fisher Effect from economics.

Note that applying a country risk premium does not address differences in currency, but rather the political and economic risk for an investor investing outside of a developed market (typically the US, based on the most common calculations of country risk premium).

Exceptions to calculating both fair value less costs of disposal and value in use

Although recoverable amount is defined as the higher of the fair value less costs of disposal (FVLCO) and VIU, PAS 36 makes clear it is not always necessary to determine both estimates. The table below outlines instances when an entity need only calculate either FVLCO or VIU.

| Situation | Calculate only | Reason |
|---|----------------|---|
| When either amount exceeds the asset's carrying amount | FVLCO or VIU | The asset is not impaired, and it is not necessary to calculate the other amount. |
| It is not possible to measure FVLCO because there is no basis for making a reliable estimate of the price in accordance with PFRS 13, <i>Fair Value Measurement</i> | VIU | It is usually possible to measure FVLCO with sufficient reliability (even without a quoted price in an active market for and identical asset or frequent transactions in similar assets with observable prices). PAS 36 indicates (without elaborating) that sometimes it will not be possible to measure FVLCO because there is no basis for making a reliable estimate. |
| There is no reason to believe that VIU materially exceeds FVLCO | FVLCO | This will often be the case for an asset that is held for disposal as the future cash flows from continuing to use the asset until disposal are likely negligible and will consist mainly of net disposal proceeds. |

Shortcuts for estimating FVLCOB or VIU

PAS 36 clarifies it is sometimes not necessary to perform the detailed computations for determining FVLCOB or VIU. Estimates, averages and/or computational shortcuts may be used when they provide reasonable approximations of the detailed computations for determining FVLCOB or VIU.

PAS 36 also provides relief from calculating recoverable amount in some situations when an indicator has been identified or the annual impairment testing date has been reached. The table below summarizes the relief provisions available in PAS 36 for intangible assets and goodwill. Broadly, the relief provisions note the concept of materiality applies in identifying the need to estimate recoverable amount.

| Asset type | Description of relief |
|---|---|
| Intangible assets with an indefinite useful life (or not yet available for use) and goodwill | <p>The concept of materiality applies. Examples include:</p> <ul style="list-style-type: none">• if previous calculations show an asset's recoverable amount is significantly greater than its carrying amount, the entity need not re-estimate the asset's recoverable amount if no events have occurred that would eliminate that difference.• if a previous analysis shows an asset's recoverable amount is not sensitive to one (or more) of the indicators identified. Refer to our article 'Insights into PAS 36 – If and when to undertake an impairment review'. <p>See Example 2 in the next page.</p> |
| Intangible assets with an indefinite useful life | <p>The most recent detailed calculation of such an asset's recoverable amount made in a preceding period may be used in the impairment test for that asset in the current period, provided all of the following criteria are met:</p> <ul style="list-style-type: none">• where an intangible asset is tested for impairment as part of the CGU to which it belongs, the asset and liabilities making up that unit have not changed significantly since the most recent recoverable amount calculation,• the most recent recoverable amount calculation resulted in an amount that exceeded the asset's carrying amount by a substantial margin, and,• based on an analysis of events that have occurred and circumstances that have changed since the most recent recoverable amount calculation, the likelihood that a current recoverable amount determination would be less than the asset's carrying amount is remote. |
| Goodwill | <p>The most recent detailed calculation made in a preceding period of the recoverable amount of a CGU to which goodwill has been allocated may be used in the impairment test of that CGU in the current period provided all of the following criteria are met:</p> <ul style="list-style-type: none">• the assets and liabilities making up the unit have not changed significantly since the most recent recoverable amount calculation,• the most recent recoverable amount calculation resulted in an amount that exceeded the carrying amount of the unit by a substantial margin, and,• based on an analysis of events that have occurred and circumstances that have changed since the most recent recoverable amount calculation, the likelihood that a current recoverable amount determination would be less than the current carrying amount of the unit is remote. |

Example 2 – Considering materiality despite an indicator of impairment being present or reaching the annual impairment testing date

Market interest rates and returns on investments in general have increased during the reporting period, indicating that Entity A's asset may be impaired. Entity A's management is considering if it needs to estimate the recoverable amount of its asset.

Analysis

Entity A would not be required to estimate the recoverable amount of the asset if the discount rate used in calculating the asset's VIU is unlikely to be affected by the increase in these market rates (e.g., increases in short-term interest rates may not have a material effect for an asset with a long remaining useful life). Further, even if the discount rate is likely to be affected by the increase in these market rates, Entity A would not be required to estimate the recoverable amount of the asset if a previous sensitivity analysis of recoverable amount shows it is unlikely there will be a material decrease in recoverable amount or the decrease in recoverable amount is unlikely to result in a material impairment loss.

Example 3 – Using the most recent detailed calculation

Entity P has a 31 December 20X2 reporting date. In June 20X2, Entity P acquires subsidiary S, which will be accounted for in accordance with PFRS 3, *Business Combinations*. In November 20X2, Entity P completes the determination of the acquisition date fair values and allocates the resultant goodwill to the appropriate CGUs. At 31 December 20X2, the measurement period has closed (as Entity P has received the information it was requesting about subsidiary S) and the amounts are considered final. Entity P carries out a detailed impairment test on the goodwill as at 31 December 20X2 in accordance with PAS 36. The test indicates that recoverable amount exceeds carrying value by a comfortable margin.

Entity P wishes to set its annual impairment testing date for the goodwill as 30 June 20X3. Should it carry out another detailed test at 30 June 20X2 in order to establish its annual testing date?

Analysis

In our view, Entity P need not carry out a full impairment test as at 30 June 20X3 if the conditions in PAS 36 apply. This paragraph provides relief from performing a detailed impairment test if various conditions are met but is still regarded as an impairment test for the purposes of PAS 36. The assumptions used in the previous 'full' impairment test calculation remain valid until facts and circumstances change such that a new detailed calculation becomes necessary.

How we can help

We hope you find the information in this article helpful in giving you some insight into PAS 36. If you would like to discuss any of the points raised, please speak to your usual P&A Grant Thornton contact or visit www.grantthornton.com.ph/Contact.

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