

In depth

A look at current financial reporting issues

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IFRS 9 impairment practical guide: intercompany loans in separate financial statements

At a glance

IFRS 9 requires entities to recognise expected credit losses for all financial assets held at amortised cost, including most intercompany loans from the perspective of the lender.

IAS 39, the previous guidance for assessing impairment of intercompany loans, had an incurred loss model, where provisions were recognised when there was objective evidence of impairment. Under IFRS 9, lenders of intercompany loans will be required to consider forward-looking information to calculate expected credit losses, regardless of whether there has been an impairment trigger.

This practical guide provides guidance on IFRS 9's impairment requirements for intercompany loans.

Background

Expected credit losses for intercompany loans

Entities applying IFRS in their stand-alone accounts are required to calculate expected credit losses on all financial assets, including intercompany loans within the scope of IFRS 9, 'Financial Instruments', and which are classified at either amortised cost, or fair value through other comprehensive income ('FVOCI'). Intercompany positions eliminate in consolidated financial statements. Certain simplifications from IFRS 9's general 3-stage impairment model are available for trade receivables (including intercompany trade receivables), contract assets or lease receivables, but these do not apply to intercompany loans. PwC's 'In depth – IFRS 9 impairment practical guide: provision matrix' provides guidance for calculating expected credit losses for those balances.

This practical guide discusses which intercompany loans fall within the scope of IFRS 9 and how to calculate expected credit losses on those that do. The Appendix explains IFRS 9's general 3-stage impairment model in further detail.

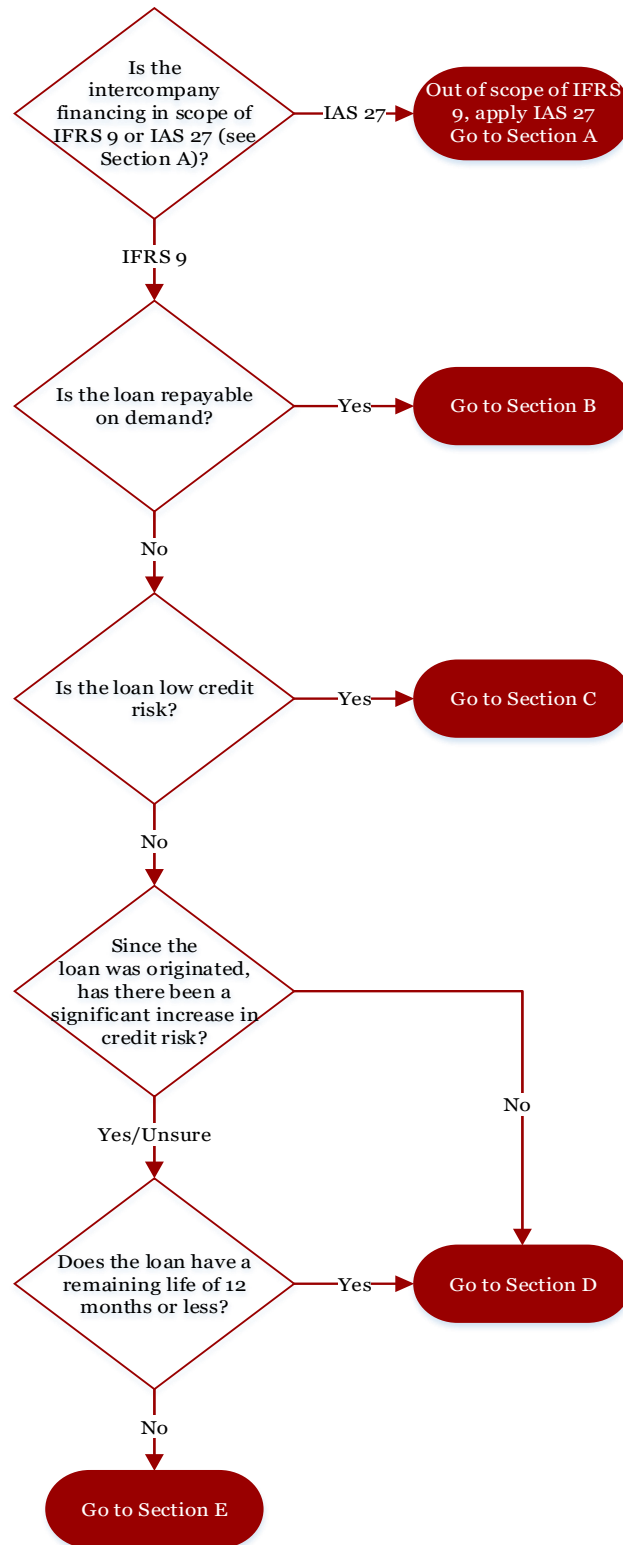
The decision tree on page 2 should be used to direct readers to the relevant section of guidance for the type of intercompany loan(s) being considered. Unless an entity has all of the types of intercompany loan covered within this publication, it will not be necessary to consider the publication in its entirety.

It is expected that many intercompany loans within the scope of IFRS 9 will fall within Section B, C or D of the guidance (loans repayable on demand, with low credit risk, with a remaining life of 12 months or less or that have had no significant increase in credit risk since the loan was originated). Simpler considerations apply to such loans than to other intercompany loans for which IFRS 9 requires calculation of lifetime expected credit losses (covered in Section E).

Decision tree & content index

How should a lender assess intercompany loans for impairment?

Use the following decision tree to direct you to the relevant section of this publication:



Guidance

A. Loan is an investment in a group company

Key points

- Intercompany financings that, in substance, form part of an entity's 'investment in a subsidiary' are not in IFRS 9's scope. Rather, IAS 27 applies to such investments.
- An intercompany loan is outside IFRS 9's scope (and within IAS 27's scope) only if it meets the definition of an equity instrument for the subsidiary (for example, it is a capital contribution).
- All loans to subsidiaries that are accounted for by the subsidiary as a liability are within IFRS 9's scope.
- If the terms of an intercompany financing are clarified or changed on adoption of IFRS 9, careful analysis might be required.

Is the intercompany financing within the scope of IFRS 9 or IAS 27?

Financing arrangements between entities within the same group can take various forms. On the one hand, they might be formal contractual lending agreements that are enforceable under local law; on the other hand, they might, in substance, be part of the investment in another entity. The terms of financing arrangements can vary, or might not be clearly defined, with some being repayable on demand, others having a fixed maturity and still others having no stated maturity.

In certain cases, it might be clear that the loan is a debt instrument (and therefore within the scope of IFRS 9), particularly if there is a legal agreement that creates contractual rights and obligations between the two entities. IFRS 9 applies to all debt instruments held at amortised cost or FVOCI. This includes 'quasi equity' loans (that is, financings that are accounted for as debt instruments, but have some features of an equity instrument and form part of the net investment in the borrower for foreign currency purposes under IAS 21, 'The effects of foreign exchange rates').

In other cases, the financing provided to a subsidiary might represent part of the investment in the subsidiary, and it would be accounted for under IAS 27, 'Separate Financial Statements'. This In depth only addresses instruments that are within the scope of IFRS 9 and that are not accounted for under IAS 27, 'Separate Financial Statements', or IAS 28, 'Investments in Associates and Joint Ventures'. It provides guidance on their accounting treatment from the perspective of both the borrower/subsidiary and the lender/parent. It does not address the question of whether an instrument is within the scope of IAS 27 or IFRS 9, nor does it address the application of IFRS 9's impairment requirements.

It should also be noted that an entity itself should determine whether an instrument that it holds is an equity or debt instrument, looking to the issuer only for reference. It would not be sufficient for the holder of the instrument to simply replicate the accounting treatment of the issuer, and vice versa, without confirming that such accounting treatment is appropriate.

Example – Hawkins Petroleum plc

Throughout this publication, the application of IFRS 9 impairment to intercompany balances for a fictional group, Hawkins Petroleum plc (HP), will be considered. HP is implementing IFRS 9 from 1 January 2018. It is a diversified oil and gas group with operations in many locations around the world. At present, HP's management is working through its IFRS 9 implementation plan, but it is still finalising the proposed methodology for impairment of intercompany positions within individual financial statements.

Management has made assessments relating to materiality of balances as part of its implementation plan. HP's auditors will need to form their own views of materiality and discuss with management where further consideration might need to be given.

HP splits itself into three large operating divisions: Upstream, Downstream and Supply & Trading. Under each division, there are several business units split between geographic locations/markets, with legal entities in differing countries.

The top-tier legal subsidiary of HP's US Downstream business has a large intercompany position with HP, the ultimate parent of the group. This transaction was put in place some years ago to partially fund the acquisition of the subsidiary, using a beneficial tax structure. While this transaction represents a significant portion of the group's investment in the US business, and is unlikely to be required to be repaid, the agreement is legally a lending agreement with a fixed term of 10 years and a market rate of interest of 5%.

Management has therefore concluded that this instrument would be classed as a liability within the subsidiary's financial statements and would be within the scope of IFRS 9's impairment requirements for the parent.

What if the terms of an intercompany financing are not clear?

If the terms of the intercompany financing are not clear or have not been previously documented, judgement might be involved in determining whether the intercompany financing is a loan within the scope of IFRS 9 or is, in substance, part of the investment in the subsidiary under IAS 27. If the terms of the intercompany financing are currently not sufficiently clear (for example, it is not clear if or when the financing is repayable), management might wish to clarify the terms to make it easier to assess whether the intercompany financing is within the scope of IFRS 9 and, if required, to calculate an expected credit loss.

Clarifying the terms of an intercompany financing is different from changing the terms, which is discussed further below. Assessing whether management is proposing to clarify or change the terms of intercompany financings can be a significant area of judgement.

Within HP's Trinidad Upstream business, there is an intercompany position between a UK entity, HP Investments (Trinidad) Limited, and a Trinidad entity. This position was to support and fund certain operational costs required in the set-up of the business. There was no documented agreement governing this financing and, historically, this position was held at amortised cost, described as 'intercompany' within the financial statements of both the parent and subsidiary. In the subsidiary's financial statements, 'intercompany' was presented on the balance sheet within liabilities.

As part of the process for transition to IFRS 9, management has decided to formally document the terms of this agreement. It has determined that it

represents a loan arrangement that is repayable on demand. Since the terms have only been clarified in line with management's prior intention, there is no impact on the carrying amount of the loan.

What if an entity wishes to change the terms of its intercompany financing?

If the terms of the intercompany are changed, care should be taken to consider how this change should be treated within the financial statements of both the lender and the borrower. If the intercompany financing was previously accounted for as a debt instrument under IAS 39 (that is, as a financial asset, a loan) and, following the change, it continues to be classed as a debt instrument, modification principles should be considered, to determine how the change impacts the carrying amount of the intercompany financing (see chapter 44 of PwC's *Manual of accounting for modification* under IAS 39 and IFRS 9).

If the intercompany financing was previously considered a debt instrument by the lender, but now meets the definition of an equity instrument (that is, it is accounted for as an investment in a subsidiary), the intercompany financing becomes part of the parent/lender's investment in the subsidiary. For the borrower, the financial liability should be extinguished and a capital contribution recognised.

It should be noted that, where intercompany loans (including 'quasi-equity' loans) are restructured to be equity instruments, so the borrower recognises a capital contribution rather than a financial liability, this might have tax implications.

Within HP's French Upstream business, there is another intercompany financing between HP Investments SARL and a subsidiary of HP Investments SARL, HP Exploration SARL. This intercompany financing is repayable on demand, does not bear interest, and has an outstanding balance of €10m. HP Investments SARL has decided to change the terms of this arrangement, so that HP Exploration SARL is no longer contractually required to repay it.

For HP Investments SARL, the €10m intercompany financing becomes part of 'investment in subsidiaries' on its balance sheet.

HP Exploration SARL extinguishes the €10m borrowing from HP Investments SARL on its balance sheet, and it recognises a €10m capital contribution.

If a loan to an associate or joint venture forms part of the investment in that other entity, does this loan fall within the scope of IFRS 9?

Yes. For associates and joint ventures, the IASB clarified, as part of its Annual Improvements project, loans which form part of the long-term investment in that associate or joint venture, but which are not equity accounted for, fall within the scope of IFRS 9. The decision tree above should be considered for the terms of loans to associates/joint ventures, to locate relevant guidance below.

B. Intercompany loans repayable on demand

Key points

- For loans that are repayable on demand, expected credit losses are based on the assumption that repayment of the loan is demanded at the reporting date.
- If the borrower has sufficient accessible highly liquid assets in order to repay the loan if demanded at the reporting date, the expected credit loss is likely to be immaterial.
- If the borrower could not repay the loan if demanded at the reporting date, the lender should consider the expected manner of recovery to measure expected credit losses. This might be a 'repay over time' strategy (that allows the borrower time to pay), or a fire sale of less liquid assets.
- If the recovery strategies indicate that the lender would fully recover the outstanding balance of the loan, the expected credit loss will be limited to the effect of discounting the amount due on the loan (at the loan's effective interest rate, which might be 0% if the loan is interest free) over the period until cash is realised. If the time period to realise cash is short or the effective interest rate is low, the effect of discounting might be immaterial. If the effective interest rate is 0%, and all strategies indicate that the lender would fully recover the outstanding balance of the loan, there is no impairment loss to recognise.

Some intercompany loans between entities within a group are repayable on demand. Such loans might or might not be interest free.

How should a lender calculate expected credit losses for an intercompany loan that is repayable on demand?

Paragraph B5.5.38 of IFRS 9 notes that the maximum period over which expected impairment losses should be measured is the longest contractual period where an entity is exposed to credit risk. In the case of loans repayable on demand, the contractual period is the very short period needed to transfer the cash once demanded (that is typically one day or less). Therefore the impairment provision would be based on the assumption that the loan is demanded at the reporting date, and it would reflect the losses (if any) that would result from this.

Considering the 3-stage general impairment model explained in the Appendix, if the lender uses a PD*LGD*EAD methodology¹, then the lender of an intercompany loan that is repayable on demand needs to understand:

- the PD ('probability of default') – that is, the likelihood that the borrower would not be able to repay in the very short payment period;
- the LGD ('loss given default') – that is, the loss that occurs if the borrower is unable to repay in that very short payment period; and
- the EAD ('exposure at default') – that is, the outstanding balance at the reporting date.

Paragraph B5.5.41 of IFRS 9 requires the lender to measure the expected credit loss at a probability-weighted amount that reflects the possibility that a credit loss occurs, and the possibility that no credit loss occurs, even if the possibility of a credit loss

¹ This is a common methodology but it is not prescribed by IFRS 9; others might also be acceptable. The Appendix explains this methodology in further detail.

occurring is low. For an intercompany loan repayable on demand, there are likely to be two mutually exclusive scenarios: either the borrower can pay today if demanded (that is, it has sufficient highly liquid resources); or it cannot.

If the borrower cannot pay today if demanded, the assessment should consider the expected manner of recovery and recovery period of the intercompany loan (the lender's 'recovery scenarios').

For example, if, at the reporting date, the borrower would be unable to immediately repay the loan if demanded by the lender, the lender might expect that it would maximise recovery of the loan by allowing the borrower time to pay (that is, to continue trading or to sell its assets over a period of time), instead of forcing the borrower to liquidate or sell some or all of its assets to repay the loan immediately.

Similarly, a borrower might, in the past, have paid any excess cash to its parent by way of dividend, which could prevent it from having sufficient available liquid assets to repay its intercompany loan if repayment was demanded. In this case, management of the group might determine that it would maximise recovery of the loan by the borrower ceasing to make such dividend payments in reporting periods where it would not otherwise have sufficient available liquid assets to repay its intercompany loan. However, it should not be assumed that management will support a subsidiary that is otherwise unable to repay an intercompany loan in the absence of a contractual obligation to do so or other supporting evidence (such as a guarantee or letter of comfort, discussed further in Section E). In addition, management should take a holistic view of the group, in particular, since a strategy to support one group entity might give rise to funding issues or potential impairments elsewhere in the group.

If the borrower has sufficient highly liquid assets to repay the intercompany loan if it is demanded today, does that mean that the expected credit loss could be close to zero?

Yes. If the borrower has sufficient available liquid assets (that is, cash and cash equivalents which can be accessed immediately) to repay the outstanding loan if the loan was demanded today, the PD would be close to 0%.

It is important to consider whether the borrower has any more senior external or internal loans which would need to be repaid before the intercompany loan being assessed, since these would reduce the liquid assets available to repay that intercompany loan.

In such a scenario, assuming that the entity has no restrictions on its liquid assets and could meet a demand to repay the loan at the reporting date, any impairment on the intercompany position would likely be immaterial.

Within HP's Upstream division, there are certain centralised costs incurred at a divisional level and then recharged to each legal entity within the division on a monthly basis. Typically, settlement of these intercompany balances occurs quarterly, but the outstanding balances are contractually repayable on demand. HP's Upstream division does not use a provisions matrix for measuring expected credit losses on these balances.

Management has made an assessment of the intercompany positions as at 31 December 2017 as part of its preparations for transition to IFRS 9. HP Upstream Services (UK) Limited has an outstanding intercompany asset due from HP Upstream Norway AS of £2.5m. As noted, management has concluded that the contractual terms of this balance are that it is repayable on demand. Management has reviewed the liquid asset position of HP Upstream Norway AS at 31 December 2017, and concluded that its cash balances in excess of \$50m

support the conclusion that the liability could be repaid.

There are no external or intercompany loans that would need to be repaid before the intercompany loan being assessed. Management has determined that any expected credit losses would therefore be immaterial.

If the borrower does not have sufficient highly liquid assets, what are the next steps?

If the borrower does not have sufficient highly liquid assets to repay the loan if demanded at the reporting date, the PD is likely to be higher and might even be close to 100%; this is because, if the loan was called at the reporting date, the borrower would be unable to make repayment. However, as explained above, the PD forms only one part of the expected credit loss calculation. The lender will need to determine what its recovery scenarios are, to understand the LGD if the loan is demanded.

For example, if the lender's recovery strategy would be to require an immediate 'fire sale' of the borrower's assets, it will need to consider the net realisable value of those assets (less any proceeds needed to repay more senior external or internal debt before repaying the intercompany loan) and whether this covers the outstanding balance of the loan. If it does, the expected credit loss will be limited to the effect of discounting the amount due on the loan (at the loan's effective interest rate) over the period until cash is realised. If the time period to realise cash is short or the effective interest rate is low, the effect of discounting might be immaterial. Further guidance on discount rates is given at the end of this section.

There are a number of intercompany sales between HP's Downstream and Supply & Trading divisions. One group of such transactions is sales between HP Fuels Limited and HP Aviation Limited of kerosene for use in jet fuel. Sales are billed daily between the entities, with outstanding balances contractually due on demand. Management has made an assessment of the intercompany positions as at 31 December 2017 as part of its preparations for transition to IFRS 9. Management does not use a provisions matrix for measuring expected credit losses on these balances. HP Fuels Limited had an outstanding asset balance due from HP Aviation Limited of £3m at 31 December 2017. Management has reviewed the liquid asset position of HP Aviation Limited at 31 December 2017 and noted that there are only minimal cash balances. This is a result of the practice within the Supply & Trading division of sweeping daily closing cash positions to the divisional treasury function. However, while there are limited cash balances, there is an overall net asset position and there are substantial stocks (£15m) of aviation fuel on the balance sheet. Management has concluded that the probability-weighted outcome is that management would sell these stocks to repay the loan in this situation, and it is highly probable that cash would be received within three business days. Furthermore, there are no external or intercompany loans that would need to be repaid before the intercompany balance being assessed. Therefore, management has concluded that any impairment would be immaterial.

In cases where the recovery scenario would be to allow the borrower to continue trading or to sell assets over a period of time (a 'repay over time' strategy), it will be necessary to determine the expected amount that can be recovered over the recovery period. For example, a cash flow forecast might help to give an indication of the expected trading cash flows and/or liquid assets expected to be generated during the recovery period. If these expected trading cash flows and/or liquid assets cover the outstanding balance of the intercompany loan, the expected credit losses will be limited to the effect of discounting the amount due on the loan (at the loan's effective interest rate) over the period until cash is realised and repaid to the lender. If the time period to realise cash is short or the effective interest rate is low, the effect of

discounting might be immaterial. Further guidance on discount rates is given at the end of this section.

Cash flow forecasts should consider the quality of any assets being sold, an expectation of the level of cash or other liquid assets expected to be generated over the period forecasted and the terms of any recovery agreement expected to be entered into with the borrower. The cash flow forecasts also need to incorporate relevant and reliable forward-looking information (including macro-economic factors) that is probability-weighted. Section E provides further guidance about incorporating forward-looking information into assumptions. The cash flow forecasts need not consider every single possible scenario that could occur, but must consider at least one scenario where a loss occurs. This is illustrated within the Appendix under ‘*How should expected credit losses be measured?*’.

Assume that, for HP Fuels Limited’s outstanding asset balance with HP Aviation Limited of £3m at 31 December 2017, management has instead determined that HP Aviation Limited would be allowed to continue to trade over a five-year period, ring-fencing cash from the sale of aviation fuel over that period to repay the loan. If, at the end of the five-year period, sufficient cash had not been ring-fenced, remaining aviation fuel stocks would be sold to repay the loan.

Management has prepared a cash flow forecast of the cash expected to be generated over the five-year period from the sale of aviation fuel and of the aviation fuel stocks after five years. It expects that HP Aviation Limited will have generated £1m of ring-fenced cash and have £3.5m aviation fuel stocks. The cash flow forecast includes internal and external forward-looking information, incorporating economic forecasts about fuel prices and inflation. Since the fuel stocks could be sold within three business days of the end of the five-year period, the expected credit loss is limited to the effect of discounting the amount due (£3m) for the five-year recovery period at the loan’s effective interest rate. Management determined that the effective interest rate of the loan was 0% (see below), and so it concluded that the effect of discounting, and consequently any impairment, would be trivial.

In cases where, under different recovery scenarios, the lender is not able to fully recover the intercompany loan if a demand for payment is made today, expected credit losses might not be immaterial and should therefore be calculated, as explained in Sections D and E below. This is also illustrated in the Appendix under ‘*How should expected credit losses be measured?*’.

What discount rate should the lender use if recovery scenarios are required and the intercompany loan is interest free and repayable on demand?

IFRS 9 requires the discount rate to be the loan’s effective interest rate.

FAQ 45.59.5 in chapter 45 of PwC’s *Manual of accounting* explains that intercompany loans which are interest free and repayable on demand have an effective interest rate of 0%. Accordingly, for such loans, discounting over the recovery period will have no effect. It follows that, if all recovery scenarios indicate that the full amount of the loan would be recovered, there will be no impairment loss to recognise.

Where the loan is not interest free and the effective interest rate is not zero, if all scenarios indicate that the full amount of the loan would be recovered, any impairment loss is limited to the effect of discounting the amount of the loan (at the loan’s effective interest rate) over the period until cash is realised. This is illustrated within the Appendix under ‘*How should expected credit losses be measured?*’.

C. Low credit risk intercompany loans

Key points

- A loan has low credit risk if the borrower has a strong capacity to meet its contractual cash flow obligations in the near term, and adverse changes in economic and business conditions in the longer term might, but will not necessarily, reduce the ability of the borrower to fulfil its obligations.
- For loans that are low credit risk at the reporting date, IFRS 9 allows a 12-month expected credit loss to be recognised.
- An external rating of ‘investment grade’ is an example of low credit risk. However, an intercompany loan should not be assumed to have the same rating as other instruments issued by the borrower (such as loans to third parties) without further analysis.
- Low credit risk loans might have very low risk of default (or ‘probability of default’ (PD)).
- A ‘short-cut’ can be used to determine if the expected credit loss on a low credit risk loan is material. This short-cut assumes that the PD for the intercompany loan is that of the lowest investment grade (either BBB- or Baa3, depending on the credit ratings agency used) and the maximum possible loss in the event of a default (that is, the loan is fully drawn and no amount is recovered). If this results in an immaterial expected credit loss, no further work is required. If, however, this short-cut results in a material expected credit loss, further work will be required to estimate both the actual PD and the actual loss in the event of a default.

As explained within the Appendix, a lender holding an intercompany loan that has low credit risk at the reporting date could choose to assume that there has not been a significant increase in credit risk since the loan was first recognised. This allows the lender to calculate a 12-month expected credit loss under stage 1 of the general model, which is a simpler calculation than calculating lifetime expected credit losses under stage 2 or 3 (see Section E below).

One approach for this calculation is that described in the Appendix ($PD * LGD * EAD$). Loans which are low credit risk typically have very low PDs. Therefore, if it is assumed that the PD is that for a BBB-/Baa3 rated loan (BBB-/Baa3 being the lowest credit rating that qualifies as low credit risk) and that the LGD is 100% (that is, no collateral, guarantees or other credit enhancements are available), it is possible to apply the assumed PD to the outstanding balance of the loan to understand if there is a material expected credit loss. If it is material, further work is required to refine the PD and LGD to calculate a more accurate expected credit loss. Further information on establishing a PD and an LGD is provided in Sections D and E.

HP LPG (UK) Limited has an outstanding intercompany loan with HP LPG (Germany) GmbH. This is a medium-term (five-year) loan to fund the purchase of automated aviation refuelling trucks for €50m. The loan was set at a market rate of interest, fixed at 2.5%. This rate was broadly consistent with quotes received at the time (31 December 2016) from external financial institutions for a loan directly to HP LPG (Germany) GmbH.

Management has completed some high-level analysis, which considers both historical and forward-looking qualitative and quantitative information, to determine if the intercompany loan is low credit risk at 31 December 2017.

Management has prepared cash flow forecasts for the remaining four years of the loan, and it expects HP LPG (Germany) GmbH to have sufficient cash throughout that period, under a range of scenarios, to meet all of its working capital and other obligations, including repayment of the intercompany loan.

Management does not expect there to be adverse changes in economic and business conditions during the four-year period which would reduce the ability of HP LPG (Germany) GmbH to repay the intercompany loan. Consequently, management has determined that the loan is low credit risk, the intercompany loan falls within 'stage 1' of IFRS 9's impairment model, and 12-month expected credit losses can be calculated.

HP Group's long-term credit rating from C&T Ratings has been consistently AA+ for the last three years. However, HP Group's long-term credit rating is based on several external loans which have different maturities and are more senior than the intercompany loan; in the event of HP Group being liquidated, creditors of the external loans would be repaid before the intercompany loan. Accordingly, management is unsure what rating would be assigned to the intercompany loan. So it has decided to use the highest PD for an investment grade loan to assess whether a material impairment provision is required for HP LPG (Germany) GmbH.

C&T Ratings publish PDs by credit rating. The published 12-month PD for a BBB- loan is 0.181%. Management has considered that the aviation industry is broadly stable, and therefore the historical rates are broadly reflective of their future expectations of default rates.

*Assuming an LGD of 100% (that is, there are no collateral or other credit enhancements supporting the loan), applying this to the loan (0.181%*100%*€50m) would result in a 12-month expected credit loss of €90,500. Management has concluded that this amount is immaterial.*

D. Stage 1 intercompany loans and loans whose life is 12 months or less

Key points

- For loans where there has not been a significant increase in credit risk (that is, where they are in stage 1), a 12-month expected credit loss is recognised
- A similar short-cut could be used as for low credit risk loans to determine if the expected credit loss on a stage 1 loan is material. This short-cut assumes the maximum possible loss in the event of a default (that is, the loan is fully drawn and no amount is recovered). If, when the PD is applied to the outstanding balance of the intercompany loan, this results in an immaterial expected credit loss, no further work is required. If, however, this short-cut results in a material expected credit loss, further work will be required to estimate the actual loss in the event of a default.

If the lender has assessed that there has not been a significant increase in credit risk since the loan was initially recognised, the loan is in 'stage 1' of the impairment model and a 12-month expected credit loss should be calculated. Similarly, if the loan has a maturity of less than 12 months, lifetime and 12-month expected credit losses will be the same, so 12-month expected credit losses can be calculated.

Once the PD has been determined, a similar short-cut can be used as for low credit risk loans to determine if the expected credit loss on a stage 1 loan is material. This short-cut assumes that the LGD is 100% (that is, no collateral, guarantees or other credit enhancements are available) and applies the PD to the full outstanding balance of the loan. If it is material, further work is required to refine the LGD to calculate a more accurate expected credit loss. Further information on establishing an LGD is provided in Section E.

For many 'quasi-equity' loans, it might not be possible to assess whether they are low credit risk, so they are expected to fall within this Section D, with management assessing whether there has been a significant increase in credit risk since the 'quasi-equity' loan was first recognised.

Management of HP has identified an intercompany financing transaction within the Supply & Trading division between HP Fuels Limited and HP Fuels (Channel Islands) Limited, which has an outstanding balance of £15.5m at 31 December 2017. The loan was originally recognised on 31 December 2016 and is repayable on 31 December 2021.

HP Fuels (Channel Islands) Limited has some external loans, but these loans are much more senior than the intercompany loan and they have completely different terms from the intercompany loan. Management has found it difficult to assess whether the loan is low credit risk, so it is assessing whether there has been a significant increase in credit risk since the loan was first recognised on 31 December 2016.

Management has considered whether there has been an actual or expected significant change in the operating results of the borrower since the loan was first recognised. This included considering whether there were any actual or expected declining revenues or margins, increasing operating risks, working capital deficiencies, decreasing asset quality, increased balance sheet leverage, liquidity, management problems, or changes in the scope of business or organisational structure (such as the discontinuance of a segment of the business) that would result in a significant change in the borrower's ability to meet its debt obligations. Management concluded that there was no such actual or expected significant change in the operating results of the borrower.

Management has also considered whether there has been an actual or expected significant adverse change in the regulatory, economic or technological environment of the borrower that would result in a significant change in the borrower's ability to meet its debt obligations, such as a decline in the demand for the borrower's fuels by airlines due to fewer flights being offered as a result of significantly higher oil prices. Management has concluded that there was no such actual or expected adverse change in the regulatory, economic or technological environment of the borrower.

Finally, management has determined that the borrower was not 30 days past due on any of its repayments of the loan, as set out in the loan repayment schedule in the loan agreement.

Therefore, management considers that there has not been a significant increase in credit risk since initial recognition. Hence the intercompany loan is in 'stage 1', and 12-month expected credit losses should be calculated for the loan.

Management applies a consistent approach to establishing a PD with that described in Section E, and has determined that a 12-month PD of 0.2% is a reasonable PD for this loan.

Applying a 0.2% PD to the loan ($0.2\% \times 100\% \times £15.5m$) would result in a 12-month expected credit loss of £31,000. Management has concluded that this amount is immaterial.

However, even if the PD percentage is very small, where it is applied to a large EAD (for example, $0.1\% \text{ PD} \times £1 \text{ billion EAD}$), a material expected credit loss could still arise if the remaining component of the calculation (that is, the LGD) is assumed to be 100%. In many cases, an LGD of 100% is not realistic, since that assumes that no amount of the loan will be recovered. It is therefore important in such cases to

understand the LGD and how it might be estimated; this is because the lower the LGD, the lower the expected credit losses will be.

Since only 12-month expected credit losses are being calculated, a similar approach could be taken to that in Section B for loans repayable on demand to understand the LGD. That is, the lender could consider if the borrower is expected to have sufficient available liquid assets (such as cash and cash equivalents) to cover the full outstanding balance of the loan, or what recovery strategies the lender would take to recover the full outstanding balance of the loan, if the borrower defaulted in the next 12 months.

If there are sufficient available liquid assets at all dates to repay the loan, the expected credit loss is likely to be immaterial. If there are not sufficient available liquid assets at all dates to repay the loan, but the probability-weighted outcome from recovery scenarios that the lender would take indicates that the loan would be fully recovered, the expected credit loss will be limited to the effect of discounting the amount due on the loan (at the loan's effective interest rate) over the period until cash is realised. If the time period to realise cash is short or the effective interest rate is low, the effect of discounting might be immaterial.

As described in Section B, cash flow forecasts supporting the recovery scenarios should include relevant and reliable forward-looking information, which is probability weighted. The cash flow forecasts should be based on the net realisable value of the assets expected to be generated and then realised to repay the loan throughout the period, and not only those available at the reporting date, also taking into consideration the quality of those assets and the terms of their recovery.

Collateral and other credit enhancements (such as guarantees and credit insurance) can also result in a lower LGD. Letters of support can help to provide evidence that the borrower will be supported in the event of default, if 12-month expected credit losses are being calculated. These are explained further in Section E below.

Management of HP has identified an intercompany financing transaction within the Supply & Trading division between HP Fuels Limited and HP Aviation Inc. This is a long-term (10-year) loan to fund the acquisition of another US aviation business and has an outstanding balance of \$350m. The loan was at a market rate of interest, fixed at 3.0%. This rate was broadly consistent with quotes received at the time (January 2016) from external financial institutions for a loan directly to HP Aviation Inc.

Management undertook the same assessment as for the other loan granted to HP Fuels (Channel Islands) Limited and has concluded that this loan is also in stage 1 (that is, it has not suffered a significant increase in credit risk since it was granted) and that the 12-month PD for this loan is also 0.2%. Applying this PD to the outstanding balance, without taking into account any collateral of other credit enhancements, would give an expected credit loss of £7m, which management has determined is material to HP Aviation Inc.

Management has prepared forecasts for the next 12 months of the cash and cash equivalents and other assets which would be sold to repay the loan if HP Aviation Inc. were to default. These have a combined net realisable value of \$475m, which is sufficient to cover the full outstanding balance of the loan. The assets are fuel stocks and the head office (which has a reliably estimable value). Assets such as goodwill, deferred tax assets, intangibles and specialist equipment (which were considered relatively low value and difficult to sell) were not included in the calculation. The assets could be sold within 12 months of the following year-end. Management has determined that discounting the amount due on the loan at the loan's effective interest rate over a maximum of 24 months does not give rise to a material expected credit loss.

E. Stage 2 & 3 intercompany loans

Key points

- For loans that are in stage 2 or 3, a lifetime expected credit loss is recognised.
- In measuring the expected credit loss, all reasonable and supportable information that is available without undue cost or effort should be considered. This includes both internal and external information, and information about past events, current conditions and forecasts of future economic conditions.
- The effect of credit enhancements such as collateral, guarantees and letters of support should also be included. Guarantees that are contractually enforceable have a greater effect than letters of support that are not.

For intercompany loans that fall within ‘stage 2 or 3’, a lifetime expected credit loss is recognised. Also, as explained within the Appendix, if an entity cannot determine at the date of transition to IFRS 9 whether there has been a significant increase in credit risk since the loan was originated without undue cost or effort, lifetime expected credit losses should be recognised.

Using the approach described within the Appendix will require a PD to be applied that considers the likelihood of default over the whole life of the loan. Since lifetime PDs are higher than 12-month PDs, it is more likely that the intercompany loan will have a material expected credit loss. However, irrespective of the ‘stage’ at which the intercompany loan sits within the model, collateral and other credit enhancements can result in a lower LGD, which in turn reduces the expected credit loss.

How can an entity establish the PD of the loan?

The lender should take a holistic approach to establish the PD of the loan, taking into account all reasonable and supportable information that it is able to obtain without undue cost or effort relating to the loan. This includes information about past events, current conditions and forecasts of future economic conditions.

The starting point for the lender will generally be to consider the internal information that it holds about the borrower and the loan, which should be supplemented by external information.

Internal information: If the group is sophisticated, it might have developed its own internal credit ratings as part of its credit risk management that can be used to establish the PD of the loan. In any event, the lender should consider any information that it has about the borrower’s historical arrears. IFRS 9 contains rebuttable presumptions that a loan that is 30 days past due has had a significant increase in credit risk (at para 5.5.11), and that a loan that is 90 days past due is credit-impaired (at para B5.5.37).

Management of the lender is expected to consider its intercompany arrangements with the borrower holistically. For example, if the borrower has been granted multiple loans by the lender and is overdue on one loan, it might be more likely that it will default on another intercompany loan, and hence that the other intercompany loan now has a higher PD.

The lender could also consider the interest rates/credit spreads used for transfer pricing on loans to the borrower, which might give an indication of its credit rating.

If the borrower is a lessee needing to calculate an incremental borrowing rate (that is, the rate of interest that a lessee would have to pay to borrow over a similar term, and with similar security, as the lease) for its leases under the new leasing accounting standard, IFRS 16, this might also give an indication of the borrower’s PD, although

entities considering IFRS 16's implementation will be aware that calculating the incremental borrowing rate brings its own challenges.

The lender can also consider the overall financial health of the borrower in developing a PD. For example, if the borrower has positive liquid net assets (that is, excluding goodwill, deferred tax assets, contingent consideration etc.) and a low gearing ratio, the PD might be lower than if the borrower has negative liquid net assets and a high gearing ratio.

Management should ensure that the information used to generate PD estimates is consistent with other internal information, such as that used in cash flow forecasts to assess impairment, deferred tax asset recovery, internal budgets and incremental borrowing rates of leases, where applicable.

External information: If the borrower has any external loans, or is the counterparty to any other instruments such as interest rate swaps, there might be external credit rating information about that entity. As explained in Section C above, external credit ratings are likely to be a useful point of comparison for an intercompany loan's credit rating only where the external loan has the same seniority and terms as the intercompany loan. In addition, if any intercompany loan arrangements have previously been established at a market rate of interest, the entity should have information available on how this assessment was made.

External credit ratings agencies (such as Standard & Poor's, Moody's and Fitch), analytics agencies (such as Thomson Reuters and Bloomberg) and credit bureaux (such as Experian and Equifax) might directly provide related PD percentages.

External credit ratings are historical, and sometimes lagging, indicators. The lender should carefully consider their relevance and whether the PD should be changed based on forecasts of future economic conditions in the wider economic environment. This might require consideration of factors such as changes in the unemployment rate, interest rates or economic growth, and how this would be expected to flow through to the PD, as discussed further below.

Management of HP has identified another intercompany financing transaction within the Downstream business unit between HP Aviation Limited and HP Aviation (Overseas) Limited, a fuel supply company. This is a mid-term (three-year) loan of €300m to expand operations. The loan was at a market rate of interest, floating at EURIBOR+2.0%. This rate was broadly consistent with quotes received at the time (December 2016) from external financial institutions for a similar loan directly to HP Aviation (Overseas) Limited.

Management has gathered the following information to establish a PD:

- *HP Aviation (Overseas) Limited has a history of defaulting on external and intercompany loans. Of its four external and 20 intercompany loans, it has defaulted on two of them in the past 12 months.*
- *The financial health of HP Aviation (Overseas) Limited – it has a high gearing ratio.*
- *Aviation industry average credit ratings (global), which give a PD of 5%.*
- *Peer aviation fuel supply company credit ratings (global), which give a PD of 4%.*

Management has determined that the global industry average and peer company credit ratings give a PD which is too low for the intercompany loan, given the historical defaults by HP Aviation (Overseas) Limited and its high gearing ratio.

Management has noted that, of HP Aviation (Overseas) Limited's 24 long-term borrowings, it has defaulted on two of them in the past 12 months (that is, it has defaulted on 8.3% of its external and intercompany loans in the last year). The intercompany loan to HP Aviation Limited has two years of its life remaining, so management has calculated a lifetime PD, initially based only on this historical information, by calculating the PD for each of the remaining two years as follows:

Year 1 (2018): Apply the historical PD of 8.3% to the intercompany loan under consideration.

Year 2 (2019): Calculate the marginal PD (that is, the probability that the loan will default in year 2 if it has not already defaulted in year 1). The probability that the loan will not default in year 1 is 91.7% (that is, 100% less 8.3%). Accordingly, the marginal PD for year 2 is $8.3\% \times 91.7\% = 7.6\%$.

Lifetime PD (based on historical information) is the sum of the PDs for years 1 and 2 (that is, $8.3\% + 7.6\% = 15.9\%$).

Management now needs to consider the impact of forward-looking expectations on the PD.

How can an entity incorporate forward-looking information into the PD?

Management will need to do an assessment, based on its historic experience and understanding of the industry/customer base of the borrower, to determine what factors are likely to have the greatest impact on the recoverability of the intercompany loan.

These factors could be general trends and changes in the economy, such as inflation/growth rates, unemployment rates, interest rates, FX rates, etc. In addition, there could be further industry or geography-specific indicators that might have a significant impact on future default levels. These indicators might differ for each intercompany loan/group of intercompany loans, depending on the industry and geography in which the borrowers operate.

One approach might be to look for historical correlation between macro-economic rates (such as unemployment rates) and losses experienced on intercompany loans. If there is such a correlation and unemployment is forecast to be higher or lower than the historical average over the period in which losses have been observed, an adjustment would then be made to the historical amounts (for example, expected higher unemployment might mean that the provision applied to intercompany loans needs to be increased). Under IFRS 9, entities are expected to consider alternative scenarios to develop a probability-weighted outcome. An entity could use scenario analysis to reflect different possible future outcomes. This need not consider every single possible scenario that could occur, but must consider at least one scenario where a loss occurs. This is illustrated within the Appendix under 'How should expected credit losses be measured?'

In establishing a link to economic data, further complexities might arise due to 'lag'. Consider an electricity provider that has been granted a loan by another entity within its group. A rise in unemployment might not trigger an immediate increase in defaults, because customers prioritise paying electricity bills over other discretionary expenditures. The increase in unemployment might only trigger a rise in PD for the intercompany loan if, for example, it is sustained for a six-month period.

Management of HP has considered the customers of HP Aviation (Overseas) Limited and the wider economic factors that might impact HP Aviation (Overseas) Limited's sales and profitability and, consequently, its ability to repay its intercompany loan as follows:

- *Oil price. For most airlines, the cost of oil has a direct impact on their profitability, because it is usually one of their largest costs. In times of high oil prices, HP has experienced higher levels of default from customers in their aviation fuel business.*
- *US Dollar. Since oil is priced in dollars, not only the underlying movement in the oil price but also the strength of the US Dollar when compared to other currencies has an impact on sales to customers.*
- *Inflation. Rising prices and costs of doing business overseas will impact both customers of HP Aviation (Overseas) Limited and HP Aviation (Overseas) Limited's own ability to meet financial obligations.*
- *The International Air Transport Association ('IATA') publishes monthly data on load factors (that is, the number of seats occupied on flights). In times or areas where load factors are low, this could suggest an over-supply of flights or lack of demand, and it could therefore impact airline profitability and the ability of customers to pay their debts to HP Aviation (Overseas) Limited.*

Management considered each of the above factors and how they have moved when compared to the period of the historical data available. It has established that, in previous reporting periods, on average, when inflation has increased by 2%, overall losses have increased by 0.5%; and when the oil price has increased by 5%, losses have increased by 2%. Management has performed such an analysis for all factors. Management has obtained external economic outlook reports to understand how each variable might improve or worsen over the remaining life of the intercompany loan.

Management has determined, after performing the analysis described above for each factor, that an additional expected credit loss for forward-looking information of €3m needs to be recognised. The €3m represents the total expected impact of the economic outlook on the intercompany loan for each of the factors above. Management has provided a detailed breakdown of the €3m additional expected credit loss, and all of the related inputs and assumptions.

Management could have developed a detailed statistical model that considered large number of detailed simulations to estimate the quantitative impact of the above factors on the historical PD (that is, how the 15.9% PD should be adjusted to reflect forward-looking information). However, HP has determined that it is unable to do this without undue cost and effort, so it has used the simpler analysis outlined above.

Therefore, instead of adjusting the PD directly, once management has calculated an expected credit loss based on historical information (using a PD of 15.9% determined previously), it will recognise an additional expected credit loss as calculated above.

How can an entity establish the LGD of the loan?

LGD is affected by collateral and other credit enhancements, some examples of which are explored below. As for the PD, the LGD should incorporate appropriate forward-looking information. For example, if the collateral backing an intercompany loan was a head office property, expectations about how the Commercial Property Price Index in the relevant geographical area might perform should be factored into the realisable value of the property. A similar approach to that applied above, for calculating the impact of forward-looking information for the PD, could be applied to the LGD.

Collateral: Any collateral pledged to the lender or other security over the loan (for example, the right to seize assets of the entity holding the loan) can reduce the LGD, which could be decreased to an amount that represents the value at which the collateral/asset(s) seized could be sold. Careful consideration should be given as to what drives the value of the assets. If the assets are, by definition, not valuable in the event that the counterparty defaults, those assets would not be effective in decreasing the LGD.

Guarantees: Guarantees are contractually binding and generally come in two different forms. The first type of guarantee would only become effective when a default occurs. This type of guarantee reduces the LGD of the intercompany loan – it does not reduce the likelihood that the borrower will default, and hence it does not affect whether a loan is in stage 1 or stage 2, but it will reduce the loss incurred if the borrower does default. The second type of guarantee becomes effective before a default occurs. Hence, this type of guarantee helps to prevent a default from occurring, and consequently does reduce the PD and can affect whether the loan is in stage 1 or stage 2. If guarantees are present for intercompany loans, either from a bank or another entity within the group, it is therefore important to understand how the guarantee works to appropriately reflect it in the expected credit loss calculation.

Since guarantees are contractually binding, paragraph 5.5.55 of IFRS 9 states that they should be taken into account in determining expected credit losses; their effect is to reduce the PD/LGD of the intercompany loan, as applicable, to that of the entity providing the guarantee (that is, the bank or other group entity). The entity providing the guarantee might need to record a provision itself based on the likelihood of paying out under the guarantee.

Letters of support: Letters of support can be given in varying circumstances between group entities to support the going concern of an entity. Typically, these letters of support are not legally binding, and they create no legal obligation between the provider and entity in question. Management should consider its history of supporting entities and its ability to move cash and liquid assets around the group to settle obligations when taking a holistic view about intercompany arrangements.

Whilst letters of support should be taken into consideration when establishing the PD and LGD for the intercompany loan, they are not contractually binding, and so they do not reduce the PD and LGD of the intercompany loan to the same extent as a contractual guarantee.

Further, letters of support typically have an effective date of up to 12 months from the date when the financial statements are signed. Thus, they might form one of the considerations when taking a holistic view of information about the borrower if 12-month expected credit losses are calculated for the intercompany loan. If there has been a significant increase in credit risk since inception and lifetime expected credit losses need to be determined, they would only be helpful in considering the PD and LGD for the period that the letter covers. (For example, if a letter of support is effective for one year from when the financial statements are signed, and the financial statements are signed nine months after the reporting period, the letter of support could only be considered for the first year and nine months of the loan's remaining

life. If the loan has a remaining life of longer than one year and nine months, the expected credit loss for the period after one year and nine months would not be influenced by the letter of support.)

Letters of credit and credit insurance: Letters of credit and credit insurance might help to reduce the PD of the loan to that of the letter of credit/insurance provider, or reduce the LGD, dependent on whether the letter of credit/insurance reduces the likelihood of a default, or mitigates the loss after a default has occurred (similar to the two types of guarantee described above).

HP Aviation Limited holds a contractually binding guarantee from HP (Hold Co) Ltd, the ultimate parent entity, which guarantees 30% of the loan due from HP Aviation (Overseas) Limited if HP Aviation (Overseas) Limited defaults. HP (Hold Co) Ltd has a strong capacity to pay out under the guarantee in the event of such a default. Management has taken this into account in assessing the LGD, and it has therefore calculated expected losses for this intercompany loan as follows:

- *PD – 15.9% (based on historical information);*
- *LGD – 70% (30% of the loan is guaranteed by the parent); and*
- *EAD – €300m.*

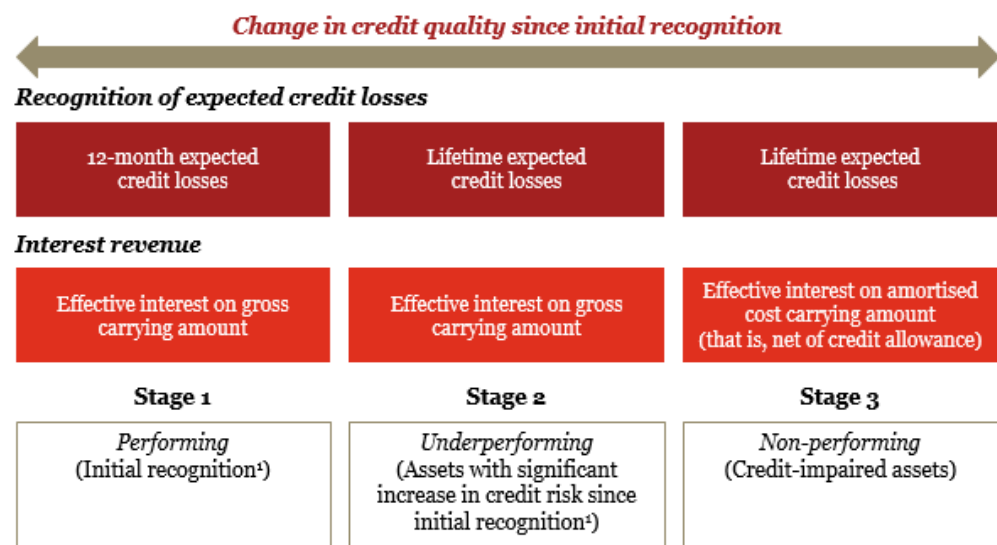
This gives expected credit losses of €33.4m. The overlay for forward-looking information calculated previously (an additional €3m of expected credit losses) did not include the effect of the parent's guarantee. Consequently, the overlay is now reduced by 30% (that is, to €2.1m). This gives total expected credit losses of €35.5m.

Appendix

The 3-stage general impairment model

What is the 3-stage general impairment model?

The first step of the general model is to determine which impairment ‘stage’ the intercompany loan sits within. At initial recognition, intercompany loans are generally within ‘stage 1’, which requires a 12-month expected credit loss to be calculated for each intercompany loan balance. The model then requires monitoring of the credit risk associated with the loan to consider if there has been a significant increase since initial recognition. If there has been a significant increase in credit risk (the intercompany loan is now in ‘stage 2’), or the asset has become credit impaired (the intercompany loan is now in ‘stage 3’), a lifetime expected credit loss must be recognised. The diagram below illustrates this:



⁴ Except for purchased or originated credit impaired assets.

What ‘stage’ is the intercompany loan in (in other words, does the lender need to consider a 12-month or lifetime PD)?

IFRS 9 offers some practical expedients which might help to determine whether a 12-month or lifetime PD should be applied:

- If the loan has low credit risk (IFRS 9 paras B5.5.22–B5.5.23) at the reporting date, an assumption can be made by management that there has not been a significant increase in credit risk since initial recognition (that is, the intercompany loan is in ‘stage 1’, and a 12-month expected credit loss applies). This ‘low credit risk exemption’ is optional but, if used, it removes the operational need to consider whether there has been a significant increase (IFRS 9 para 5.5.10). The assessment of whether a loan has low credit risk should be made before consideration of collateral and other credit enhancements. The low credit risk exemption is illustrated in Section C.
- There is a rebuttable presumption in paragraph 5.5.11 of IFRS 9 that, if a loan is 30 days past due, there has been a significant increase in credit risk, and that, if a loan is 90 days past due, the loan is credit-impaired (that is, the loan is in ‘stage 2’ or ‘stage 3’ respectively, and a lifetime expected credit loss applies).
- Loans which are repayable on demand have a contractual period of less than one day, which simplifies the assessment into whether the borrower has sufficient available liquid assets if a demand was made during that period. Section B explores this assessment in further detail.

- Finally, on transition to IFRS 9, if the entity cannot determine whether there has been a significant increase in credit risk since the loan was originated, without undue cost or effort, paragraph 7.2.20 of IFRS 9 states that lifetime expected credit losses should be recognised (that is, it is not necessary to assess whether there has been a significant increase in credit risk, and a lifetime expected credit loss applies). If this approach is applied, lifetime expected credit losses must be recognised for the intercompany loan at each subsequent reporting period.

If the intercompany loan is not 'low credit risk', it is necessary to determine whether there has been a significant increase in credit risk since initial recognition of the intercompany loan (it is in 'stage 2'), or the loan is credit-impaired (it is in 'stage 3') (that is, a lifetime PD needs to be applied).

Whilst the second and third bullet points above offer practical expedients for each of those determinations respectively, those practical expedients are likely to be practicable only if the loan has stated terms and conditions. Without specified terms, it will be difficult to demonstrate whether a loan is low credit risk and, if no interest is charged, whether it is 30/90 days past due.

How does an entity assess whether there has been a significant increase in credit risk, or the intercompany loan is credit-impaired, if the expedients are not practicable?

There is no definition of a 'significant' increase in credit risk, but the assessment is likely to be a combination of quantitative information (such as PDs and credit ratings), qualitative information (such as changes in operating results, or business, financial or economic conditions), and the rebuttable presumption that any loan over 30 days past due has had a significant increase in credit risk.

The lender would need to identify relevant factors based on facts and circumstances specific to the intercompany loan. Paragraph 45.32 and FAQ 45.31.2 in PwC's *Manual of accounting* offer guidance on information to take into account in determining whether a financial asset has had a significant increase in credit risk.

IFRS 9 defines credit-impaired financial assets as those which have experienced one or more events that have a detrimental impact on its estimated future cash flows.

Evidence that a financial asset is credit-impaired includes observable data about the following events:

- significant financial difficulty of the issuer or the borrower;
- a breach of contract, such as a default or past-due event;
- the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;
- it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation;
- the disappearance of an active market for that financial asset because of financial difficulties; or
- the purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses.

It might not be possible to identify a single discrete event – instead, the combined effect of several events might have caused financial assets to become credit-impaired.

When assessing whether there has been a significant increase in credit risk or the asset is credit-impaired, the effect of collateral and other credit enhancements should not be taken into account, unless they affect the likelihood that the borrower will

default. Rather, collateral and other credit enhancements are taken into account when measuring expected credit losses once the stage that the loan sits in (stage 1, 2 or 3) has been determined. This is discussed further in Section E.

How should expected credit losses be measured?

Once the 'stage' that the intercompany loan sits within has been determined, expected credit losses should be calculated; a method for calculating the expected credit loss is to consider the probability of default ('PD'), loss given default ('LGD') and exposure at default ('EAD'), using the PD*LGD*EAD methodology:

- PD is the likelihood of a default happening over a prescribed period; for the purposes of IFRS 9, this is either within 12 months, if the intercompany loan is within 'stage 1', or through the whole life of the loan, if the intercompany loan is within 'stage 2 or 3'.
- LGD is the percentage that could be lost in the event of a default. Collateral and other credit enhancements (such as guarantees or credit insurance) can reduce the LGD.
- EAD is the outstanding balance of the loan.

IFRS 9 does not prescribe that this approach is used; others might also be suitable. See Section B above for applying this methodology to repayable on demand loans.

Each of the components of the expected credit loss calculation should initially be based on historical information that the entity holds about the other entity, and adjusted for forward-looking information.

Forward-looking information should be included if it is reasonable and supportable, and can be obtained without undue cost or effort. Paragraph 5.5.17 of IFRS 9 requires consideration of a range of possible outcomes (multiple scenarios) and does not permit a single 'best estimate'.

In particular, paragraph B5.5.41 of IFRS 9 requires the expected credit loss to always reflect both the possibility that a loss occurs and the possibility that no loss occurs, even if the most likely outcome is no credit loss. This is different to assessing impairment of an asset under IAS 36 *Impairment of assets*, where in determining an asset's recoverable amount the 'higher of' its fair value less costs to sell and value in use is used.

HP Aviation Limited is the lender of a £10 million repayable on demand intercompany loan to HP Aviation Services Limited (HPASL). The intercompany loan accrues interest at 5% on the outstanding loan balance. HP Aviation Limited and HPASL are companies within the HP plc group. HPASL is loss making, but HP plc as a whole has positive net assets and HP plc's market capitalisation (£35 million) exceeds the £10 million intercompany loan.

As HPASL is loss making, HP Aviation Limited has developed a strategy to maximise recovery by allowing HPASL to repay the £10 million loan plus accrued interest in 1 years' time, to allow it to realise the cash flows from the sale of its assets. If HPASL underwent an immediate 'fire sale' of its assets, this would be less likely to enable recovery of the full £10 million.

The contractual cash flows of the intercompany loan at the end of the 1 year period are £10,500,000 (£10 million outstanding plus 5% interest charged on the unpaid £10 million).

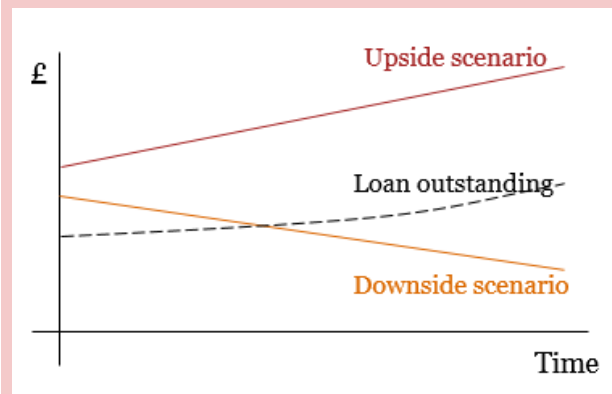
For the purposes of estimating its period-end ECL, HP Aviation Limited considers two scenarios. These are considered to be representative scenarios that cover the possibility that no credit loss occurs and the possibility that a

credit loss occurs:

Scenario 1 - the 'upside' scenario. The expected cash flows from the sale of HPASL's assets are £15 million as there is strong demand for its specialist assets. The cash flows from the sale of HPASL's assets in the future would therefore allow HP Aviation Limited to recover the intercompany loan and accrued interest in full. Whilst inherently judgemental, management has determined that this scenario has an 80% probability of occurring.

Scenario 2 – the 'downside' scenario. The expected cash flows from the sale of HPASL's assets are £8 million as there is weaker demand for its specialist assets. Therefore, the cash flows from the sale of HPASL's assets do not recover all of the outstanding £10 million plus accrued interest. Whilst inherently judgemental, management has determined that this scenario has a 20% probability of occurring.

The expected cash flows under these two scenarios, compared to the outstanding loan balance, can be illustrated with the following graph (not to scale):



The expected credit loss is calculated as the sum of:

(1) £0 under Scenario 1 – this is the difference between the contractual cash flows (£10,500,000) and expected cash flows (£10,500,000), (i.e. a £nil shortfall) discounted back 1 year to the reporting date using the original effective interest rate of 5% and weighted by 80%; and

(2) £476,191 under Scenario 2 – this is the difference between the contractual cash flows (£10,500,000) and expected cash flows (£8,000,000), (i.e. a £2,500,000 shortfall) discounted back 1 year to the reporting date using the original effective interest rate of 5% (i.e. £2,380,952) and weighted by 20% (i.e. £476,191).

The expected credit loss is £476,191. £476,191 is material to the statutory audit of HP Aviation Limited.

Other factors to consider when performing this type of analysis, that may be relevant depending on the borrower's specific facts and circumstances, include:

- *Excess cash flows / 'headroom'*: The magnitude of any cash flow excess or 'headroom' in the 'upside scenario' (i.e. the extent that the 'upside scenario' is above the 'loan outstanding' line in the graph above) cannot remove the need to consider 'downside scenario(s)'. This is because credit losses only arise in the downside scenarios and the loan will never participate in any excess returns in upside scenarios. In addition, as explained above, IFRS 9 requires consideration of at least a scenario where a credit loss occurs.

- *Multiple 'downside' scenarios:* It is necessary to consider a range of different possible outcomes where a loss occurs (i.e. scenarios below the 'loan outstanding' line in the graph above) and determine whether a single 'downside scenario' is representative of that range of possible outcomes – or whether more than one 'downside' scenario might be required. Consideration should be given to what scenario(s) would need to occur in order for a credit loss to arise. Low probability but high impact loss scenarios may still need to be considered, as when combined with other scenarios they could have a material impact. Particular care should be taken where an entity's materiality is low – even if the probability of loss on the loan is very low, if the magnitude of the intercompany loan is large the expected credit loss could still be material.
- *Market capitalisation exceeds intercompany loan balance:* Where a listed parent is lending to its primary or sole operating entity and the outstanding balance on the intercompany loan is similar to the market capitalisation of the listed group, this is not sufficient evidence to conclude there is no expected credit loss. The market capitalisation is a function of the share price of the group, which is a blend of market assumptions and expectations including both 'upside scenarios' that will generate no extra return on the loan and 'downside scenarios' that might generate a credit loss on the loan. Only the downsides are relevant in estimating ECL.
- *'Sense check' of asset sale proceeds vs borrower's enterprise value:* Where a strategy is developed to sell all of the borrower's assets to recover the intercompany loan, it would generally be expected that the probability weighted average of the sale proceeds would broadly reconcile to the borrower's enterprise value. Where it does not, the reasons for this should be understood to ensure they are appropriate and do not indicate unrealistic scenarios or probability weightings.
- *Time horizons:* Longer time horizons generally introduce increased uncertainty in the amounts expected to be recovered. Therefore, where the period to repayment is longer, everything else being equal, the spread of possible outcomes would be expected to be wider, and so expected credit losses potentially greater.
- *Consistency in calculation:* Lenders will need to develop an approach to calculating expected credit losses which is repeatable in future reporting periods.
- *Disclosures and Key Audit Matters:* If expected credit losses are material, management should consider the need for IAS 1 disclosures on significant estimation uncertainty.

In some cases, the possibility that a loss occurs, or the losses that result in that case, might be very low. In those cases, the probability-weighted outcome of forward-looking information might not have a material effect on the overall expected credit loss calculation. Further to the example above, Section E illustrates where this might not be the case.

If a borrower has never experienced any intercompany defaults, does this mean that the PD (and hence the expected credit loss) can be zero?

No. IFRS 9 looks to move the basis of recognition of losses away from one where impairment is recognised only when a loss has occurred to a basis where impairment is based on forward-looking expectations. The lender therefore needs to make a judgement around the likelihood of a loss occurring on an asset, based on both experience of losses to date and expectations of future losses. Whilst history of no losses would suggest that the PD might be small, since the future is inherently uncertain there can never be a scenario where the PD is zero. The lender needs to consider the potential for loss in the future, based on its assessment of the credit risk of the intercompany position.

As explained above, paragraph 5.5.17 of IFRS 9 requires consideration of a range of possible outcomes, and the expected credit loss should always reflect both the possibility that a loss occurs and the possibility that no loss occurs, even if the most likely outcome is no credit loss. As also explained above, and illustrated in Section E, it could be the case that the probability-weighted outcome of forward-looking information might not have a material effect on the overall expected credit loss calculation.

Questions?

PwC clients who have questions about this *In depth* should contact their engagement partner.

Authored by:

Sandra Thompson
Partner – Global Accounting Consulting Services
sandra.j.thompson@pwc.com

Louise Brown
Senior Manager – UK Accounting Consulting Services
louise.brown@pwc.com

Jessica Taurae
Partner – UK Accounting Consulting Services
jessica.taurae@pwc.com

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