



# **APPLYING IFRS 9 TO RELATED COMPANY LOANS IN THE REAL ESTATE SECTOR**



# TABLE OF CONTENTS

<b>Introduction</b>	<b>5</b>
<b>Section 1 – Investment property group</b>	<b>6</b>
Example 1.1. – Interest-free demand loan – No bank debt	7
Example 1.2. – Interest-free term loan – No bank debt	11
Example 1.3. – Interest-free demand or term loan – Senior bank term debt	16
Example 1.4. – Refinancing of bank debt	19
Example 1.5. – Profit participating loan	21
<b>Section 2 – Property development group</b>	<b>22</b>
Example 2.1. – Interest bearing term loan – Senior interest bearing bank term debt	23
<b>Appendix A – IFRS 9 – Key requirements</b>	<b>26</b>



# INTRODUCTION

IFRS 9 *Financial Instruments* makes no distinction between unrelated third party and related party transactions. Entities that prepare stand-alone financial statements are required to apply the full provisions of the standard to all transactions within its scope. This means related company loan receivables must be classified and measured in accordance with the requirements of IFRS 9, including where relevant, applying the Expected Credit Loss (ECL) model for impairment.

The purpose of this publication is to illustrate the application of IFRS 9 to a number of common intragroup funding structures that a typical real estate group might have in place.

In **Section 1**, we consider five common funding structures for an investment property group.

In **Section 2**, we consider a typical funding structure for a property development group, such as a house-builder.

*Appendix A contains a high level summary of the key requirements of IFRS 9. More detailed guidance can be found in our BDO Global publication, 'Applying IFRS 9 to related company loans' which is available on the [BDO Global IFRS webpage](#).*

## SECTION 1 – INVESTMENT PROPERTY GROUP

Parent A operates in the UK real estate sector. Its subsidiary undertakings purchase investment properties for the purpose of generating rental income and for capital appreciation. Management makes each investment decision in line with the group's stated investment strategy and supporting policies. Each potential purchase proposal is supported by a detailed business case which includes, for example, a due diligence report and independent third party valuations. Management assesses each proposal in accordance with a number of key investment criteria, including for example, the minimum yield required on each investment and maximum loan to value (LTV) accepted.

Once the proposal has been approved by Management, a new wholly owned subsidiary is set up for the purpose of undertaking the property purchase and appropriate financing is arranged. Typically, new subsidiaries are thinly capitalised meaning that they are funded almost entirely through debt with only minimal equity. In some cases, the subsidiary is financed entirely through an unsecured loan from Parent A whereas in other cases a third party bank may provide a senior secured loan with Parent A providing a junior unsecured loan. Funds are received by the subsidiary from its debt providers in advance of the property purchase and are held on deposit with a bank or in some cases, with the company's lawyers for a short period until the property purchase is complete.

At the end of 2017, Parent A sets up a new subsidiary (Subsidiary B) for the purposes of purchasing a new investment property worth £1m which has been approved by Management. An annual market rent of £80k is expected (i.e. a rental yield of 8%) and a tenant has already been secured at this rate for the first 2 years. For the purposes of illustration, assume that Management expects both the property value and rental yield to remain stable year on year.

Parent A arranges debt financing for the transaction to be put in place on 1 January 2018 ahead of the planned purchase date later that month. The following examples illustrate different funding structures that Management could choose to put in place at inception, including a potential refinancing scenario that could arise in a later accounting period.

### Potential Funding Structures

- **Example 1.1.** – Interest-free demand loan; no bank debt
- **Example 1.2.** – Interest-free term loan; no bank debt
- **Example 1.3.** – Interest-free term loan (or demand loan); senior bank term debt
- **Example 1.4.** – Refinancing of bank debt
- **Example 1.5.** – Profit participating loan

For each example we consider how the loan advanced by Parent A should be classified under IFRS 9 and how the ECL model should be applied (where relevant). Assume in all cases that the loans are in a hold-to-collect business model because Parent A intends to hold the loans in order to collect their contractual cash flows.

## Example 1.1. – Interest-free demand loan – No bank debt

Parent A advances an unsecured loan for £1m to Subsidiary B on 1 January 2018 with the following terms:

- 0% interest;
- £1m repayable on demand.

### *BDO comment – Initial recognition of an interest-free demand loan*

*IFRS 9 contains the same initial recognition requirements for financial assets as IAS 39. This means that at initial recognition the loan must be recognised at its fair value (which, for a demand loan, will be the transaction price) plus transaction costs (assumed to be nil in this example).*

*Therefore, Parent A initially recognises the loan at its fair value being its transaction price of £1m. This reflects the fact that repayment could be demanded immediately which is in contrast to a related company term loan. Owing to the demand feature and the contractual rate of interest of 0%, the EIR is 0%.*

## A. Classification

As the loan is in a 'hold to collect' business model, the key classification question is whether the loan meets the Solely Payments of Principal and Interest (**SPPI**) test.

In considering whether the loan is likely to meet the SPPI test, Parent A must take into consideration the fact that the loan is implicitly non-recourse in nature because Subsidiary B only holds one asset. This means that Parent A must look-through to the cash flows generated from this asset and determine whether the non-recourse nature of the loan restricts the contractual cash flows of the loan in a manner that is inconsistent with a basic lending arrangement. Parent A notes the following:

- The contractual terms of the loan specify a fixed repayment of £1m which is equal to the principal amount (being the initial fair value of the loan) and interest (being nil as the EIR is 0%). These repayments are consistent with a basic lending arrangement as they are not contractually linked to changes in the property value;
- While the LTV is 100% at initial recognition, Parent A notes that it could choose immediately to demand repayment and receive back cash flows equal to principal (£1m) plus interest (nil). In addition:
  - Rental income is expected to be sufficient to repay the loan in full by 2030 (i.e. £80k x 13 yrs = £1.04m);
  - Once Subsidiary B has accumulated sufficient rental income, the loan from Parent A could be refinanced with a third party at a lower LTV;
  - Given the current valuation of the property, it could be sold in order to repay the loan;
- The investment is made in accordance with Management's investment policies which specify a number of key criteria including for example, a minimum LTV and rental income which supports repayment of the loan. When Parent A provides funding to Subsidiary B, its aim is not to take property risk but to provide financing to its subsidiaries for their ongoing business operations which will in turn generate rental income for the group.

Based on the above, Parent A concludes that the loan to Subsidiary B is a basic lending arrangement that **meets the SPPI test** and would be classified at **amortised cost** because it is in a **hold to collect** business model.

## B. Impairment

As the loan is classified at amortised cost, it is within the scope of the ECL model and subject to the **general approach**. At the next reporting date following initial recognition, Parent A must determine whether the loan is in **Stage 1**, **Stage 2** or **Stage 3** and measure 12 month ECL or lifetime ECL accordingly. In performing this analysis, Parent A must consider all relevant reasonable and supportable historic, current and forward looking information that provides evidence about the risk that Subsidiary B will default on the loan and the amount of losses that would arise as a result of that default. Sources of this information can be internal and external, including external providers to whom, a fee is payable.

Assume that at **31 December 2018**, based on current and forward looking information:

- The property value has reduced to £875k and is forecast to remain at this level;
- The rental income after 2019 is expected to reduce to £70k and is forecast to remain at this level; and
- The market rate rental yield is expected to remain at 8%.

### ***BDO comment – Staging assessment and estimating the risk of a default occurring for demand loans***

*Assessing which stage the loan is in and estimating the risk of a default occurring should be relatively straightforward for demand loans. This is because Management must determine the risk of a default occurring based on the assumption that repayment is demanded immediately (irrespective of whether this is the intention). This is likely to be a binary analysis as the subsidiary will either:*

- *Have sufficient cash or other liquid assets to repay the loan immediately (meaning that the risk of default is very low, possibly close to 0% and the loan is in **Stage 1**); or*
- *Not have sufficient cash or other liquid assets to repay the loan immediately (meaning that the risk of default is very high, possibly close to 100% and the loan is in **Stage 3**).*

*This means that typically, provided the funds are not lent to an insolvent entity, the risk of a default occurring at initial recognition is likely to be very low. This is on the basis that repayment could be demanded immediately and because the subsidiary would not yet have used the funds, the full amount would almost certainly be recovered.*

### **(i) Staging Assessment**

Assume that Management defines **default** as Subsidiary B having insufficient funds to repay the loan when due (i.e. on demand) and considers that a loan is **credit impaired** once it meets the definition of a defaulted loan. As a backstop indicator, a default is assumed if the loan is more than 90 days past due but given that the loan is due on demand and bears no interest, it is not considered appropriate to solely rely on this indicator. At the reporting date, the loan is not past due but Management considers that Subsidiary B would have insufficient funds to repay the loan if demanded (as the full amount has been used to purchase the property). This means that the loan is in default and considered credit impaired. The loan is therefore in **Stage 3** and **Lifetime ECL** is required to be recognised.

## (ii) Estimating the risk of a default occurring

Due to the fact that Subsidiary B would default if repayment was demanded immediately, Management concludes the risk of default can be assumed to be **100%**.

## (iii) ECL Measurement

Management must then consider the possible credit losses that would arise upon a default taking into account different possible recovery strategies and expected cash flows using historic, current and forward looking information. In doing so, Management should consider that in some cases, they may be forced to pursue a strategy that does not maximise recoveries for example, depending upon Parent A's cash flow position at that time. The analysis may also be affected by the extent to which Parent A has unrelated third party funding in place, and the recovery strategy that the third party lender might adopt. This is explained further in Example 1.3.

Assume that Management has determined that there is approximately a 90% probability that the property value and rental yield will remain at or above current levels. In this case, Management considers that the best recovery strategy is to wait for Subsidiary B to accumulate sufficient rental income to repay of the loan by 2031 at which point the property could then be sold for £875k (**Scenario 1**).<sup>1</sup>

Management also considers that there is approximately a 10% probability that the property value will decline to £500k and that annual rental income will decline to £40k after 2019. In this case, Management considers that the best recovery strategy would be to force a sale of the underlying property at the end of 2019 thus foregoing any future rental income.<sup>2</sup> While an orderly sale after a normal marketing period (**Scenario 2**) would maximise recoveries, Management cannot rule out the possibility of a fire sale (**Scenario 3**) depending upon market conditions and the cash flow position of Parent A.

Taking this information into account, Management estimates the following expected cash flow scenarios and their likelihood. Note that for **Scenario 2** and **Scenario 3**, it is assumed that the rental income received in 2018 and 2019 can be used as part repayment for the loan.

Scenario	Probability	Recovery Strategy	Rentals received	Sale Proceeds	Total expected cash flows <sup>3</sup>
<b>Scenario 1</b>	90%	Rentals plus orderly sale in Q4 2031	1,000,000 [(80k x 2yrs) + (70k x 12 yrs)]	875,000	1,000,000
<b>Scenario 2</b>	7%	Rentals plus orderly sale in Q4 2019	160,000 [80k x 2 yrs]	500,000	660,000
<b>Scenario 3</b>	3%	Rentals plus fire sale in Q4 2019 (15% discount)	160,000 [80k x 2 yrs]	425,000	585,000

<sup>1</sup> Management is also likely to consider other options such as refinancing with a third party (once sufficient rental income has been accumulated to allow for refinancing with a lower LTV loan) or selling the property.

<sup>2</sup> Other possible scenarios such as a subsequent recovery in market conditions are also likely to be considered.

<sup>3</sup> Total expected cash flows are capped at £1m – i.e. the contractual amount owed to Parent A. Any cash flows in excess of this amount represent a profit for Subsidiary B and ultimately the wider group.

The credit losses arising under these scenarios are then weighted accordingly and multiplied by the lifetime risk of default occurring of 100% to arrive at a lifetime ECL. Note that because the EIR is 0% in this example, discounting credit losses has no effect.

	Credit loss (undiscounted)	Credit loss (discounted at 0%)	Probability	Weighted average credit loss (discounted at 0%)
<b>Scenario 1</b>				
Gross Carrying Amount	1,000,000	1,000,000		
Expected cash flows	1,000,000	1,000,000		
	-	-	90%	-
<b>Scenario 2</b>				
Gross Carrying Amount	1,000,000	1,000,000		
Expected cash flows	660,000	660,000		
	340,000	340,000	7%	23,800
<b>Scenario 3</b>				
Gross Carrying Amount	1,000,000	1,000,000		
Expected cash flows	585,000	585,000		
	415,000	415,000	3%	12,450
<b>Total Weighted Average Credit Loss</b>				<b>36,250</b>
<b>Risk of default</b>				<b>100%</b>
<b>Lifetime ECL</b>				<b>36,250</b>

## Example 1.2. – Interest-free term loan – No bank debt

Parent A advances an unsecured loan for £1m to Subsidiary B on 1 January 2018 with the following terms:

- 0% interest (assume that a market rate of interest for a similar loan is estimated at 7%);
- £1m repayable in 5 years – December 2022.

### ***BDO comment – Initial recognition of an interest-free term loan***

*As noted earlier, IFRS 9 contains the same initial recognition requirements for financial assets as IAS 39. This means that, in contrast to demand loans, there are specific requirements which state that the initial fair value of an interest-free term loan is equal to the present value of future cash receipts discounted at an appropriate market rate of interest for a similar loan at that date.*

*In this example, the present value of future cash receipts of £1m discounted for 5 years at the appropriate market rate of interest of 7% (the rate at which the subsidiary could have borrowed funds on equivalent terms from an unrelated third party), being the imputed EIR, is equal to £713k. This amount which is initially recognised by Parent A accretes to £1m using the market rate of 7% over 5 years.*

*It is important to note that difference between the transaction price of £1m and the initial fair value of £713k (i.e. £287k) does not constitute a Day 1 profit or loss. Instead, as a result of the parent subsidiary relationship, it is recognised as an addition to Parent A's investment in Subsidiary B (and a capital contribution by Subsidiary B). This accounting treatment is specific to related company loans, and is different from the approach that is required to be followed for loans between unrelated parties.*

## A. Classification

As the loan is in a 'hold to collect' business model, the key classification question is whether the loan meets the Solely Payments of Principal and Interest (**SPPI**) test.

In considering whether the loan is likely to meet the SPPI test, Parent A must take into consideration the fact that the loan is implicitly non-recourse in nature because Subsidiary B only holds one asset. This means that Parent A must look-through to the cash flows generated from this asset and determine whether the non-recourse nature of the loan restricts the contractual cash flows on the loan in a manner that is inconsistent with a basic lending arrangement. Parent A notes the following:

- The contractual terms of the loan specify a fixed repayment amount of £1m which is equal to the principal (being the initial fair value of the loan of £713k) and interest (being £287k interest accrued using an EIR of 7%). These repayments are consistent with a basic lending arrangement as they are not contractually linked to changes in the property value;
- While the LTV on Day 1 is 71% (£713k / £1m) because part of the loan has been added to Parent A's the investment in Subsidiary B, the forecast LTV at date of repayment is expected to increase to 100%. However, by that point Subsidiary B is forecast to have built up £400k (i.e. £80k x 5 years) in rental income. In order to repay the loan to Parent A, Subsidiary B could:
  - Refinance the loan from Parent A with a third party at a lower LTV; or
  - Sell the property and use the proceeds to repay the loan from Parent A;
- The investment is made in accordance with Management's investment policies which specify a number of key criteria including for example, whether expected rental yield is sufficient to allow for full repayment of the loan. When Parent A provides funding to Subsidiary B, its aim is not to take property risk but to provide financing to its subsidiary which will in turn generate rental income for the group.

Based on the above, Parent A concludes that the loan to Subsidiary B is a basic lending arrangement that **meets the SPPI test** and would be classified at **amortised cost** because it is in a **hold to collect** business model.

## B. Impairment

As the loan is classified at amortised cost, it is within the scope of the ECL model and subject to the **general approach**. Parent A therefore needs to determine whether the loan is in **Stage 1**, **Stage 2** or **Stage 3** and measure 12 month ECL or lifetime ECL accordingly. In performing this analysis, Parent A is required to consider all relevant reasonable and supportable historic, current and forward looking information that could affect the risk that Subsidiary B will default on the loan and the amount of losses that would arise as a result of that default. Sources of this information can be internal and external, including external providers to whom, a fee is payable.

Assume that at **31 December 2018**, based on current and forward looking information:

- The property value has reduced to £875k and is forecast to remain at this level;
- The rental yield after 2019 is expected to reduce to £70k and is forecast to remain at this level; and
- The market rate rental yield is expected to remain at 8%.

### ***BDO comment – Staging assessment and estimating the risk of a default occurring for term loans***

*Assessing which stage the loan is in and estimating the risk of a default occurring will be more complex for term loans than for demand loans. This is due to the longer maturity period over which the risk of a default needs to be estimated, in this example over the remaining life of 4 years to December 2022.*

### **(i) Staging Assessment**

Assume that Management has the following accounting policies:

- **Default** is defined as Subsidiary B having insufficient funds to repay the loan when due and monitors through a number of different indicators – including for example, the loss of a major tenant and LTVs falling below a minimum threshold. As a backstop indicator, a default is assumed if the loan is more than 90 days past due but given that the loan bears no interest throughout its life, it is not considered appropriate to solely rely on this indicator. Once a loan is in default, the loan is considered to be **credit impaired**.
- **Significant Increases in Credit Risk (SICR)** is assessed on a qualitative basis by monitoring changes in actual and expected rental income and property values since initial recognition. This is because Management considers that changes in either of these measures have the greatest effect on the risk of a default occurring i.e. a decline in rental income would reduce cash flows available to repay the loan and a decline in property value would increase the LTV which could have a detrimental effect on refinancing options available to Subsidiary B. As a backstop indicator, a SICR is assumed if the loan is more than 30 days past due but given that the loan bears no interest throughout its life, it is not considered appropriate to solely rely on this indicator.

Based on the revised forecasts the rental income has fallen by 12.5% after 2019 (from £80k to £70k) and the property value has also fallen by 12.5% (from £1m to £875k). For the purposes of illustration assume that this is considered to constitute a SICR by Management. This means that the loan is in **Stage 2** and **Lifetime ECL** is required to be recognised.

**(ii) Estimating the risk of a default occurring**

When estimating the risk of a default occurring, Management should consider internal and external information about past default rates on similar loans (to the extent available) as well as forward looking information about factors that provide evidence about the risk of a default occurring such as expected property and rental market forecasts. Management is of the view that under the most likely scenario where property values and rental yields remain at or above current levels, no default is expected because Subsidiary B would be in a position to repay the loan when due using a combination of its accumulated rental income and refinancing with a third party at a lower LTV or through sale.

However, Management also considers an alternative scenario under which the property value will decline to £500k and annual rentals after 2019 will reduce to £40k. Under this scenario, Management considers that a default would arise as Subsidiary B would not be in a position to repay the loan through any means. The probability of this scenario arising is estimated at approximately 10% i.e. **the risk of default is 10%**.

**(iii) ECL Measurement**

Management must then consider the possible credit losses that would arise upon a default taking into account different possible recovery strategies and expected cash flows. In doing so, Management should consider that in some cases, they may be forced to pursue a strategy that does not maximise recoveries.

In this example, based on an analysis of relevant forward looking information relevant, Management is of the view that the property value is very unlikely to go below £500k and is instead expected to recover significantly. By 2025, Management estimates an annual rental income of £60k with a property valuation of £750k. This means that if Parent A was in a position to wait and allow the market to recover, this would be a viable recovery strategy.

For the purposes of illustration, assume that in this example, Management considers that waiting to receive rentals and making a sale at the end of 2025 would be the best recovery strategy (**Scenario 1**). However, under certain future market conditions, Parent A may not be in a position to wait and may instead need to force a sale of the underlying property at the loan maturity date – i.e. the end of 2022. In addition, while an orderly sale after a normal marketing period (**Scenario 2**) would maximise recoveries, the possibility of a fire sale (**Scenario 3**) cannot be ruled out (depending upon the cash flow position of Parent A).

Taking this information into account, Management estimates the following expected cash flows and their likelihood. In all scenarios, it is assumed that the rental income received can be used as part repayment of the loan.

Scenario	Probability	Recovery Strategy	Rentals received	Sale Proceeds	Total expected cash flows <sup>4</sup>
<b>Scenario 1</b>	70%	Rentals plus orderly sale in Q4 2025	420,000 [(80k x 2 yrs) + (40k x 5 yrs) + (60k x 1yrs)]	750,000	1,000,000
<b>Scenario 2</b>	20%	Rentals plus orderly sale in Q4 2022	280,000 [(80k x 2 yrs) + (40k x 3 yrs)]	500,000	780,000
<b>Scenario 3</b>	10%	Rentals plus fire sale in Q4 2022 (15% discount)	280,000 [(80k x 2yrs) + (40k x 3 yrs)]	425,000	705,000

<sup>4</sup> Total expected cash flows are capped at £1m – i.e. the contractual amount owed to Parent A. Any cash flows in excess of this amount represent a profit for Subsidiary B and ultimately the wider group.

The credit losses arising under these scenarios are illustrated below. These are then weighted accordingly and multiplied by the lifetime risk of default occurring of 10% to arrive at a lifetime ECL. Note:

- Because the EIR is 7% in this example, discounting future cash flows will have an effect – This means that even in **Scenario 1** where full recovery is expected but payment will be later than the contractually due date, a credit loss will arise;
- To simplify the effect of discounting, it is assumed that Subsidiary B repays the total expected cash flows in one lump sum at the end of 2025 for **Scenario 1** and at the end of 2022 for **Scenario 2** and **Scenario 3**.

	Credit loss (undiscounted)	Credit loss (discounted at 7%)	Probability	Weighted average credit loss (discounted)
<b>Scenario 1</b>				
Gross Carrying Amount	1,000,000	762,895		
Expected cash flows	1,000,000	622,750		
	-	140,145	70%	98,102
<b>Scenario 2</b>				
Gross Carrying Amount	1,000,000	762,895		
Expected cash flows	780,000	595,058		
	220,000	167,837	20%	33,567
<b>Scenario 3</b>				
Gross Carrying Amount	1,000,000	762,895		
Expected cash flows	705,000	537,841		
	295,000	225,054	10%	22,505
<b>Total Weighted Average Credit Loss</b>				<b>154,175</b>
<b>Risk of default</b>				<b>10%</b>
<b>Lifetime ECL</b>				<b>15,418</b>

### Example 1.3. – Interest-free demand or term loan – Senior bank term debt

Parent A advances a £200k unsecured loan to Subsidiary B on 1 January 2018 with the following terms:

- 0% interest and repayable on demand; **or**
- 0% interest and repayable in 5 years (assume 5 year market rate of interest = 7%).

At or around the same time, Bank X advances a £800k senior secured loan to Subsidiary B with the following terms:

- Market rate of interest of 5% i.e. £40k per annum;
- Repayable at par in 5 years and at any time at par plus accrued interest.

This means that the LTV for the combined funding is 100% (i.e. £1m / £1m). However, from the perspective of Bank X the LTV is 80% because it is secured over a property worth £1m (i.e. £800k / £1m). The loan from Bank X must be repaid in full before the loan from Parent A.<sup>5</sup>

#### **BDO comment – Funding involving senior ranking interest bearing bank debt – Additional considerations**

*Determining how the loan from Parent A should be classified and how the impairment model should be applied requires a similar approach to that outlined in Example 1.1. and Example 1.2. However, the introduction of a senior ranking interest bearing bank term loan does give rise to additional considerations, including for example:*

- **Estimation of expected cash flows** – Subsidiary B is expected to earn £80k annual rental income but will be required to pay annual interest of £40k (i.e. 5% x £800k) to Bank X which reduces cash flows available to meet the principal and interest payments on the loan from Parent A;
- **Refinancing Risk** – As the loan from Bank X has a 5 year term, this gives rise to refinancing risk at the end of year 5 which needs to be considered irrespective of whether the loan from Parent A is repayable on demand or repayable in 5 years;
- **SICR** – A breach of covenant or late payment under the bank loan may be indicators of a SICR on the loan from Parent A;
- **Default** – Events of default under the bank loan may trigger a default under the loan from Parent A;
- **Recovery Strategies** – Parent A will need to take into account not only its own position but that of Bank X. For example, Bank X could wish to enforce security in accordance with the terms of the loan agreement at a point that maximised its own recoveries but not those of Parent A. This could in turn lead to Parent A being forced to refinance the bank loan itself (see Example 1.4.).

<sup>5</sup> This means that if Parent A advanced a demand loan, it would need to require Subsidiary B to repay the bank loan prior to demanding repayment.

## A. Classification

Similar to Examples 1.1. and 1.2., the loans are in a hold to collect business model and therefore the key classification issue is the SPPI test. In this example, the contractual terms of both the demand loan and term loan only specify payments of principal and interest and are not linked to changes in the property value but Parent A is required to consider whether the non-recourse nature of the loan results in the SPPI test not being met.

Similar to the previous examples, Parent A's intention is to provide financing to its subsidiaries for the purposes of their ongoing business activities which will in turn generate rental income for the group. In addition, Subsidiary B is expected to earn sufficient rental income to service the bank debt and will have accumulated an additional £200k (i.e. net rental income of £40k x 5 years) by the time that the bank loan is due to be repaid. At this point, assuming (i) the property value remains stable at £1m and (ii) the additional £200k can be used to part repay the bank debt, a number of scenarios could arise, including:

- Subsidiary B could refinance both the bank loan and the loan from Parent A with a new third party loan for £800k i.e. at an LTV of 80%;
- Parent A may wish to continue funding Subsidiary B, meaning that only £600k of new debt at an LTV of 60% would be required;<sup>6</sup>
- Subsidiary B could choose to sell the property in order to fund the repayment of both loans in full.

In all of the above scenarios, Parent A is likely to conclude that both the demand loan and the term loan are basic lending arrangements that **meet the SPPI test** and would therefore be classified at **amortised cost** because they are in a **hold to collect** business model.

<sup>6</sup> Note that in the context of a demand loan, Parent A could simply choose not to demand repayment whereas with a term loan, Parent A would need to either modify the existing term loan or advance a new loan term which could give rise to a profit or loss effect (note that this profit or loss effect is separate, and in addition to, any impairment charge).

## **B. Impairment**

Once it has been determined that the loan is classified at amortised cost, it is within the scope of the ECL model and subject to the **general approach**. Applying the ECL model follows a similar approach to that set out in Examples 1.1. and 1.2. but as with the classification decision, a number of additional considerations arise.

### **(i) Staging Assessment and estimating the risk of a default occurring**

In the case of a **demand loan**, on the basis that Subsidiary B would not have sufficient funds to repay the loan on demand, the risk of default is likely to be close to 100%. As explained in Example 1.1., this means that the loan will be in **Stage 3** and **Lifetime ECL** will be recognised.

The staging assessment for a **term loan** follows a similar approach to that set out in Example 1.2. with some additional considerations for Parent A including:

- Monitoring actual or expected breaches of covenant and/or late payments on the bank loan as indicators of an increased risk of default/SICR on Parent A's loan to Subsidiary B;
- Incorporating interest payable to Bank X which reduces available cash flows of Subsidiary B which is in turn likely to increase the risk of a default occurring.

### **(ii) Measuring ECL**

A similar approach to that set out in Example 1.1. and 1.2. should be followed. However, the expected cash flow scenarios that would arise upon a default and related credit losses will need to take into account the cash flows required to service and repay the bank debt in full, prior to repaying the loan from Parent A.

In addition, Parent A will need to factor in the possible recovery strategies of Bank X that may influence its own actions. For example, Bank X could wish to enforce security in accordance with the terms of the loan agreement at a point that maximised its own recoveries but not those of Parent A. In this case, Parent A might consider refinancing the bank loan itself as illustrated in Example 1.4.

## Example 1.4. – Refinancing of bank debt

Following on from Example 1.3. above, assume Parent A advances a £200k unsecured loan to Subsidiary B on 1 January 2018. The loan is interest-free and is repayable in 5 years. At the same time, Bank X advances a £800k secured loan to Subsidiary B. The loan carries market rate of interest of 5% and is repayable in 5 years.

At initial recognition Parent A concluded that the loan to Subsidiary B met the criteria to be classified at amortised cost and applied the ECL model accordingly.

Rental yields for the first 2 years were locked in at £80k and this allowed Subsidiary B to service the external debt (i.e.  $5\% \times £800k = £40k$  per annum) leaving residual cash of £40k each year. However, in 2020, yields have reduced to £40k, leaving no residual cash flow for the remainder of the loan maturity. In addition, the market valuation of the property has declined to £500k which has in turn breached an LTV covenant in the bank loan agreement resulting in an event of default. At this point, Bank X could seek recourse to any remaining liquid assets held by Subsidiary B and enforce security over the property.

However, following a negotiation, Parent A agrees to acquire the outstanding loan amount of £800k from Bank X through a newly set up intermediate subsidiary, Subsidiary C for an amount equal to the market valuation of the property i.e. £500k. Bank X accepts this offer because it avoids a potentially lengthy sales process during which time it could be exposed to further declines in property prices. Bank X considers that this would be inconsistent with the nature of its business as a lender. In contrast, given the nature of Parent A's real estate business, it is willing to accept this level of property risk for the benefit of the wider group and wait for the market to recover over time. The following steps are taken:

- Parent A lends £500k to Subsidiary C – the loan is repayable on demand and interest-free;
- Subsidiary C uses the £500k to purchase the outstanding bank loan i.e. remaining 2 year maturity, 5% rate of interest and a notional of £800k.

Assume for the purpose of illustration that Parent A's original loan to Subsidiary B for £200k has been fully impaired.

## A. Classification

### (i) Loan from Subsidiary C to Subsidiary B (novated interest bearing bank term loan)

The loan from Subsidiary C is non-recourse in nature due to the fact that Subsidiary B only holds one asset being the investment property. Subsidiary C must therefore look through to the underlying asset (being the investment property) and determine whether this feature results in the SPPI test being failed.

In considering the SPPI test, Subsidiary C notes that if the loan was considered a basic lending arrangement which met the SPPI test, it would also meet the definition of a 'Purchased or Originated Credit Impaired' loan because the discount of £300k would represent incurred credit losses. This means that a credit adjusted EIR taking into account those incurred losses would be calculated. At initial recognition therefore:

- Fair value = £500k;
- Credit adjusted EIR = 8% (i.e. the interest rate which discounts future cash flows of £40k in 2021 and £540k 2022 back to the initial carrying amount of £500k).

Under this method of accounting, any subsequent changes (gains or losses) in lifetime ECL of £300k would be taken as an impairment gain or loss in future periods and would be entirely dependent upon the value of the property. This is not consistent with a basic lending arrangement and implies that the loan is more in the nature of an indirect investment in the underlying property than the provision of finance.

Based on the above analysis, Subsidiary C concludes that the loan fails the SPPI test and would be classified at FVPL. On an ongoing basis, the loan would be measured at fair value in accordance with IFRS 13 *Fair Value Measurement* with all movements in fair value going through profit or loss.

### (ii) Loan from Parent A to Subsidiary C (interest-free demand loan)

The loan from Parent A is also non-recourse in nature due to the fact that Subsidiary C only holds one asset being the non-recourse loan to Subsidiary B. Parent A must therefore look through to that underlying asset and determine whether this feature results in the SPPI test being failed.

In contrast to the novated interest bearing bank term loan which has a contractual par amount of £800k, the demand loan has been advanced on an interest free basis with a contractual par amount of £500k. This means that unlike Subsidiary C, Parent A will never be entitled to an amount in excess of £500k as a result of an increase in the property valuation.

Determining whether the loan from Parent A meets the SPPI test will require judgment and will depend upon a detailed consideration of the individual facts and circumstances, including Parent A's views on the property market. In this particular example, the fact that Parent A does not expect the property to decline in value below £500k means that it should receive back the full amount of £500k which may seem to suggest that the non-recourse feature will not result in the SPPI test being failed. However, consideration should also be given to the fact that even a slight decline in property prices could result in Parent A not recovering the amount advanced because the rental income and property valuation is only just sufficient to cover the principal and interest on the novated bank loan. This may imply that the nature of the loan is more akin to an investment in the underlying property than the provision of financing which would result in similar accounting to that of the loan from Subsidiary C set out in part (i) above.

## Example 1.5. – Profit participating loan

Parent A advances £1m to Subsidiary B on 1 January 2018 with the following terms:

- 5% interest;
- 30% of the annual appreciation in the property value;
- £1m repayable in 5 years – December 2022.

### A. Classification

As the loan is in a 'hold to collect' business model, the key classification question is whether the loan meets the Solely Payments of Principal and Interest (SPPI) test.

Despite the fact that the loan has contractual payments of principal and interest, the additional contingent payment linked to the appreciation in the property value must be considered in order to determine whether the loan meets the SPPI test. This because IFRS 9 requires the loan to be assessed in its entirety i.e. as one unit of account and specifies that contractual terms can only be ignored if the potential impact on the contractual cash flows is considered 'de minimis' or if the feature is 'non-genuine'.

When determining whether a feature is de minimis entities must consider the 'possible effect' that the feature could have on the contractual cash flows in each reporting period (and cumulatively). Non-genuine features are those that are only triggered upon the occurrence of a rare or highly abnormal event (that is, the potential for the event to occur is at or very close to zero) and are therefore not expected to be common. In this example, the contingent feature is clearly genuine and in addition, it could have a substantially more than de minimis effect on the contractual cash flows of the loan. This feature therefore introduces property price risk, which is inconsistent with a basic lending arrangement.

Based on the above analysis, Parent A concludes that the loan fails the SPPI test and would be classified at FVPL. On an ongoing basis, the loan would be measured at fair value in accordance with IFRS 13 *Fair Value Measurement* with all movements in fair value going through profit or loss.

## SECTION 2 – PROPERTY DEVELOPMENT GROUP

Parent C operates in the UK real estate sector and purchases land for development into residential units for public sale. Each potential development proposal is supported by a detailed business case which includes a due diligence report in respect of the expected Gross Development Costs (GDC) as well as an independent third party valuation of the Gross Development Value (GDV) of the completed site both of which are undertaken in order to secure bank financing. Management assesses each proposal in accordance with a number of key investment criteria, including for example, the minimum yield required on each development.

Once the proposal has been approved by Management, a new subsidiary is set up for the purpose of undertaking the development and appropriate financing is arranged. Similar to the Investment Property Group, the subsidiaries are generally financed almost entirely through debt. Typically, new subsidiaries are funded as follows:

- Parent C provides an unsecured loan to finance the purchase of vacant land; and
- A third party bank provides a senior secured loan commitment used to finance the development spend based on a maximum loan to GDV ratio.<sup>7</sup>

The loan commitment provided covers the expected GDC plus a small contingency amount and is drawn down over the course of the development period based on construction certifications obtained for costs of work completed. Typically, different elements of the development are sub-contracted at an agreed price prior to the development commencing which reduces the risk of the contingency being required.

Sales of completed units are generally made prior to or during the development phase rather than after the development is completed. Typically, the bank debt must be repaid as and when units are sold/proceeds are received during the development but there is also a backstop or maturity date at which point any remaining unsold units would either need to be sold by the subsidiary in order to repay the bank debt or seized by the bank.

Owing to the nature of the investment, there is no immediate source of income until the property development is completed and units are sold. This means that any interest due on either the loan from Parent C or the external provider will be rolled up and paid as and when the principal is repaid.

In the example below, a new property development project has been approved by Management. Subsidiary D has been set up for this new project and will be funded by a combination of bank debt and a loan from Parent C. The example illustrates how IFRS 9 should be applied to the loan from Parent C. Assume that Parent C holds the loan in a hold to collect business model.

<sup>7</sup> Alternatively, the parent company may jointly fund the development spend with the bank. In either case, any costs arising in excess the stated contingency amount would be funded by the parent company.

## Example 2.1. – Interest bearing term loan – Senior interest bearing bank term debt

At the end of 2017, Parent C sets up a new subsidiary (Subsidiary D) for the purposes of purchasing a vacant plot of land and developing four residential units for sale over a 2 year period. The cost of the land is £200k and the maximum GDC is £840k (i.e. expected GDC of £800k plus a 5% contingency amount of £40k). The four individual units are expected to be sold for £350k (after selling costs) each which results in a total expected GDV of £1.4m.

Project Details	GBP
<i>Land Cost</i>	<i>£200</i>
<i>Gross Development Cost (GDC) – Excluding contingency</i>	<i>£800</i>
<b>Total Development Cost</b>	<b>£1m</b>
<i>Unit Value (£350k x 4)</i>	<i>£1.4m</i>
<b>Gross Development Value (GDV)</b>	<b>£1.4m</b>

On 1 January 2018, Subsidiary D enters into the following funding arrangements:

- £200k unsecured loan from Parent C at a market rate of interest of 10%. Both the principal and interest amount is repayable in 2 years following the sale of all completed units and repayment of bank debt. The funds are used to acquire land worth £200k; and
- £840k senior secured loan commitment from Bank X. Once drawn, the loan attracts a market rate of interest of 5%. Similar to the loan from Parent C both the principal and interest amount is repayable in two years following the sale of all completed units. The funds are used to finance the development of the land into 4 houses which is expected to cost £800k.

Assume the following:<sup>8</sup>

- No other fees are charged in respect of the bank loan and the EIR is 5%;
- £800k is drawn down on the bank loan on Day 1 and not repaid until the maturity date of December 2019 resulting in an interest charge of 5% on £800k for 2 years.

	Principal	Interest roll-up	Total repayment
<i>Parent C loan</i>	<i>£200k</i>	<i>£42k (10% for 2 years)</i>	<i>£242k</i>
<i>Bank loan facility</i>	<i>£800k</i>	<i>£82k (5% for 2 years)</i>	<i>£882k</i>
<b>Total</b>	<b>£1m</b>	<b>£124k</b>	<b>£1.12m</b>

<sup>8</sup> These facts have been assumed in order to simplify the example. In practice, additional fees are likely for example commitment and exit fees. In addition, the facility is likely to be drawn down in stages and the loan will be repaid over the life of the development as and when the residential units are sold.

Based on the above and taking into account the total GDV of £1.4m, the following loan to GDV ratio and expected profit amounts (pre and post interest) can be calculated as follows:

	Pre Interest	Post Interest
<i>Total loan to GDV ratio</i>	71% (£1m / £1.4m)	80% (£1.12m / £1.4m)
<i>Expected Profit</i>	£400k (£1.4m - £1m)	£280k (£1.4m - £1.12m)

In this example, as the loan from Parent A bears a market rate of interest, the fair value at initial recognition is equal to the transaction price of £200k.

## A. Classification

As the loan is in a 'hold to collect' business model, the key classification question is whether the loan meets the Solely Payments of Principal and Interest (SPPI) test.

In considering whether the loan is likely to meet the SPPI test, Parent C must take into consideration the fact that the loan is implicitly non-recourse in nature because Subsidiary D only holds only one single property development project. This means that Parent C must look-through to the cash flows expected to be generated from this project and determine whether the non-recourse nature of the loan restricts the contractual cash flows on the loan in a manner that is inconsistent with the SPPI test. Parent C notes the following:

- The contractual terms of the loan specifies a fixed repayment of £200k which is equal to the principal (being the fair value at initial recognition) and interest of £42k (being 10% interest compounded for 2 years). The contractual cash flows of the loan are not linked to changes in the property value;
- While the loan advanced by Parent C provided financing for 100% of the cost of the land, the total loan (i.e. Parent C loan plus bank loan) to GDV (post interest) is 80% which suggests that there are more than sufficient cash flows expected to be generated to repay the amounts of principal and interest outstanding on both loans, with a residual equity margin;
- The investment is made in accordance with Management's investment policies which specify a number of key criteria including for example, minimum yield and loan to GDV accepted. When Parent C provides funding to Subsidiary D, its aim is not to take construction risk but to provide financing for the development which will in turn generate profits on sales of developed units for the group.

Based on the above, Parent C concludes that the loan to Subsidiary D is a basic lending arrangement that **meets the SPPI test** and would be classified at **amortised cost** because it is in a **hold to collect** business model.

## **B. Impairment**

As the loan is classified at amortised cost, it is within the scope of the ECL model and subject to the **general approach**. Parent A therefore needs to determine whether the loan is in **Stage 1**, **Stage 2** or **Stage 3** and measure 12 month ECL or Lifetime ECL accordingly. Parent C should follow a similar approach to that set out in Example 1.2. which illustrated a term loan being advanced to an investment property company (taking into account that the loan advanced by Parent C is interest bearing). It should also take into account the additional considerations that are required as a result of the interest bearing senior bank debt set out in Example 1.3.

In addition, the nature of Subsidiary D's business as a property developer (rather than an investment property company) means that different factors are likely to be relevant to the analysis. Some possible examples are noted below.

### **(i) Staging Assessment**

When determining which stage the loan is in, Management will need to develop appropriate accounting policies including how default is defined and what constitutes a SICR. In this regard, Management may consider:

- Different indicators of default e.g. the loan to GDV ratio falling below a minimum threshold, costs in excess of a maximum threshold, the loss of a potential purchaser, events of default under the bank loan;
- Different indicators of SICR e.g. increases in actual and expected development costs (i.e. GDC) or decreases in sales values (i.e. GDV) since initial recognition, actual or expected covenant breaches under the bank loan.

### **(ii) Estimating the risk of a default occurring**

When estimating the risk of a default occurring, Management should consider forward-looking information about various factors that could affect the risk of a default occurring. For example, cost inflation (in cases where costs are not agreed with subcontractors upfront), expected sales values and market sentiment.

As noted previously, even if the most likely scenario is that no default will arise, the possibility of a default must be considered. In this example, this could include a scenario where the expected GDV reduces and/or cost inflation increases to a level which would not only eliminate profits but also result in the subsidiary being unable to repay the loan.

### **(iii) ECL Measurement**

Once the risk of a default occurring has been estimated, Management must estimate possible credit losses that could arise. Similar to the previous examples, it should consider different **possible recovery strategies**, for example:

- Allowing more time for Subsidiary D to execute sales resulting in late payment;
- Being forced to sell the underlying units at a discount in cases where the bank is unwilling to wait;
- Selling the development prior to completion.

## APPENDIX A – IFRS 9 – KEY REQUIREMENTS

### Classification and Measurement

Once it has been determined that a loan receivable is within the scope of IFRS 9, it must be classified into one of three categories:

- a) Amortised cost;
- b) Fair Value through Profit or Loss (FVPL); or
- c) Fair Value through Other Comprehensive Income (FVOCI) for debt.

The classification decision is based on (i) the business model within which the loan is held and (ii) whether its contractual cash flows meet the 'solely payments of principal and interest' (SPPI) test, as illustrated below:

BUSINESS MODEL		Hold to collect	Hold to collect and sell	Other
CASH FLOW TYPE	SPPI	Amortised cost	FVOCI	FVPL
	Other	FVPL	FVPL	FVPL

All related company loan receivables that are classified at amortised cost or at FVOCI are subject to the ECL model which means that impairment losses are recognised in profit or loss. Loan that are classified at FVPL are not subject to the ECL model because all fair value changes must be recognised in profit or loss. Fair values must be determined in accordance with the requirements in IFRS 13 *Fair Value Measurement*.

## Impairment – ECL model

The ECL model represents a major change from the existing incurred loss model because it is forward looking and will result in the earlier recognition of impairment losses in profit or loss. There are a number of approaches to applying the ECL model; however all related company loan receivables within its scope (i.e. loans at amortised cost or FVOCI) are subject to the General Approach.

Under this approach, an entity must determine at each reporting date whether the loan has suffered a significant increase in credit risk (SICR) or whether the loan is credit impaired. This then determines which stage the loan is in which drives both the basis of ECL recognition and interest income recognition as illustrated below:

	<i>Stage 1</i> No SICR	<i>Stage 2</i> SICR	<i>Stage 3</i> Credit Impaired
<b>Recognition of ECL</b>	12-month ECL	Lifetime ECL	
<b>Recognition of interest</b>	EIR on gross carrying amount (excluding ECL)		EIR on net carrying amount (including ECL)

When measuring ECL, entities are required, at a minimum, to consider the possibility of a credit loss and the possibility of no credit loss. However, in some cases, in order to calculate a probability weighted measure of credit losses entities will need to consider a range of different future scenarios. This is because additional credit losses that arise in a downside scenario will often be greater than the reduced losses in the equivalent upside scenario.

### ***BDO comment – Reasonable and supportable information***

*When applying the ECL model, IFRS 9 requires the incorporation of reasonable and supportable information (sources of which may be external or internal) that is available without undue cost or effort. It is important to note that this does not mean no cost or effort and therefore may involve external providers, to whom a fee is payable.*

## CONTACT

For further information about how BDO can assist you and your organisation, please get in touch with one of our key contacts listed below.

Alternatively, please visit

[www.bdointernational.com/Services/Audit/IFRS/IFRS Country Leaders](http://www.bdointernational.com/Services/Audit/IFRS/IFRS%20Country%20Leaders)

where you can find full lists of regional and country contacts.

### EUROPE

Anne Catherine Farlay	France	<a href="mailto:annecatherine.farlay@bdo.fr">annecatherine.farlay@bdo.fr</a>
Jens Freiberg	Germany	<a href="mailto:jens.freiberg@bdo.de">jens.freiberg@bdo.de</a>
Teresa Morahan	Ireland	<a href="mailto:tmorahan@bdo.ie">tmorahan@bdo.ie</a>
Ehud Greenberg	Israel	<a href="mailto:ehudg@bdo.co.il">ehudg@bdo.co.il</a>
Roald Beumer	Netherlands	<a href="mailto:roald.beumer@bdo.nl">roald.beumer@bdo.nl</a>
Reidar Jensen	Norway	<a href="mailto:reidar.jensen@bdo.no">reidar.jensen@bdo.no</a>
Maria Sukonkina	Russia	<a href="mailto:m.sukonkina@bdo.ru">m.sukonkina@bdo.ru</a>
David Cabaleiro	Spain	<a href="mailto:david.cabaleiro@bdo.es">david.cabaleiro@bdo.es</a>
René Krügel	Switzerland	<a href="mailto:rene.kruegel@bdo.ch">rene.kruegel@bdo.ch</a>
Moses Serfaty	United Kingdom	<a href="mailto:moses.serfaty@bdo.co.uk">moses.serfaty@bdo.co.uk</a>

### ASIA PACIFIC

Wayne Basford	Australia	<a href="mailto:wayne.basford@bdo.com.au">wayne.basford@bdo.com.au</a>
Aletta Boshoff	Australia	<a href="mailto:aletta.boshoff@bdo.com.au">aletta.boshoff@bdo.com.au</a>
Zheng Xian Hong	China	<a href="mailto:zheng.xianhong@bdo.com.cn">zheng.xianhong@bdo.com.cn</a>
Fanny Hsiang	Hong Kong	<a href="mailto:fannyhsiang@bdo.com.hk">fannyhsiang@bdo.com.hk</a>
Keyur Dave	India	<a href="mailto:keyurdave@bdo.in">keyurdave@bdo.in</a>
Khoon Yeow Tan	Malaysia	<a href="mailto:tanky@bdo.my">tanky@bdo.my</a>

### LATIN AMERICA

Marcelo Canetti	Argentina	<a href="mailto:mcanetti@bdoargentina.com">mcanetti@bdoargentina.com</a>
Luis Pierrend	Peru	<a href="mailto:lpierrend@bdo.com.pe">lpierrend@bdo.com.pe</a>
Ernesto Bartesaghi	Uruguay	<a href="mailto:ebartesaghi@bdo.com.uy">ebartesaghi@bdo.com.uy</a>

### NORTH AMERICA & CARIBBEAN

Armand Capisciolto	Canada	<a href="mailto:acapisciolto@bdo.ca">acapisciolto@bdo.ca</a>
Wendy Hambleton	USA	<a href="mailto:whambleton@bdo.com">whambleton@bdo.com</a>

### MIDDLE EAST

Arshad Gadit	Bahrain	<a href="mailto:arshad.gadit@bdo.bh">arshad.gadit@bdo.bh</a>
Antoine Gholam	Lebanon	<a href="mailto:agholam@bdo-lb.com">agholam@bdo-lb.com</a>

### SUB SAHARAN AFRICA

Nigel Griffith	South Africa	<a href="mailto:ngriffith@bdo.co.za">ngriffith@bdo.co.za</a>
----------------	--------------	--

This publication has been carefully prepared, but it has been written in general terms and should be seen as broad guidance only. The publication cannot be relied upon to cover specific situations and you should not act, or refrain from acting, upon the information contained therein without obtaining specific professional advice. Please contact your respective BDO member firm to discuss these matters in the context of your particular circumstances. Neither BDO IFR Advisory Limited, Brussels Worldwide Services BVBA, BDO International Limited and/or BDO member firms, nor their respective partners, employees and/or agents accept or assume any liability or duty of care for any loss arising from any action taken or not taken by anyone in reliance on the information in this publication or for any decision based on it.

Service provision within the international BDO network of independent member firms ('the BDO network') in connection with IFRS (comprising International Financial Reporting Standards, International Accounting Standards, and Interpretations developed by the IFRS Interpretations Committee and the former Standing Interpretations Committee), and other documents, as issued by the International Accounting Standards Board, is provided by BDO IFR Advisory Limited, a UK registered company limited by guarantee. Service provision within the BDO network is co-ordinated by Brussels Worldwide Services BVBA, a limited liability company incorporated in Belgium with its statutory seat in Zaventem.

Each of BDO International Limited (the governing entity of the BDO network), Brussels Worldwide Services BVBA, BDO IFR Advisory Limited and the member firms is a separate legal entity and has no liability for another such entity's acts or omissions. Nothing in the arrangements or rules of the BDO network shall constitute or imply an agency relationship or a partnership between BDO International Limited, Brussels Worldwide Services BVBA, BDO IFR Advisory Limited and/or the member firms of the BDO network.

BDO is the brand name for the BDO network and for each of the BDO member firms.

© 2018 BDO IFR Advisory Limited, a UK registered company limited by guarantee. All rights reserved.

[www.bdo.global](http://www.bdo.global)

1808-04