# CHAPTER 14
# FINANCIAL INSTRUMENTS

## Quick test

## Question 1

(a) The redeemable preference shares require regular distributions to the holders, but more importantly have the debt characteristic of being redeemable. Therefore according to IAS 32 they should be classified as debt (a financial liability).

(b) According to IFRS 2 *Share-based Payment* the grant of share options must be recognised in equity. Share options are an alternative to cash as remuneration, so an expense should be measured in profit or loss with a credit to equity.

## Question 2

(a) A guarantee to replace or repair goods sold by a business in the normal course of business does not fall within the definition of a financial liability, so it should be dealt with under IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*.

(b) A firm commitment (order) to purchase a specific quantity of raw sugar beet for use in manufacturing is not a financial liability. This is a normal operating purchase which is not recognised until delivery when there is a contractual obligation on the part of the purchaser to pay for the raw sugar beet.

(c) A forward contract such as this falls within the definition of a derivative, so in principle it does fall within IFRS 9. The only exception would be if the contract is for the entity's expected usage of raw sugar beet in its business (which is outside the scope of IFRS 39). This would be accounted for as a normal purchase on delivery, as (b).

## Question 3

In accordance with IAS 32 *Financial Instruments: Presentation* convertible preference shares are a compound financial instrument and have to be split into debt and equity components.

Splitting the liability and equity components on initial recognition

| | *Payments* | *Discount factor** | *Present value* |
|---|---|---|---|
| | £ | | £ |
| 20X2 | 30,000 | 0.9259 | 27,777 |
| 20X3 | 30,000 | 0.8573 | 25,719 |
| 20X4 | 30,000 | 0.7938 | 23,814 |
| 20X5 | 30,000 | 0.7350 | 22,050 |
| 20X6 | 530,000 | 0.6806 | 360,718 |
| Liability component | | | 460,078 |

| | |
|---|---|
| Equity component (Bal fig) | 19,922 |
| Total (£500,000 less £20,000) | 480,000 |

* Using 8% interest rate on similar preference shares without the conversion option

Calculation of liability carrying amount at year end:

| | £ |
|---|---|
| Liability at 1 January 20X2 | 460,078 |
| Interest expense (8% x 460,078) | 36,806 |
| Cash paid | (30,000) |
| Liability at 31 December 20X2 | 466,884 |

**Extracts from financial statements for year ended 31 December 20X2**

| | £ |
|---|---|
| **Statement of comprehensive income** | |
| Finance cost | 36,906 |
| | |
| **Statement of financial position** | |
| Non-current liabilities | |
| Borrowings | 466,884 |
| Equity | |
| Equity element of convertible debt | 19,922 |
| | |
| **Statement of cash flows** | |
| Cash flows from operating activities | |
| Interest paid | (30,000) |
| Cash flows from financing activities | |
| Proceeds from issue of convertible redeemable preference shares | 480,000 |

## Question 4

Beresford is receiving cash that it is obliged to repay, so this financial instrument is classified as a financial liability. Given that the liability is not being held for trading purposes nor that the option to have it classified as fair value through profit or loss (FVTPL) has been made, the liability will be classified and accounted for at amortised cost and initially measured at fair value less the transaction costs. The bonds are being issued at par, so there is neither a premium nor discount on issue. Thus Beresford initially receives £100,000. There are no transaction costs and, if there were, they would be deducted. Thus, the liability is initially recognised at £100,000.

In applying amortised cost, the finance cost to be charged to the statement of profit or loss is calculated by applying the effective rate of interest of 7% to the opening balance of the liability each year. The finance cost will increase the liability. The bond is a zero coupon bond meaning that no actual interest is paid during the period of the bond. Even though no interest is paid there will still be a finance cost in borrowing this money. The premium paid on redemption of £14,490 represents the finance cost. The finance cost is

recognised as an expense in the statement of profit or loss over the period of the loan. It would be inappropriate to spread the cost evenly as this would be ignoring the compound nature of finance costs, thus the effective rate of interest is given. In the final year there is a single cash payment that wholly discharges the obligation.

The workings for the liability being accounted for at amortised cost can be summarised as follows:

| | **Opening balance** | **Plus statement of profit or loss finance charge @7%** | **Cash paid** | **Closing balance, i.e. liability on statement of financial position** |
|---|---|---|---|---|
| Year 1 | £100,000 | £7,000 | (Nil) | £107,000 |
| Year 2 | £107,000 | £7,490 | £114,490 | Nil |

**Develop your understanding**

**Question 5**

Note – the correct redemption period is after four years (not three as stated in the question).

Squab plc is receiving cash that it is obliged to repay, so this financial instrument is classified as a financial liability. There is no indication that the loan notes are held for trading, and no election has been made to measure the liability at FVTPL, so it will be classified and accounted for at amortised cost. It is initially measured at the fair value of consideration received less the transaction costs:

| | | £ |
|---|---|---|
| Cash received – nominal value less discount on issue | (200,000 x 90%) | 180,000 |
| Less: transaction costs | | (10,000) |
| Initial measurement of financial liability | | 170,000 |

In applying amortised cost, the finance cost to be charged to the statement of profit or loss is calculated by applying the effective rate of interest of 12% to the opening balance of the liability each year. The finance cost will increase the liability. The actual cash is paid at the end of each reporting period and is calculated by applying the coupon rate of 6% to the nominal value of the liability, i.e. to £200,000. The annual cash payment of £12,000 (6% x 200,000 = £12,000) will reduce the liability.
In the final year there is an additional cash payment of £210,146 (the nominal value of £200,000 plus the premium of £10,146), which extinguishes the remaining balance of the liability.

The workings for the liability being accounted for at amortised cost are summarised as follows:

| | Opening balance | Statement of profit or loss finance charge @12% on opening balance | Cash paid | Closing balance |
|---|---|---|---|---|
| 20X0 | 170,000 | 20,400 | (12,000) | 178,400 |
| 20X1 | 178,400 | 21,408 | (12,000) | 187,808 |
| 20X2 | 187,808 | 22,537 | (12,000) | 198,345 |
| 20X3 | 198,345 | 23,801 | (12,000) | Nil |
| | | | (210,146) | |
| Total finance costs | | 88,146 | | |

Because the cash paid each year is less than the finance cost, each year the outstanding liability grows, and for this reason the finance cost increases year on year as well. The total finance cost charged to income over the period of the loan comprises not only the interest paid, but also the discount on the issue, the premium on redemption and the transaction costs.

| | | |
|---|---|---|
| Interest paid | (4 years x £12,000) | 48,000 |
| Discount on issue | (10% x £200,000) | 20,000 |
| Premium on redemption | | 10,146 |
| Issue costs | | 10,000 |
| Total finance costs | | £88,146 |

**Question 6**

Lysander plc has a contractual right to receive cash, so this is a financial asset. As the company intends to hold this type of stock until maturity, an assumption can be made that the business model is to collect contractual cash flows. The cash flow characteristics of the instrument are such that the company will receive payments of interest and the final principle on specified dates. This asset will therefore be classified as measured at amortised cost.

Assume transaction costs are zero.

On 1 January 20X4 loan stock is initially measured at £234,825

Subsequently:

| Year | Balance at start of year | Interest @ 7.5% | Cash received (6% x 250,000) | Balance at end of year |
|---|---|---|---|---|
| | £ | £ | £ | £ |
| 20X4 | 234,825 | 17,612 | (15,000) | 237,437 |
| 20X5 | 237,437 | 17,808 | (15,000) | 240,245 |
| 20X6 | 240,245 | 18,018 | (15,000) | 243,263 |
| 20X7 | 243,263 | 18,245 | (15,000) | 246,508 |
| 20X8 | 246,508 | 18,492* | (265,000) | - |

* Includes additional £4 rounding difference

Each year the interest will be included in finance income in the statement of profit or loss.

The balances at the end of the year will be the figures included in the statement of financial position.

## Question 7

**20X1**
Dyke plc has received cash that it is obliged to repay so this financial instrument is classified as a financial liability. The liability is classified at FVTPL so, presumably, it is being held for trading purposes or the option to have it classified as FVTPL has been made.

Initial measurement is at the fair value of £300,000 received and, although there are no transaction costs in this example, these would be expensed rather than taken into account in arriving at the initial measurement.

With an effective rate of interest and the coupon rate both being 5%, at the end of the accounting period the carrying value of the liability will still be £300,000. This is because the finance cost that will increase the liability is £15,000 (5% x 300,000), and the cash paid reducing the liability is also £15,000.

As the liability has been classified as FVTPL this carrying value at 31 December 20X1 now has to be revalued. The fair value of the liability at this date will be the present value (using the new rate of interest of 6%) of the next remaining two years' payments:

| | Cash flow | 6% discount factor | PV of future cash flow |
|---|---|---|---|
| Payment due 31 December 20X2 (interest only) | 15,000 | 0.943 | 14,145 |
| Payment due 31 December 20X3 (final interest payment plus repayment of £300,000) | 315,000 | 0.890 | 280,350 |

| | |
|---|---|
| Fair value of liability at 31 December 20X1 | 294,495 |

As Dyke plc has classified this liability at FVTPL, it is revalued to £294,495. The reduction of £5,505 in the carrying value of the liability from £300,000 is regarded as a profit, and this is recognised in the statement of profit or loss.

If, however, the higher discount rate used was not because general interest rates had risen, but because the credit risk of the entity had risen, then the gain is recognised as other comprehensive income.

This can all be summarised as follows:

| | **Opening balance** | **Statement of profit or loss finance charge @5%** | **Less cash paid** | **Carrying value of liability at year end** | **Fair value of liability at year end** | **Gain to profit or loss / other comprehensive income** |
|---|---|---|---|---|---|---|
| 1/1/20X1 | 300,000 | 15,000 | (15,000) | 300,000 | 294,495 | 5,505 |

Taking the example further – accounting for the financial instrument in 20X2 and 20X3:

**20X2**
The finance charge in the statement of profit or loss for the year ending 31 December 20X2 will be 6% x 294,495 = £17,670. With the cash payment of £15,000 being made, the carrying value of the liability will be £297,165 (294,450 + 17,670 - 15,000) at the year end.

Suppose at 31 December 20X2 the market rate of interest has fallen to 4%, the fair value of the liability at the reporting date will be the present value of the last repayment due of £315,000 in one year's time discounted at 4%, i.e. 315,000 x 0.962 = £303,030. As the fair value of the liability exceeds the carrying value, a loss of £5,865 (i.e. 303,030 - 297,165) arises which is recognised in the statement of profit or loss.

**20X3**
In the year ending 31 December 20X3 the finance cost to the statement of profit or loss will be 4% x £303,030 = £12,121, increasing the liability to £315,151 before the final cash payment of £315,000 is made which extinguishes the liability (note – rounding difference of £151 which would reduce the final finance cost).

Note, when interest rates rise, the fair value of bonds fall and when interest rates fall then the fair value of bonds rises.

## Question 8

The objective of the business model is achieved by both collecting contractual cash flows and selling financial assets. Bishop plc will make decisions on an ongoing basis about whether collecting contractual cash flows or selling financial assets will maximise the return on the portfolio until the need arises for the invested cash.

In contrast, consider an entity that anticipates a cash outflow in five years to fund capital expenditure and invests excess cash in short-term financial assets. When the investments mature, the entity reinvests the cash in new short-term financial assets. The entity maintains this strategy until the funds are needed, at which time the entity uses the proceeds from the maturing financial assets to fund the capital expenditure. Only sales that are insignificant in value occur before maturity (unless there is an increase in credit risk). The objective of this contrasting business model is to hold financial assets to collect contractual cash flows.

## Question 9

**(a) Purchase of equity shares in a listed company**

Equity shares held for trading should be classified as an asset held at fair value through profit or loss. It is initially measured at fair value of consideration, in this case £1.75 million (500,000 shares x £3.50). The transaction costs of £15,000 should not be included in the cost of the investment and should be written off to profit or loss as an expense.

The investment is subsequently measured at 30 September 20X3 at fair value of £1.825 million (500,000 shares x £3.65) with the gain of £75,000 (£1.825m – £1.75m) recorded in profit or loss.

The following adjustments are therefore required:

| | | | |
|---|---|---|---|
| Dr | Administrative expenses | £15,000 | |
| Cr | Financial asset | | £15,000 |

Correction in respect of transaction costs

| | | | |
|---|---|---|---|
| Dr | Financial asset | £75,000 | |
| Cr | Gain on investment (P/L) | | £75,000 |

Gain on the investment being credited to the statement of profit or loss

**(b) Purchase of a bond**

Tucker's business model for financial assets appears to be one of collecting contractual cash flows and holding them to maturity. The bond purchased by Tucker will yield interest and the principle on specified dates. So on initial recognition it should be classified as measured at amortised cost.

It is initially recorded at the net cost of £4.5 million (90% x £5 million) and then subsequently measured at amortised cost using the effective interest rate of 10.26%.

Only the interest received of £250,000 (5% x £5 million) has been recorded in the statement of profit or loss. The following adjustment is therefore required to bring the finance income up to the effective interest rate and to correct the carrying amount of the asset (see working):

| | | | |
|---|---|---|---|
| Dr | Financial asset | £211,700 | |
| Cr | Finance income | | £211,700 |

Additional finance income to be recognised in profit or loss

**Working**

| | | £000 |
|---|---|---|
| 1 October 20X2 Acquisition price | (£5m x 90%) | 4,500 |
| Finance income | (£4.5m x 10.26%) | 461.7 |
| Interest received | (£5m x 5%) | (250) |
| 30 September 20X3 Balance | | 4,711.7 |

The financial asset will be held at £4,711,700 and a further £211,700 (£461,700 – £250,000) will be credited to profit or loss.

## Take it further

## Question 10

This is a convertible instrument and is considered part liability and part equity. IAS 32 requires that each part is measured separately on initial recognition. The liability element is measured by estimating the present value of the future cash flows from the instrument (interest and potential redemption) using a discount rate equivalent to the market rate of interest for a similar instrument with no conversion terms. The equity element is then the balance.

| | £ |
|---|---|
| PV of the principal amount £8m at 7% redeemable in 5 yrs (£8m x 0.713) | 5,704,000 |
| PV of the interest annuity at 7% for 5 yrs (5% x £8m) x 4.100 | 1,640,000 |
| Total value of financial liability element | 7,344,000 |
| Equity element (balancing figure) | 656,000 |
| Total proceeds raised | 8,000,000 |

The equity element will not be remeasured, however the liability element will be subsequently remeasured at amortised cost recognising the finance cost using the effective interest rate of 7% and deducting the coupon interest paid. The financial statements will include:

**Statement of profit or loss and other comprehensive income for the year ended 31 December 20X6**

| | | £ |
|---|---|---|
| Finance cost | (7% x 9,180,000) | 514,080 |

**Statement of financial position at 31 December 20X6**

| | | £ |
|---|---|---|
| Equity | | 656,000 |
| Financial liability | (see working) | 7,458,080 |

**Working**

| | | £ |
|---|---|---|
| Liability recognised 1.1.X6 | | 7,344,000 |
| Finance cost | (7% x 7,344,000) | 514,080 |
| Interest paid | (5% x 8,000,000) | (400,000) |
| At 31.12.X6 | | 7,458,080 |

## Question 11

The shares are initially measured at fair value (the purchase price) plus transaction costs:

| | | £ |
|---|---|---|
| Purchase price | (80,000 x £4.54) | 363,200 |
| Transaction costs | (1% x 363,200) | 3,632 |
| | | 366,832 |

The investment is derecognised on 31 December 20X7. The fact that the same quantity of shares are repurchased on the next trading day does not prevent derecognition as the company has no obligation to repurchase them, therefore the risks and rewards of ownership are not retained.

Immediately prior to derecognition a loss is recognised in other comprehensive income as the company elected to hold the investment at fair value through in other comprehensive income and the investment must be remeasured to fair value at the date of derecognition (IFRS 9 para. 3.2.12a).

| | | £ |
|---|---|---|
| Fair value at 31 December 20X7 | (80,000 x £4.22 bid price) | 337,600 |
| Carrying amount of investment | | 366,832 |
| Loss | | (29,232) |

The transaction costs on sale of £3,376 (1% x £337,600) are recognised in profit and loss.

## Question 12

As permitted by IFRS 9, Micawber measures the loss allowance for trade receivables at an amount equal to lifetime expected credit losses. The lifetime expected credit losses are calculated by applying the provision matrix default rates to the aged receivables balances:

| | **Gross carrying amount** | **Default rate** | **Lifetime expected credit loss allowance** |
|---|---|---|---|
| | £ | | £ |
| Current | 15,000,000 | 0.3% | 45,000 |
| 1–30 days past due | 7,500,000 | 1.6% | 120,000 |
| 31–60 days past due | 4,000,000 | 3.6% | 144,000 |
| 61–90 days past due | 2,500,000 | 6.6% | 165,000 |
| More than 90 days past due | 1,000,000 | 10.6% | 106,000 |
| | 30,000,000 | | 580,000 |

Provision for expected credit losses set off against receivables at 31 December 20X1 £580,000.

## Question 13

| | | £000 | £000 |
|---|---|---|---|
| On 15 December 20X0: | | | |
| Dr | Financial asset – FVOCI | 1,000 | |
| Cr | Cash | | 1,000 |
| To recognise the debt instrument measured at its fair value | | | |
| | | | |
| On 31 December 20X0: | | | |
| Dr | Impairment loss (profit or loss) | 30 | |
| Cr | Other comprehensive income | | 20 |
| | Financial asset – FVOCI | | 50 |
| To recognise 12-month expected credit losses and other fair value changes on the debt instrument | | | |

Note – disclosure would be provided about the accumulated impairment amount of £30,000.

| | | | |
|---|---|---|---|
| On 1 January 20X1: | | | |
| Dr | Cash | 950 | |
| Cr | Financial asset – FVOCI | | 950 |
| Dr | Loss (profit or loss) | 20 | |
| Cr | Other comprehensive income | | 20 |
| To derecognise the fair value through other comprehensive income asset and recycle amounts accumulated in other comprehensive income to profit or loss | | | |