Intermediate Financial Reporting 2 Primer
# Table of Contents

**INTRODUCTION** .................................................................................................................. 6

**PART 1** .................................................................................................................................. 6

- Liabilities ................................................................................................................................ 6
  - Recognition ............................................................................................................................... 6
  - Types of liabilities .................................................................................................................. 6
- Financial liabilities at FVPL — IFRS 9 ................................................................................. 7
- Other financial liabilities — IFRS 9 ....................................................................................... 7
  - Example .................................................................................................................................. 7
- Debt denominated in a foreign currency .................................................................................. 8
  - Example .................................................................................................................................. 8
- Bonds issued at a discount or premium .................................................................................... 9
  - Example .................................................................................................................................. 10
- Financial liabilities — ASPE .................................................................................................... 12
- Non-financial liabilities — IAS 37 .......................................................................................... 12
- Customer loyalty programs ...................................................................................................... 12
  - Example .................................................................................................................................. 12
- Decommissioning and site restoration obligations .................................................................... 13
  - Example .................................................................................................................................. 13
- Contingencies ............................................................................................................................ 14
  - Example .................................................................................................................................. 15
- Practice questions ..................................................................................................................... 15

**PART 2** .................................................................................................................................... 21

- Governing standards ................................................................................................................ 21
- Contributed capital .................................................................................................................... 21
- Issuance of shares ...................................................................................................................... 21
  - Example .................................................................................................................................. 21
- Shares sold on a subscription basis ........................................................................................... 22
Accounting changes ........................................................................................................... 58
  Determining the nature of the accounting change .......................................................... 58
  Accounting for changes in accounting policy ............................................................... 59
  Accounting for changes in estimates ........................................................................... 61
  Accounting for prior-period errors ............................................................................. 62
Practice questions ......................................................................................................... 63
PART 6 .................................................................................................................................. 67
  Sections and methods — Statement of cash flows ......................................................... 67
  Specific transactions and the SCF .................................................................................. 67
    Contingent liabilities .................................................................................................... 67
    Accrued provisions ........................................................................................................ 67
    Decommissioning obligations ..................................................................................... 67
    Deferred tax expense .................................................................................................. 68
    Leases ........................................................................................................................... 68
    Pensions ....................................................................................................................... 68
    Example ....................................................................................................................... 68
  Financial statement users ............................................................................................. 72
  Interim financial reporting ............................................................................................. 72
  Management discussion and analysis .......................................................................... 72
  Financial statement analysis .......................................................................................... 73
    Profitability .................................................................................................................. 73
    Liquidity ....................................................................................................................... 74
    Asset management ...................................................................................................... 74
    Solvency ....................................................................................................................... 75
Practice questions ......................................................................................................... 76
Intermediate Financial Reporting 2 Primer

INTRODUCTION
Intermediate Financial Reporting 2 introduces a number of complicated issues on the liabilities and equity side of the statement of financial position. These issues include convertible bonds, leases, pensions, employee stock ownership plans and deferred taxes. You will learn how to calculate earnings per share (both basic and diluted) and how to deal with accounting changes and prior-period errors. Finally, you will touch on financial statement analysis, statements of cash flows and management discussion and analysis.

PART 1
This section discusses liabilities. IFRS 9 Financial Instruments and IAS 37 Provisions, Contingent Liabilities and Contingent Assets are the standards under which most liabilities fall. However, there are other liabilities (such as income tax liabilities, leases and pensions) that are governed by standards other than the ones above.

Liabilities
For an obligation to meet the definition of a liability, the obligation must (1) arise from a past event, (2) be a present obligation and (3) cause an expected outflow of economic resources.

Recognition
When all three criteria are met, a liability is recognized in the financial statements. If only two criteria are met, then the item may be disclosed in the notes, but it is not required that a liability be recognized.

Note that the amount of the liability is not required to be known with certainty, nor does the liability have to be 100% certain to occur. Instead, the amount of a provision is accrued based on a reliable estimate that takes into account the likelihood of occurrence. These types of liabilities require professional judgment.

Types of liabilities
Liabilities are classified as either financial liabilities or non-financial liabilities. A financial liability arises from a contract; if a contractual obligation does not exist, it is classified as a non-
financial liability. A financial liability also requires the delivery of cash or another financial asset to another entity to satisfy the obligation.

Financial liabilities can be classified as either fair value through profit or loss (FVPL) or at amortized cost. The following table summarizes the treatment for each category:

<table>
<thead>
<tr>
<th>Classification of liability</th>
<th>Initial measurement</th>
<th>Subsequent measurement</th>
<th>Gains and losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>FVPL</td>
<td>Fair value*</td>
<td>Fair value</td>
<td>SCI**</td>
</tr>
<tr>
<td>Amortized cost</td>
<td>Fair value less transaction costs</td>
<td>Amortized cost</td>
<td>N/A SCI**</td>
</tr>
</tbody>
</table>

* Transaction costs are immediately expensed  
** Statement of comprehensive income (profit or loss)

Financial liabilities at FVPL — IFRS 9

When using FVPL, any transaction costs are immediately expensed, and the liability is revalued to fair value at the end of every reporting period. The loss or gain that arises from the revaluation is recorded as an unrealized gain/loss in net income on the statement of comprehensive income. The interest expense for the year reflects the cash paid or payable for the same period; the effective interest rate method is not used.

Other financial liabilities — IFRS 9

When liabilities are classified at amortized cost, their initial and subsequent measurement is at cost less any applicable transaction costs. The difference between face value and opening net book value (NBV) is amortized over the life of the note. ASPE allows the use of either the effective interest method or the straight-line method for amortization; however, IFRS requires the use of the effective interest method.

In this and the following sections, you will need to use your financial calculator. There is a refresher on using your calculator to determine present value and related amounts on the website.

Example

On January 1, 20X5, Bloch Corp. issued a $200,000, 5%, two-year note. Interest will be paid annually, and issuance costs on the note were $3,000. Bloch is a public corporation.

Required:

a) Calculate the effective interest rate for use under IFRS (necessary when the face value and NBV are not the same and no effective interest rate is given).

b) Prepare the journal entry to record the issuance of the note.
c) Prepare the journal entry to record interest expense at December 31, 20X5.

**Solution**

a) Effective interest rate = \( I = 5.816\% \)

\[
PV = -197,000; FV = 200,000; N = 2; PMT = 10,000 \times (0.05 \times 200,000); CPT I/Y
\]

b) January 1, 20X5

\[
\begin{align*}
\text{DR} & \quad \text{Cash} & \quad 197,000 \\
\text{CR} & \quad \text{Notes payable} & \quad 197,000
\end{align*}
\]

*To record the issuance of two-year note payable.*

c) December 31, 20X5

\[
\begin{align*}
\text{DR} & \quad \text{Interest expense*} & \quad 11,458 \\
\text{CR} & \quad \text{Notes payable} & \quad 1,458 \\
\text{CR} & \quad \text{Cash**} & \quad 10,000
\end{align*}
\]

\* \( 197,000 \times 5.816\% = 11,458 \)

\** \( 200,000 \times 5\% = 10,000 \)

**Debt denominated in a foreign currency**

When a Canadian company borrows money or purchases goods/services from a foreign company, the transactions must be translated into Canadian dollars. The liability must be translated at the exchange rate on the date of initial recognition, then revalued at period-end and before settlement using the exchange rates in effect on each date. Gains/losses from revaluation are recognized in profit/loss on the comprehensive income statement. Interest expense is translated using the average exchange rate for the period. An exchange gain or loss will be recorded if the exchange rate on the date the interest is paid is different from the average exchange rate for the period.

**Example**

On March 15, 20X5, Oil and Gas Co. ordered merchandise from a supplier in Europe for €22,000, FOB destination. The merchandise was delivered on April 1, with payment in full to be made in 60 days from date of delivery. Oil and Gas Co.’s year end is April 30.

<table>
<thead>
<tr>
<th>Date</th>
<th>Exchange rate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>March 15, 20X5</td>
<td>€1 = C$1.48</td>
<td></td>
</tr>
<tr>
<td>April 1, 20X5</td>
<td>€1 = C$1.49</td>
<td></td>
</tr>
<tr>
<td>April 30, 20X5</td>
<td>€1 = C$1.51</td>
<td></td>
</tr>
<tr>
<td>May 31, 20X5</td>
<td>€1 = C$1.46</td>
<td></td>
</tr>
</tbody>
</table>
Required:

Record the journal entries in Canadian dollars to illustrate the following:

a) The company’s purchase of merchandise
b) Year-end adjustment
c) Subsequent payment

Solution

a) On March 15, 20X5 no transaction is recorded.

April 1, 20X5
DR Inventory 32,780
CR Accounts payable 32,780
To record the purchase of inventory (€22,000 × 1.49).

b) April 30, 20X5

DR Foreign exchange loss 440
CR Accounts payable 440
To adjust the value to year end [€22,000 × (1.51 – 1.49)].

c) May 31, 20X5
First adjust A/P to the current rate:

DR Accounts payable 1,100
CR Foreign exchange gain 1,100
To adjust euro payable to current value (€22,000 × 1.51 – 1.46).

Then record settlement:
Balance in accounts payable = 32,780 + 440 – 1,100 = 32,120

DR Accounts payable 32,120
CR Cash 32,120
To pay euro payable (€22,000 × 1.46).

Bonds issued at a discount or premium

The difference between the fair value (present value) at issuance and the face value of a bond is the premium or discount. The issue price and face value will be different if the stated interest rate and the effective market interest rate are different. When the market rate is greater than the stated rate, a discount will occur; when the market rate is less than the stated rate, a premium will result.

The carrying value of a bond differs from the issue price of the bonds because of the costs incurred when issuing bonds because IFRS requires bonds to be carried at the issue price less issue costs. Bond issue costs therefore increase the bond discount or reduce the bond premium that occurred due to the difference between the stated and market interest rates.
When the issue costs are deducted, the effective cost of borrowing changes and the new effective interest rate must be calculated. The new premium or discount is amortized over the life of the bond using the effective interest rate method, which provides a constant interest cost in relation to the bond carrying value. Straight-line amortization is allowable if not materially different.

**Example**

Wilson Inc. issued $3,200,000 of 6%, five-year bonds on May 1, 20X4. The market interest at the time of issue was 5%. Interest is paid annually. The company has a December 31 year end. Issue costs of $40,000 were incurred.

**Required:**

a) Determine the net sales proceeds received from the bonds.
b) Complete a bond amortization spreadsheet using the format that follows:

c) Prepare the journal entries on December 31, 20X4, and April 30, 20X5.

**Solution**

a) Net sale proceeds = Issue price – Issue costs = $3,338,543 – $40,000 = $3,298,543

Issue price of bonds:

- FV = 3,200,000
- I/Y = 5
- N = 5
- PMT = 192,000 (3,200,000 × 0.06)

\[
PV = \frac{-3,298,543}{1.05^5}
\]

b) It is necessary to calculate the effective interest rate based on the new carrying value.

\[
PV = -3,298,543; \ PMT = 192,000; \ FV = 3,200,000; \ N = 5; \ CPT \ I/Y
\]

\[
I/Y = 5.28314\%
\]
1. Interest expense = Effective interest rate × Beginning of the year amortized cost
2. Interest paid = Stated rate × Face value of bond
3. Premium amortized = Interest paid – Interest expense
4. Amortized cost = Beginning of the year amortized cost – Premium amortized

c) December 31, 20X4

<table>
<thead>
<tr>
<th>Date</th>
<th>Interest expense</th>
<th>Interest paid</th>
<th>Premium amortized</th>
<th>Amortized cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 1, 20X4</td>
<td></td>
<td></td>
<td></td>
<td>$3,298,543</td>
</tr>
<tr>
<td>April 30, 20X5</td>
<td>$174,267</td>
<td>$192,000</td>
<td>$17,733</td>
<td>$3,280,810</td>
</tr>
<tr>
<td>April 30, 20X6</td>
<td>$173,330</td>
<td>$192,000</td>
<td>$18,670</td>
<td>$3,262,140</td>
</tr>
<tr>
<td>April 30, 20X7</td>
<td>$172,343</td>
<td>$192,000</td>
<td>$19,657</td>
<td>$3,242,483</td>
</tr>
<tr>
<td>April 30, 20X8</td>
<td>$171,305</td>
<td>$192,000</td>
<td>$20,695</td>
<td>$3,221,788</td>
</tr>
<tr>
<td>April 30, 20X9</td>
<td>$170,212</td>
<td>$192,000</td>
<td>$21,788</td>
<td>$3,200,000</td>
</tr>
</tbody>
</table>

Expense: 174,267× 8/12 = 116,178
Bonds payable (amortization of premium): 17,733 × 8/12 = 11,822
Interest payable: 192,000 × 8/12 = 128,000

April 30, 20X5

<table>
<thead>
<tr>
<th>Date</th>
<th>Interest payable</th>
<th>Interest expense</th>
<th>Bonds payable</th>
<th>CR Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>128,000</td>
<td>58,089</td>
<td>5,911</td>
<td>192,000</td>
</tr>
</tbody>
</table>

To record the payment of interest on April 30 20X5.

Interest expense: 174,267× 4/12 = 58,089
Bonds payable (amortization of premium): 17,733 × 4/12 = 5,911

Note that if the bond paid interest semi-annually, then there would be two periods per year on the amortization schedule (double the number of periods) and both interest rates would be halved in the calculations. The example above was a bond sold at a premium, the interest paid was greater than the interest expense and the NBV of the bond decreases to face value over the life of the bond. However, if it had been sold at a discount, then the interest expense would be greater than the interest paid and the NBV of the bond would increase to face value. Also, because the bond interest payment date does not coincide with the date the financial statements are prepared, the interest expense is pro-rated within the period on a straight-line basis.
Financial liabilities — ASPE

Disclosure requirements for IFRS are more rigorous than those for ASPE, given the public nature of the firms using IFRS. ASPE also allows the use of straight-line amortization of bond premiums or discounts.

Non-financial liabilities — IAS 37

A non-financial liability is an obligation that meets all the criteria of a liability but is non-contractual and/or will be settled other than by paying cash or delivering another financial asset.

A provision is a liability that arises from a probable loss/expense (likelihood greater than 50%) and for which the amount can be reasonably estimated, although there is uncertainty about the exact amount of the obligation or the timing of the payment. Provisions are typically measured at the most likely outcome if a single obligation such as a lawsuit exists, and at expected value if a large population of possible obligations exists, such as a warranty obligation when many units are sold.

Customer loyalty programs

When companies offer reward points for purchases, they cannot recognize the full amount of the revenue at the point of sale. Instead, they must allocate the proceeds and recognize revenue for the good or service sold as well as the deferred revenue equal to the expected value of the fair value of the good/service which must be provided when the rewards are redeemed. As the points are redeemed, the deferred revenue is recognized.

Example

A retailer awards customers two rewards points for every dollar spent. Customers can redeem 10,000 points for a spa gift basket that retails for $22 and costs $10. It is estimated that 60% of points will be redeemed. During 20X5, the retailer made sales of $3,200,000 and 640,000 points were redeemed.

Required:

a) Prepare journal entries to record all the transactions relating to the rewards program for 20X5.

b) Determine the balance in deferred revenue at the end of 20X5, assuming that the balance at the beginning of the year was 0.

Solution

a) DR Cash/accounts receivable 3,200,000
    CR Revenue 3,191,552
    CR Deferred revenue 8,448

To record sales.
Deferred revenue: \[ ([3,200,000 \times 2 / 10,000] \times 22 \times 0.60) = 8,448 \]
Revenue: \( (3,200,000 - 8,448) = 3,191,552 \)

DR Deferred revenue 1,408
CR Revenue 1,408

To record the redemption of points.

Deferred revenue: \( (640,000 / 10,000 \times 22) = 1,408 \)

DR Cost of goods sold 640
CR Inventory 640

To record the cost and adjust inventory for the redemption of points.

Cost of goods sold: \( (640,000 / 10,000 \times 10) \)

b) The balance in deferred revenue is:

| Deferred revenue | $1,408 | $8,448 | $7,040 |

Decommissioning and site restoration obligations

The costs of decommissioning and restoring a site to meet an entity’s constructive or legal obligations are provided for in accordance with IAS 37. A non-financial liability must be recognized for the estimated future obligation. Because these costs will usually occur years in the future, they must be discounted by an appropriate interest rate that reflects the risk of the obligation. The underlying asset (including the decommissioning obligation value) must be depreciated yearly, and yearly interest is expensed on the obligation.

**Example**

An oil platform is completed for $20,000,000 cash and put into use on January 1, 20X5, by Highland Corp. At the end of its useful life of 10 years, the platform must be dismantled and removed for an approximate cost of $8,000,000. The discount rate for the company is 6%.

**Required:**

a) Calculate the present value of the dismantling costs.

b) Complete the entry to record the platform as well as the decommissioning provision on January 1, 20X5.

c) Record the entries for amortization and interest expense at December 31, 20X5.
Solution

a) PV = $-4,467,158 (rounded)
   FV = 8,000,000; I = 6; N = 10; PMT = 0; CPT PV

b) DR Platform 24,467,158
    CR Cash 20,000,000
    CR Decommissioning obligation 4,467,158
   To record the oil platform put into commission plus decommissioning costs.

c) DR Depreciation expense — platform 2,446,716
    CR Accumulated depreciation — platform 2,446,716
   To record the amortization of the platform (24,467,158 / 10) = 2,446,716, rounded.
    DR Interest expense 268,029
    CR Decommissioning obligation 268,029
   To record the interest expense on the decommissioning liability (4,467,158 × 6%, rounded).

Contingencies

IAS 37 states that a contingent liability is:

(a) a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity; or

(b) a present obligation that arises from past events but is not recognized because:
   (i) it is not probable [defined as <50%] that an outflow of resources embodying economic benefits will be required to settle the obligation; or
   (ii) the amount of the obligation cannot be measured with sufficient reliability.

Contingent liabilities may not recognized on the statement of financial position because of the above issues. When a contingent liability arises from a past event and the probability of an outflow of resources is likely (better than 50%) then a provision is recorded.

To measuring the provision:

- For a single obligation, if there is a range of possible outcomes and each outcome is equally probable, the most likely outcome is the midpoint of the range. For example, if the range is between $200 and $400, the most likely outcome is $300 [($200 + $400) / 2].
- For a single obligation, if the possible outcomes are not equally probable, use the most likely outcome to measure the provision. For example, if it is 75% likely that the liability will be $100,000 and 25% that it will be $250,000 then record $100,000.
- For multiple obligations, use the expected value method to measure the provision.
**Example**

Scenario 1: During 20X5, Wong Co. entered into a legal dispute with Munch Inc. According to legal counsel, it is 80% likely that Wong will lose, with estimated fines of $1,000,000 (40%) or $1,500,000 (60%).

Scenario 2: ABC Co. has launched a new product in 20X5, and legal counsel has determined a 20% chance of a lawsuit occurring due to patent infringement. If the lawsuit goes ahead, and ABC loses, there is 30% chance the plaintiff will be awarded $200,000, a 25% chance of $500,000 and a 45% chance that ABC will have to pay out $900,000. These are material amounts for ABC.

**Required:**

For each scenario, describe the appropriate accounting treatment for the company that is being sued. Prepare any journal entries that may be required.

**Solution**

Scenario 1: Because it is likely (>50%) that Wong will lose, a provision must be recognized based on the most likely value (60%).

\[
\begin{align*}
&\text{DR Lawsuit expense} & \text{CR Provision for lawsuit} \\
&1,500,000 & 1,500,000 \\
\end{align*}
\]

Scenario 2: Because it is unlikely that the lawsuit will go forward (<50%), no provision should be recognized. However, because it is a material amount, and there is a possibility of it occurring (>10%), it should be disclosed in the notes to the financial statements.

**Practice questions**

1. Multiple-choice questions:
   a. On January 1, Year 1, RJC Ltd. started to use its new pipelines that the company spent $1,000,000 to build. At that time, RJC estimated that the pipelines will be used for 25 years and retired at the end of 25 years. When the assets are retired, RJC is obligated to spend $200,000 to restore the sites to meet environmental regulations. On January 1, Year 16, the environmental regulations changed, and it was estimated that an additional $100,000 will be required to restore the sites at retirement. RJC uses IFRS. The interest rate is 6%.

   What is the balance of the decommissioning obligation on December 31, Year 16?

   a) $59,190
   b) $118,380
   c) $177,570
   d) $300,000
Solution

Option c) is correct.
Site restoration obligation at December 31, Year 16:
FV = 300,000 (200,000 + 100,000); N = 9; I = 6; PMT = 0; CPT PV
PV = 177,570
Note that N = 9 years because the $200,000 is brought back from 25 years to 16 years, which is 9 years.

Option a) is incorrect. This only calculates PV for the additional restoration costs.
FV = 100,000; N = 9; I = 6; PMT = 0; CPT PV
PV = 59,190

Option b) is incorrect. The additional restoration costs are not considered.
FV = 200,000; N = 9; I = 6; PMT = 0; CPT PV
PV = 118,380

Option d) is incorrect. PV is not calculated for the asset retirement obligations.
$100,000 + 200,000 = $300,000

ii. MOR Construction reports using IFRS. In June, one month before its year end, MOR was formally notified that it was being sued by a former customer for an environmental spill on a property that MOR had worked on. It is believed that the spill is a result of the work that MOR did, and consequently MOR is being sued for $1,000,000 based on cleanup estimates.

MOR denies any wrongdoing. MOR’s attorneys believe that the claim amount of $1,000,000 is too high and that it is not substantiated. They do believe that MOR may ultimately be liable for cleanup costs, but that the amount will be between $300,000 and $600,000, with each number in the range being equally likely. MOR does not have any liability insurance for this type of claim.

Based on this information, how should MOR record the environmental spill?

a) Record a provisional liability of $450,000.
b) Disclose in the financial statements the possibility of a lawsuit but do not record a liability.
c) Record a provisional liability of $1,000,000 and disclose a range of $300,000 to $1,000,000.
d) As the attorneys cannot decide on an exact amount, MOR should record nothing at this point.
**Solution**

Option a) is correct. If an amount is likely and measurable, then a liability provision should be recorded. If there is a range of amounts and no amount is more reasonable than another within that range, the midpoint of the range is used.

Option b) is incorrect. This assumes that, because it is a range, the amount cannot be measured and therefore MOR should only disclose.

Option c) is incorrect. This ignores the fact that a range that is more likely has been presented and that this range should be used.

Option d) is incorrect. This assumes that, because it is a range, the amount cannot be measured and therefore MOR should do nothing.

iii. On January 1, Zylon Corp. issued a $200,000, 4%, 15-year bond payable that pays interest semi-annually on January 1 and July 1. The market rate of interest at the time was 6%. What was the issue price of the bond, ignoring transaction costs (rounded to the nearest dollar)?

a) $160,799  
b) $161,151  
c) $200,000  
d) $244,793

**Solution**

Option a) is correct.  
FV = $200,000; PMT = 0.04 × 0.5 × 200,000 = $4,000; N = 15 × 2 = 30; I = 6 / 2 = 3  
CPT PV = 160,799

Option b) is incorrect. This records PMT, N and I at annual rather than semi-annual amounts.

Option c) is incorrect. This uses the coupon rate on the bond (4%) for both the PMT calculation and I.

Option d) is incorrect. This reverses the interest rates so that the PMT is based on 6% and I is based on 4%.
2. Wilson Inc. issued $4,800,000 of 6%, five-year bonds on May 1, 20X4. The market interest rate at the time of issue was 8%. Interest is paid annually. Bond issue costs of $50,000 were paid. Wilson has an April 30 year end.

**Required:**

a) Determine the net sales proceeds received from the bonds.

b) Prepare the journal entry to record the issuance of the bonds.

c) Complete a bond amortization spreadsheet using the format that follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Interest expense</th>
<th>Interest paid</th>
<th>Premium or Discount amortized</th>
<th>Amortized cost (NBV)</th>
</tr>
</thead>
</table>

d) Prepare the journal entry to record the payment of interest and related amortization on April 30, 20X5.

**Solution**

a) **CPA Way step: Assess the Situation**

Wilson has issued bonds at a different rate than market.

**CPA Way step: Analyze Major Issues**

Net sale proceeds = $4,416,700 – $50,000 = $4,366,700
Proceeds from bond issuance: FV = 4,800,000; I/Y = 8; N = 5; PMT = 288,000 (4,800,000 × 0.06); CPT PV
PV = –4,416,700

b) **CPA Way step: Conclude and Advise**

DR Cash 4,366,700
CR Bonds payable 4,366,700
c) Effective interest rate on bonds: PV = -4,366,700; FV = 4,800,000; PMT = 288,000; N = 5; CPT I/Y = 8.27745

<table>
<thead>
<tr>
<th>Date</th>
<th>Interest expense¹</th>
<th>Interest paid²</th>
<th>Discount amortized³</th>
<th>Amortized cost⁴ (NBV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 1, 20X4</td>
<td></td>
<td></td>
<td></td>
<td>$4,366,700</td>
</tr>
<tr>
<td>April 30, 20X5</td>
<td>$361,451</td>
<td>$288,000</td>
<td>$73,451</td>
<td>$4,440,151</td>
</tr>
<tr>
<td>April 30, 20X6</td>
<td>$367,531</td>
<td>$288,000</td>
<td>$79,531</td>
<td>$4,519,682</td>
</tr>
<tr>
<td>April 30, 20X7</td>
<td>$374,114</td>
<td>$288,000</td>
<td>$86,114</td>
<td>$4,605,796</td>
</tr>
<tr>
<td>April 30, 20X8</td>
<td>$381,242</td>
<td>$288,000</td>
<td>$93,242</td>
<td>$4,699,038</td>
</tr>
<tr>
<td>April 30, 20X9</td>
<td>$389,962*</td>
<td>$288,000</td>
<td>$100,962</td>
<td>$4,800,000</td>
</tr>
</tbody>
</table>

1. Interest expense = Effective interest rate × Beginning of the year amortized cost
2. Interest paid = Stated rate × Face value of bond
3. Discount amortized = Interest expense – Interest paid
4. Amortized cost = Beginning of the year amortized cost – Premium amortized

* Amount adjusted for rounding of interest rate

d) April 30, 20X5
DR Interest expense 361,451
CR Bonds payable 73,451
CR Cash 288,000

3. Seneca Corp. had the following transactions occur during 20X5:
   - Revenues were $5,000,000, and customers earned one reward point for each $1 spent at the store.
   - 6,000 points can be redeemed for cookware that retails for $60 and costs $20.
   - 75% of points earned are estimated to be redeemed.
   - 3,000,000 points were redeemed.

Required:

a) Record the transactions required under the rewards program during 20X5.
b) Determine the balance in deferred revenue at the end of 20X5, assuming that the balance at the beginning of the year was 0.
Solution

CPA Way step: Assess the Situation

Seneca has a loyalty program, and the recording of the transactions needs to be done according to IFRS.

a) CPA Way step: Analyze Major Issues

To record the sales:

DR Cash/Accounts receivable 5,000,000
CR Revenue (5,000,000 – 37,500) 4,962,500
CR Deferred revenue (5,000,000 / 6,000 × 60 × 0.75) 37,500

To record the redemption of the points:

DR Deferred revenue (3,000,000 / 6,000 × 60) 30,000
CR Revenue 30,000

DR Cost of goods sold 10,000
CR Inventory (3,000,000 / 6,000 × 20) 10,000

b) CPA Way step: Conclude and Advise

<table>
<thead>
<tr>
<th>Deferred revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>30,000</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
PART 2

Shareholders’ equity (net assets) is the shareholders’ claim on the net assets of a company. In this part, particular aspects of contributed capital, retained earnings and reserves are discussed. In addition, you will learn about complex financial instruments such as derivatives, stock-based compensation plans and compound financial instruments.

Governing standards

The governing standards for the topics to be covered are IAS 32 Financial Instruments: Presentation, IFRS 2 Share-based Payment and IFRS 9 Financial Instruments.

Contributed capital

Contributed capital consists of the amount received from issuing shares, less redemptions or repurchases. It is made up of common shares (residual interest in company) and preference shares (rights and privileges above residual interest). These two types of shares will have at least one class and potentially more. The number of shares issued represents those that were issued by the corporation and is usually lower than the number authorized to be issued, which is often unlimited. Shares outstanding represent the shares owned by investors at a particular time.

Issuance of shares

Equity instruments are recognized at the reliable fair value of cash or goods/services received at time of issuance. However, if the equity has special obligations, such as a requirement to deliver cash/assets to another party, some or all of the value must be recognized as a liability rather than equity. Costs of issuing shares cannot be expensed under IFRS. Instead, they reduce the share account (offset method) or reduce retained earnings (retained earnings method).

Example

On March 5, 20X5, when the market price of its common shares was $62 per share, and the price of preference shares was $75, the following events occurred for Cannon Inc.:

- The balance in common shares was $320,000, and the balance in preference shares was $450,000 at the beginning of the day.
- Cannon sold 4,000 common shares for cash.
- It issued 2,000 common shares in exchange for land whose fair value was reliably measured at $120,000.
- It issued 1,000 preference shares in exchange for a custom piece of equipment that could not be valued reliably.
Required:

a) Calculate the balance in common shares at the end of the day.
b) Calculate the balance in preference shares at the end of the day.

Solution

<table>
<thead>
<tr>
<th></th>
<th>a) Common shares</th>
<th>b) Preference shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>320,000</td>
<td>450,000</td>
<td></td>
</tr>
<tr>
<td>248,000(^1)</td>
<td>75,000(^3)</td>
<td></td>
</tr>
<tr>
<td>120,000(^2)</td>
<td>525,000</td>
<td></td>
</tr>
<tr>
<td>688,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Sold for cash, so use market price: $62 \times 4,000 = $248,000.
2. Fair value of land can be reliably measured, so use that instead of share price.
3. There is no reliable estimate for the equipment, so use share price: $75 \times 1,000 = $75,000.

**Shares sold on a subscription basis**

Promises to buy shares in the future are accounted for through recognizing subscriptions receivable and shares subscribed. As payments are received, the receivable is reduced, and shares are issued once the final payment is received.

**Retained earnings**

Retained earnings represent the cumulative profit of a company less cumulative dividends. Retained earnings may be affected by error corrections, the cumulative effect of accounting policy changes and capital transactions.

**Dividends**

Dividends are the distribution of capital to shareholders and are declared by the company’s Board of Directors. Dividend declarations must be carefully allocated with respect to legal entitlements. Preference shareholders usually receive dividends before ordinary shareholders are entitled to dividends. Dividends are legally enforceable when declared and are initially recorded on declaration date as a liability for cash or property dividends. Dividends declared on shares classified as a liability are deducted as an expense on the statement of comprehensive income. Dividends declared on shares classified as equity are deducted from retained earnings on the statement of changes in equity.

**Stock dividends**

Stock dividends are distributions of shares based on the proportion of pre-existing ownership. Unlike cash/asset dividends, they can be revoked after they are declared. Because there is no obligation for the company to distribute any assets, they are not recorded as a liability on
declaration date. They are recorded when distributed and are based on the market price of the shares on the date of distribution.

**Stock splits**

Stock splits are similar to stock dividends but are normally many times greater in magnitude. They have no effect on retained earnings and are not a distribution of profit. The primary purpose of a stock split is to reduce the market price of the stock to improve liquidity. Stock splits are accounted for in a memo entry.

**Dividends — Cumulative and non-cumulative**

Unlike common shares, preference shares generally have a stated dividend rate. Preference shareholders will be paid their dividend entitlement before common shareholders receive any dividends. These preference share dividends can be cumulative or non-cumulative. If they are cumulative, the shareholder is entitled to that stated amount each year. The amounts missed in any year become arrears and must be paid out before the common shareholders receive any dividends. These arrears amounts do not become a liability because dividends are awarded strictly at the discretion of the Board of Directors. If they are non-cumulative, the preference shareholders are only entitled to the current year’s amount if declared by the Board of Directors. They will receive this amount before the common shareholders receive their share.

**Example**

On October 31, 20X5, Webly Inc. declared dividends of $360,000. It had last declared and paid dividends on October 31, 20X1. Following is information about its capital structure:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common shares, unlimited authorized, 100,000 issued and outstanding</td>
<td>$780,000</td>
</tr>
<tr>
<td>$5 cumulative preference shares, unlimited authorized, 13,000 issued and outstanding</td>
<td>260,000</td>
</tr>
</tbody>
</table>

**Required:**

a) Calculate the amount of dividends each type of share will receive (in total and per share).

b) If the preference shares were non-cumulative, what is the total dividend each share class will receive?
Solution

a)

<table>
<thead>
<tr>
<th></th>
<th>Common shares</th>
<th>Preference shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrears from 20X2 to 20X4</td>
<td>= 3 × 5 × 13,000</td>
<td>= 5 × 13,000</td>
</tr>
<tr>
<td></td>
<td>= $195,000</td>
<td>= $65,000</td>
</tr>
<tr>
<td>Entitlement for 20X5</td>
<td>= 5 × 13,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= $65,000</td>
<td></td>
</tr>
<tr>
<td>Total dividends</td>
<td>= 360,000 – 260,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= $100,000¹</td>
<td>= $260,000</td>
</tr>
<tr>
<td>Per-share amounts</td>
<td>= $100,000 / 100,000 shares</td>
<td>= $260,000 / 13,000 shares</td>
</tr>
<tr>
<td></td>
<td>= $1 / common share</td>
<td>= $20 / preference share</td>
</tr>
</tbody>
</table>

(1) Once the entitlement for the preference shares is calculated, the common shares receive the amount left over. Because common shares have a residual interest in the profits of the corporation, any dividend amount may be declared by the Board of Directors with respect to these shares.

b) Preference shares will be entitled only to the current year’s dividend, and the common shareholders will receive the remainder.

= $5 × 13,000 = $65,000 to the preference shareholders

= $360,000 – $65,000 = $295,000 to the common shareholders

Reserves

Reserves is the IFRS term for all components of equity that are not share capital or retained earnings. Reserves include what was previously referred to in Canadian generally accepted accounting principles (GAAP) as contributed surplus, accumulated other comprehensive income (AOCI) and reserves (appropriated retained earnings). These terms continue to be in general use in Canadian corporations. ASPE does not require or permit the use of other comprehensive income (OCI); hence, AOCI is not reported on the balance sheet in companies using ASPE.

Statement of changes in equity

The statement of changes in equity reconciles the changes in each of the equity accounts during the year, starting with the opening balance and showing all transactions that occurred to arrive at the closing balances for the year.

Complex financial instruments

Complex financial instruments include derivatives, compound financial instruments, convertible instruments, employee stock options, equity and stock appreciation rights, as well as the financial assets and liabilities already covered in Part 1.
Derivatives

Derivative financial instruments may take the form of options, warrants, forwards, futures and swaps. Their values are linked to that of an underlying economic item, and they are commonly used to hedge risks, including foreign exchange risk, interest rate risk and price risk. Derivatives are recognized at the inception of the contract and are valued at FVPL. Gains and losses on derivative financial instruments are recognized in profit or loss. Gains and losses on derivatives offset the losses and gains caused by the underlying risks.

Options are contracts that give the holder the right (not the obligation) to buy or sell a stock or commodity up to a certain date, for the price specified. A call option is the right to buy, while a put option is the right to sell. Options are valued at the fair value, on the grant date, of the option issued. Two types of options that give the holder the right to buy a company’s shares for a given price are warrants and employee stock options.

Stock-based compensation plans

Many businesses offer stock-based compensation plans to select employees, under which the employees receive stock options or stock appreciation rights (SARs) that may result in the issuance of shares or other types of securities or a payment of cash to those employees.

Employee stock option plans — Equity settled

An employee stock option plan (ESOP) entails that on the grant date, an employer offers select employees stock options that give them the right to purchase company common stock at a given price, called the exercise or strike price, until a specified expiration date. Generally, there is a vesting period that requires the employees to keep working for the company for a certain time before they can exercise their options. Unvested options are forfeited when the employees leave. Employee stock options cannot be sold or traded.

On the grant date, employee stock options are measured at fair value using a pricing model. (You will be given this value in problems.) On the grant date, no entry is made — only a memo. This is because the options will require equity settlement. The market price of the shares does not impact the fair value of the option. However, the expected forfeiture rate affects the calculation of the compensation expense.

Outstanding employee stock options are not adjusted to current fair value at the end of each period. Instead, at the end of the period the option is granted, the original fair value of the option is used to calculate the proportion of the expense to be recorded in the current period. An entry is made to recognize “compensation expense” (debit) and “contributed surplus — ESOP” (credit). Each subsequent year until vesting, an entry is made to recognize the year’s proportion of compensation expense, adjusted yearly to incorporate additional knowledge of the forfeiture rate as time passes.

As options are exercised, equity is recognized, and “contributed surplus — ESOP” is written down. When options are forfeited or expire, the applicable amounts are transferred from “contributed surplus — ESOP” to “contributed surplus — expired options.”
**Example**

On January 1, 20X4, Redact Corp. granted 400 options each to 500 employees, allowing the purchase of a common share for each option at an exercise price of $20. The employees must remain with the company for three years (vesting period) in order to exercise the options. Pertinent details follow:

- The fair value of each option was $5 at the grant date.
- During the first year, 10 employees left the company, and it was estimated that 25 more would leave in the remaining two years.
- During the second year, 20 employees left the company, and it was estimated that another 20 employees would leave over the final year.
- During the third year, 12 employees left the company.

On January 1, 20X7, 60% of eligible employees exercised their options.

**Required:**

a) Prepare calculations showing the amounts that would appear as compensation expense on the statement of comprehensive income of Redact for each of the three years, and in “contributed surplus — ESOP” on the statement of financial position at the end of each year.

b) Prepare journal entries to record the exercise and forfeiture of the options, on January 1, 20X5.

**Solution**

**a)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Compensation expense</th>
<th>Balance in “contributed surplus — ESOP”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: (500 – 10 – 25) × $5 × 400 × 1/3</td>
<td>$310,000</td>
<td>$310,000</td>
</tr>
<tr>
<td>2: (500 – 10 – 20 – 20) × $5 × 400 × 2/3 – 310,000</td>
<td>$290,000 = 310,000 + 290,000 = $600,000</td>
<td></td>
</tr>
<tr>
<td>3: (500 – 10 – 20 – 12) × $5 × 400 – 310,000 – 290,000</td>
<td>$316,000 = 600,000 + 316,000 = $916,000</td>
<td></td>
</tr>
</tbody>
</table>

1. The ESOPs vest over three years, so one-third is recognized in the first year.

2. The vesting period is two-thirds complete, so calculate two-thirds of the total expense and subtract the amount already recognized in the first year.
b) Number of employees left: 500 – 10 – 20 – 12 = 458

\[
\begin{align*}
    \text{DR Cash} & \quad 2,198,400 \\
    & \quad (458 \times 0.6 \times 400 \times $20) \\
    \text{DR Contributed surplus — ESOP} & \quad 916,000 \\
    \text{CR Common shares} & \quad 2,748,000 \\
    & \quad [2,198,400 + (916,000 \times 0.6)] \\
    \text{CR Contributed surplus — expired options} & \quad 366,400 \\
    & \quad (916,000 \times 0.4)
\end{align*}
\]

**SARs — Cash settled**

SARs give the holder (the employee) the right to receive, in cash, the difference between the market value of the share and a benchmark value specified by the SAR. Although they are measured in similar ways and require vesting, they differ from employee stock options in the following ways:

- The employee does not have to pay cash to receive the benefit of an increase in stock price.
- The SAR is recorded as a liability because it requires settlement in cash.
- The amount of the upcoming obligation is unknown because it is determined by the future share price.

On the grant date, a memorandum is made rather than a journal entry.

Expense is recognized each period during and after the vesting period. It equals the cumulative compensation expense less previous years’ compensation. (Note that this is similar to ESOPs.) There will be a debit to compensation expense and a credit to liability under SARs. Because share price can drop, sometimes the entry will be reversed. However, since no gains can be recorded, the credit is to compensation expense.

**Example**

Mercury Co. grants 2,000 SARs on January 1, 20X5, to its employees. Pertinent details follow:

- The benchmark price is $60 per share.
- The SARs vest two years after the grant date and expire on December 31, 20X6.
- It was estimated in 20X5 that 90% of employees would qualify. In actuality, 88% of employees qualified.
- The fair value of the SARs was as follows on December 31:
  - 20X5 $8
  - 20X6 $6
- The company’s year end is December 31.
Required:

Calculate compensation expense for 20X5 and 20X6 and calculate SAR liability at December 31, 20X5 and 20X6.

Solution

<table>
<thead>
<tr>
<th>Year</th>
<th>Compensation expense</th>
<th>Balance in SAR liability</th>
</tr>
</thead>
<tbody>
<tr>
<td>X5: 2,000 × $8 × 0.9 × 1/2</td>
<td>$7,200</td>
<td>$7,200</td>
</tr>
<tr>
<td>X6: (2,000 × $6 × 0.88) – 7,200</td>
<td>$3,360</td>
<td>= 7,200 + 3,360</td>
</tr>
<tr>
<td></td>
<td></td>
<td>= $10,560</td>
</tr>
</tbody>
</table>

Stock-based compensation plans — ASPE

ESOPs are treated the same way under ASPE as they are under IFRS. However, the value of the obligation under cash-settled SARs is measured at the intrinsic value of the rights, which is the market price less the benchmark price, to a minimum of $0.

Compound financial instruments

Convertible securities are financial instruments that enable their holders to exchange one type of financial instrument for another, normally receiving common shares (for example, a warrant). A compound financial instrument is one that includes at least two elements, one or more of which is a convertible security. Examples include bonds issued with warrants, convertible bonds and convertible preference shares.

If these instruments are made up of both debt and equity components, they must be separated into their components at recognition.

Convertible bonds

The conversion option normally allows the issuer to offer the bond at a lower interest rate than would otherwise be required by investors. To determine the amount at which the bond and the conversion option are recognized, the value of the bond without the conversion option is calculated — this is the amount initially allocated to the bond component. The difference between the issue price of the convertible bond and the value of the bond without the conversion rights is the initial amount allocated to the conversion option. The transaction costs are then pro-rated between the liability (bond) and equity (conversion option) components based on these initial amounts. The transaction costs are then deducted from the initial amounts to arrive at the final amount used for recording the issuance of the convertible bond and conversion option.

The liability portion is subsequently measured at amortized cost, while the equity portion remains at historical cost. The effective interest rate will be determined with a financial calculator.
**Example**

On January 1, 20X5, MacMillan Corp. issued $4,000,000 of five-year convertible bonds with a stated rate of 8% for $5,200,000. Transaction costs totalled $52,000. Bonds pay interest annually. The market rate of interest on that date for similar bonds without the conversion feature was 6%. Each $1,000 bond can be converted into 12 common shares before maturity.

**Required:**

a) Determine the net sales proceeds that will be attributed to the bonds alone (liability) and the amount allocated to the conversion option (equity).

b) Allocate the transaction costs to both liability and equity.

c) Record the journal entry at issuance.

d) Calculate the effective interest rate on the bonds.

**Solution**

a) \( FV = 4,000,000; \ N = 5; \ I = 6; \ PMT = (4,000,000 \times 0.08) = 320,000 \)
\( CPT \ PV = $4,336,989 \)

b) 

<table>
<thead>
<tr>
<th>Financial instrument</th>
<th>Transaction cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liability = 4,336,989</td>
<td>( = 52,000 \times \frac{4,336,989}{5,200,000} = 43,370 )</td>
</tr>
<tr>
<td>Equity = 5,200,000 – 4,336,989 = 863,011</td>
<td>( = 52,000 \times \frac{863,011}{5,200,000} = 8,630 ) or ( 52,000 – 43,370 = 8,630 )</td>
</tr>
<tr>
<td>Total = 5,200,000</td>
<td></td>
</tr>
</tbody>
</table>

c) DR Cash \( 5,148,000 \)
\( (5,200,000 – 52,000) \)
CR Bonds payable \( 4,293,619 \)
\( (4,336,989 – 43,370) \)
CR Contributed surplus — Convertible bonds \( 854,381 \)
\( (863,011 – 8,630) \)

d) \( PV = – 4,293,619; \ FV = 4,000,000; \ N = 5; \ PMT = 320,000; \ CPT I = 6.246\% \)

**Bonds sold with warrants**

When bonds are sold with warrants, these warrants are detachable. This means the holder can sell them separately. On exercise of the warrants, the holder must pay the exercise price. Even though the warrants may have been sold or exercised, the bond may still be outstanding. Despite these differences between convertible bonds and bonds sold with warrants, the accounting for recognition and subsequent measurement is the same.
**Convertible preference shares**

Convertible preference shares can be converted into common shares. Because both are equity, there is no need to separate the components, and they will be measured at fair value of cash/assets received. Subsequent measurement is at historical cost.

**Compound financial instruments — ASPE**

The accounting for compound financial instruments under ASPE is similar to IFRS, except that ASPE permits the equity portion to be measured at zero, with the value of consideration received being allocated to the liability. In addition, ASPE allocates the residual to the less easily measurable component (more often than not, equity), whereas IFRS prescribes the allocation of the residual to the equity element.

**Practice questions**

1. Multiple-choice questions:

   i. Morevin Inc. has 100,000 common shares outstanding and 20,000 $0.40 preference shares outstanding issued at $5 each. The preference shares are cumulative. Dividends have been paid every year except the past two years and the current year. $50,000 will be distributed as a dividend in the current year. How much will the common shareholders receive?

      a) $24,000  
      b) $26,000  
      c) $34,000  
      d) $50,000

      Option b) is correct.
      Preference share entitlement: (20,000 shares × $0.40 × 3 years) = $24,000.
      Thus, the common shareholders receive the remainder: 50,000 – 24,000 = $26,000.

      Option a) is incorrect. This is the amount of the preference share entitlement.

      Option c) is incorrect. You did not take into account the two years of preference dividends in arrears; you used only one.

      Option d) is incorrect. You did not take into account the two years of preference dividends in arrears and the preference dividends for the current year.
ii. Machine Corp. issued $2,000,000 of four-year, 6% bonds that pay interest semi-annually. Each $1,000 bond is convertible to 20 of Machine’s common shares at any time prior to maturity. Bonds without the conversion option had a market rate of 7%. The proceeds realized on issuance were $2,050,000. Machine uses IFRS.

What amount will be allocated to contributed surplus?

a) $50,000  
b) $118,740  
c) $527,704  
d) $1,931,260

Option b) is correct.  
PV of the bond without conversion: FV = 2,000,000; PMT = (2,000,000 × 6% / 2) = 60,000; N = 4 × 2 = 8; I/Y = 7% / 2 = 3.5  
CPT PV = $1,931,260  
Therefore, the equity portion is (2,050,000 – 1,931,260) = $118,740.

Option a) is incorrect. You subtracted the face value of the bond from the issue price.

Option c) is incorrect. You calculated the PV of the bond using 7% instead of 7% / 2 = 3.5% due to the semi-annual payments.

Option d) is incorrect. This is the bonds payable portion. You must subtract this from the proceeds to get the equity portion.

2. On January 1, 20X3, Mink Corp. granted 400 options to purchase a common share to each of its 800 employees. The options have a three-year vesting period. Pertinent details follow:

- The exercise price is $50 per share.
- The fair value of each option was $4 at the grant date.
- During the year ended December 31, 20X3, 20 employees left the company, and it was estimated that another 5% of the remaining employees would leave over the next two years.
- During the year ended December 31, 20X4, 30 employees left the company, and it was estimated that another 4% of the remaining employees would leave over the next year.
- During the year ended December 31, 20X5, 25 employees left the company.

80% of eligible employees exercised their options on January 1, 20X6. The rest of the options were forfeited.
Required:

a) Prepare calculations showing the amounts that would appear as compensation expense on the statement of comprehensive income of Mink for the years ended December 31, 20X3, 20X4, and 20X5.

b) Calculate the balance in “contributed capital — ESOP” at December 31, 20X5.

c) Prepare journal entries to record the exercise of the options on January 1, 20X5.

Solution

CPA Way step: Assess the Situation

Mink Corp. has recently granted option to purchase common shares to all employees. It needs to look at the impact of this on the financial statements, especially compensation expense.

a) CPA Way step: Analyze Major Issues

<table>
<thead>
<tr>
<th>Year</th>
<th>Compensation expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>20X3: (800 – 20 – 0.05 ((800 - 20))) \times 4 \times 400 \times 1/3</td>
<td>$395,200</td>
</tr>
<tr>
<td>20X4: (800 – 20 – 30 – 0.04 ((800 - 20 - 30))) \times 4 \times 400 \times 2/3</td>
<td>$372,800</td>
</tr>
<tr>
<td>20X5: (800 – 20 – 30 – 25) \times 4 \times 400 - 395,200 – 372,800</td>
<td>$392,000</td>
</tr>
</tbody>
</table>

b) Contributed capital — ESOP: 395,200 + 372,800 + 392,000 = $1,160,000

c) Number of employees left: 800 – 20 – 30 – 25 = 725

Number of employees who exercised their options: 725 \times 80\% = 580

CPA Way step: Conclude and Advise

<table>
<thead>
<tr>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR Cash</td>
<td>11,600,000</td>
<td></td>
</tr>
<tr>
<td>(580 \times 400 \times 50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DR Contributed surplus — ESOP</td>
<td></td>
<td>1,160,000</td>
</tr>
<tr>
<td>CR Common shares</td>
<td>12,528,000</td>
<td></td>
</tr>
<tr>
<td>[11,600,000 + (0.8 \times 1,160,000)]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR Contributed surplus — expired options</td>
<td>232,000</td>
<td></td>
</tr>
<tr>
<td>(0.2 \times 1,160,000)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PART 3

The *Income Tax Act* governs the payment of income tax by corporations. Because income tax revenue/expense rules are very different from accounting rules for revenue/expense, taxable income is normally very different from accounting net income.

**Income tax expense basics**

Deferred income tax (DIT) expense and deferred tax asset or liability accounts are created in the financial statements to reflect the amount of tax that would have been paid or saved if the timing differences between taxable and accounting income did not exist. Essentially, a deferred tax expense is the extra tax a company would have had to pay in the year if the government collected tax on accounting income rather than on taxable income as required by the *Income Tax Act* (excluding permanent differences as described below).

The calculation of taxable income starts with the accounting income reported on the statement of comprehensive income, before the deduction on income tax expense or any items reported in OCI. Accounting income is then adjusted for permanent differences between taxable and accounting income, and then for timing differences arising in the current year, both of which are discussed in detail in this week’s material.

Once taxable income has been calculated, it is multiplied by the current tax rate to determine the current year’s tax expense and tax payable. Then, the cumulative timing differences, known as temporary differences, are reconciled and the DIT expense and deferred asset/liability are calculated. The sum of the current year’s tax expense and of DIT expense represents the total income tax expense for the year.

**Recognition and initial measurement — Current income tax expense**

*Permanent differences*

When revenues or expenses are recorded in accounting net income but will never be used in calculating taxable income, they are called permanent differences. The following are common examples of permanent differences.

Permanent revenue differences:

- Dividends received from taxable Canadian corporations are not taxable.
- Life insurance proceeds are not included in taxable income.

Permanent expense differences:

- Life insurance premiums are not normally a deductible expense for taxation purposes.
- Social club memberships and other recreational dues or fees (for example, golf memberships) are not deductible expenses for taxation purposes.
• Fines, penalties and interest on federal taxes are not deductible expenses for taxation purposes.
• 100% of meals and entertainment expenses are deductible expenses in accounting income, but only 50% of these expenses are deductible for taxation purposes.
• Donations made to political parties are not deductible for taxation purposes.

**Timing differences**

Timing differences arise when accounting revenues or expenses enter into the computation of taxable income in a different period than the period they are recognized in for financial reporting. Generally speaking, the tax authorities do not want professional judgment to influence the tax paid by a corporation. For example, most estimated expenses are not deductible — only amounts actually paid or calculated according to CRA rules reduce taxable income.

Some common examples of timing differences include the following:
• depreciation expense (non-deductible) versus capital cost allowance (deductible)
• warranty expense (non-deductible) versus actual warranty costs paid (deductible)
• pension expense (non-deductible) versus payments to pension trustee (deductible)
• development costs (may be capitalized for accounting purposes, but deductible for tax purposes as costs are incurred)
• instalment sales (accrued amount is recognized for accounting purposes, while actual amount of cash received is taxable)

Calculate overall income tax expense as follows:
1. Calculate taxable income and current income tax expense.
2. Calculate the change in DIT asset/liability and the DIT expense.
3. Combine the results of Steps 1 and 2 to obtain tax expense.

The best way to complete Step 1 is to first identify the temporary and permanent differences. Then adjust accounting income for these differences to get taxable income. Finally, multiply the taxable income by the tax rate to calculate current income tax expense and income tax payable.
Recognition and initial measurement — DIT expense

The liability method of calculating DIT expense is required under IFRS and allowed under ASPE. Under the liability method, the net deferred tax asset or liability is calculated for each temporary difference, at both the start and end of the year. If a deferred tax liability increases during the year, the temporary difference gives rise to a DIT expense. If a deferred tax asset increases during the year, the temporary difference gives rise to a DIT recovery. Temporary differences are classified as either deductible or taxable temporary differences. A taxable temporary difference exists when the amount deducted to date for tax purposes is greater than the amount deducted for accounting purposes. If the amount deducted to date for tax purposes is less than the amount deducted for accounting purposes, it is a deductible temporary difference.

Consider the acquisition of a single depreciable asset with a cost of $200,000. The cost is recorded on the balance sheet, and at the date of acquisition, this amount is the NBV and is referred to as the accounting base of the asset. The same amount is added to the cost pool used to depreciate assets for tax purposes. This cost pool is the undepreciated capital cost (UCC) of the asset and is referred to as the tax base of the asset. Both the NBV and UCC are increased by the same amount, $200,000. If the depreciation expense for accounting purposes is $30,000 and the depreciation amount for tax purposes, called capital cost allowance (CCA), is $60,000, then a timing difference arises in the year. At the date of purchase, there is no temporary difference, but at the end of the year, the NBV is $170,000 and the UCC is $140,000, which is a temporary difference of $30,000. This is also the amount of the timing difference in the current year between the depreciation and CCA amounts, but in subsequent years this will not usually be the case.

Over the life of this asset, the total expense for both accounting and tax purposes will be $200,000, the cost of the asset, assuming no residual value. In the current year, more expense has been deducted for tax purposes, so in future years, there is less expense available to deduct for tax purposes than for accounting purposes. This is a taxable temporary difference. One way of looking at this is that if tax was paid on accounting income, the income would have been $30,000 higher, so more tax would have been paid. Another way of looking at this is that in future, taxable income will be greater than accounting income. Either way, a deferred tax liability needs to be recognized.

The following is the easiest way to distinguish between deductible and taxable temporary differences.
Deductible and taxable temporary differences apply to the deferred tax liability or asset in the financial statements as follows:

<table>
<thead>
<tr>
<th>Difference between asset/liability base</th>
<th>Taxable temporary or deductible temporary difference</th>
<th>DIT asset or DIT liability</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting base of asset &gt; tax base</td>
<td>Taxable temporary</td>
<td>DIT liability</td>
<td>NBV of assets = 100,000 UCC = 80,000</td>
</tr>
<tr>
<td>Accounting base of asset &lt; tax base</td>
<td>Deductible temporary</td>
<td>DIT asset</td>
<td>NBV of assets = 100,000 UCC = 130,000</td>
</tr>
<tr>
<td>Accounting base of liability &gt; tax base</td>
<td>Deductible temporary</td>
<td>DIT asset</td>
<td>Warranty liability</td>
</tr>
<tr>
<td>Accounting base of liability &lt; tax base</td>
<td>Taxable temporary</td>
<td>DIT liability</td>
<td>Very rare</td>
</tr>
</tbody>
</table>

Note: There is no DIT on permanent differences — only on temporary differences.

**Example**

In 20X5, Hurley Co. has accounting income before taxes of $560,000, and the tax rate is 40%. Included in Hurley’s accounting net income is the following:

1. $110,000 of depreciation was recorded. CCA was calculated as $160,000.
2. The NBV of the depreciable assets at January 1, 20X5, was $610,000, and the UCC was $535,000 which was the only differences for tax purposes.
3. Meals and entertainment expenses totalled $6,000.
4. $26,000 of dividends received from a taxable Canadian corporation was recorded.
5. Development costs of $6,000 were deferred on the statement of financial position.
6. Warranty expenses of $16,500 were recorded on a new warranty plan instituted this year. Hurley paid $3,200 in warranty costs.

**Required:**

1. Calculate the net income for tax purposes and record current income tax expense for 20X5.
2. Calculate the required balance in the DIT account on December 31, 20X5.

**Solution**

1. Net income before taxes $ 560,000

   **Permanent differences**

   Non-deductible portion of entertainment expenses ($6,000 × 50%) 3,000
   Canadian dividends received (26,000)

   $ 537,000
**Timing differences**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation expense</td>
<td>$110,000</td>
</tr>
<tr>
<td>CCA</td>
<td>$(160,000)</td>
</tr>
<tr>
<td>Warranty expense</td>
<td>$16,500</td>
</tr>
<tr>
<td>Warranty costs paid</td>
<td>$(3,200)</td>
</tr>
<tr>
<td>Development costs paid</td>
<td>$(6,000)</td>
</tr>
<tr>
<td>Taxable income</td>
<td>$494,300</td>
</tr>
<tr>
<td>Tax rate</td>
<td>× 40%</td>
</tr>
<tr>
<td>Current portion of income tax expense</td>
<td>$197,720</td>
</tr>
</tbody>
</table>

2. **DIT account, December 31, 20X5**

**NBV/UCC difference**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBV: $610,000 Beginning – 110,000 Depreciation</td>
<td>$500,000</td>
</tr>
<tr>
<td>UCC: $535,000 Beginning – 160,000 CCA</td>
<td>$375,000</td>
</tr>
<tr>
<td>Taxable temporary difference</td>
<td>$125,000</td>
</tr>
<tr>
<td>Tax rate × 40%</td>
<td></td>
</tr>
<tr>
<td>Warranty liability: $16,500 Expense – 3,200 Costs = $13,300</td>
<td>DR 5,320</td>
</tr>
<tr>
<td>Deductible temporary difference: $13,300 × 40% tax rate</td>
<td>CR $44,680</td>
</tr>
</tbody>
</table>

**Subsequent measurement — DIT**

The DIT account is remeasured if the tax rate changes or other underlying factors change. It is measured based on the tax rate expected to be in place in the upcoming years when the timing differences will reverse themselves. If a new tax rate has been enacted for a future year, this rate is used; otherwise, the tax rate in the current year is the best estimate of the expected future rate.

**Accounting for tax losses**

Tax losses may be carried back and offset against taxable income in the three prior years as loss carrybacks (LCBs). Taxes receivable for the three prior years are based on the tax actually paid, and this is recorded as a current income tax recovery on the statement of comprehensive income. If any loss is remaining, the tax loss may be carried forward for 20 years as a loss carryforward (LCF). If the tax loss is not used within the 20-year period, it expires.

The decision to carry the tax loss back or forward is a matter of professional judgment. If the tax rate has remained constant, has decreased or is decreasing, then LCBs are usually applied to the oldest year possible first. If tax rates have increased or fluctuated, or are increasing for future years, then LCBs may be applied to the three years strategically to maximize the refund by applying the loss to the years with the highest tax rates first, or the loss may be carried forward in full to reduce future taxes.
The future benefits of LCFs should be recognized in the year of the loss only if use is probable. If probable, a DIT recovery and a deferred tax asset are recorded. An unrecognized LCF can be set up in years following the loss if the likelihood of realizing it becomes probable. If the likelihood shifts to not probable, the recorded LCF has to be written off. If a deferred tax asset is not recorded in the year of loss, in the year an LCF is deducted from taxable income, a tax recovery is recorded in earnings.

**Presentation and disclosure — DIT accounts**

Generally, DIT assets are netted out with DIT liabilities, and a single account is presented on the statement of financial position, except for consolidated entities. Both ASPE and IFRS require that current income tax expense and DIT expense be disclosed separately.

**Practice questions**

1. Multiple-choice questions:
   
   i. Which of the following will create a temporary difference between accounting and taxable incomes for which DIT debits or credits must be recorded?

   a) Dividends received from Canadian companies
   b) Life insurance premiums
   c) Membership dues to a country club where clients are entertained
   d) Provision for warranty repairs

   **Solution**

   Option d) is correct. Provisions for warranty repairs are not deductible for tax purposes. Only costs actually incurred for warranty repairs during the year are deductible. Therefore, a provision for future repair costs will create a timing difference whereby non-deductible expenses in one year will be deductible in a future year when the actual expenditure is incurred.

   Options a), b) and c) are incorrect. These represent permanent differences.

   ii. On January 1, Year 2, GHI Inc. had depreciable assets with a book value of $920,000 and a historical cost of $1,000,000. CCA totalling $100,000 had been taken on these assets. During Year 2, depreciation of $80,000 and CCA of $20,000 were taken on these assets. The tax rate in effect is 35%.

   For Year 2, the temporary differences arising from the above result in which of the following?

   a) A decrease to income tax expense of $7,000
   b) A decrease to income tax expense of $14,000
   c) A decrease to income tax expense of $21,000
   d) An increase to income tax expense of $21,000

   **Solution**

   The calculation for the temporary difference is as follows:

   - Book value at the beginning of Year 2: $920,000
   - Historical cost at the beginning of Year 2: $1,000,000
   - CCA taken: $100,000
   - Depreciation taken: $80,000
   - CCA taken: $20,000
   - Tax rate: 35%

   The temporary difference arises from the difference in the timing of the depreciation and CCA. The tax benefit from the lower depreciation is $50,000 ($80,000 - $30,000), which results in a decrease to income tax expense of $17,500 ($50,000 x 35%). Therefore, the correct answer is b) A decrease to income tax expense of $14,000.
Solution

Option c) is correct. At the start of Year 2, the UCC of the asset was $900,000 ($1,000,000 – $100,000), resulting in a deferred tax liability balance of ($900,000 – $920,000) x 35% = $7,000. This is a taxable difference resulting in a deferred tax liability, because $20,000 more CCA than depreciation had been taken on these assets to January 1.

At the end of Year 2, the assets have a book value of ($920,000 – $80,000) = $840,000 and a UCC of ($900,000 – $20,000) = $880,000, resulting in a deductible temporary difference of $40,000 ($840,000 – $880,000).

This results in a deferred tax asset balance of ($40,000 x 35%) = $14,000. The income tax expense effect is simply the difference between these two amounts (that is, the difference between the opening $7,000 credit balance in the DIT account and the ending $14,000 debit balance in the account).

<table>
<thead>
<tr>
<th>Deferred tax asset</th>
<th>7,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening balance</td>
<td></td>
</tr>
<tr>
<td>Deferred tax expense (plug)</td>
<td>21,000</td>
</tr>
<tr>
<td>Ending balance</td>
<td>14,000</td>
</tr>
</tbody>
</table>

Thus, the income tax expense must be reduced by $21,000:

DR  Deferred tax asset  21,000
CR  DIT expense  21,000

Option a) is incorrect. This is the Year 2 opening balance.

Option b) is incorrect. This omits the Year 2 opening balance.

Option d) is incorrect. This incorrectly treats the January 1 temporary difference as a deductible one and the December 31 temporary difference as a taxable one.

2. Lee Corp., a public enterprise, had net income before tax of $220,000 for its December 31, 20X5, fiscal year. On January 1, 20X5, the company had the following amounts regarding DIT:

- DIT asset = $2,204 relating to the warranty
- DIT liability = $12,160 relating to property, plant and equipment

Pertinent information associated with Lee’s operations for 20X5 is as follows:

- Depreciation expense of $45,000 was recorded. CCA on its tax return was $50,000.
- The NBV of the company’s property, plant and equipment at January 1, 20X5, was $780,000, and the UCC was $748,000.
- Life insurance premiums for executives totalled $6,000.
- Fines paid on overdue taxes totalled $1,300.
- Dividend income of $1,600 was received from a taxable Canadian corporation.
- Warranty expense of $8,000 was recorded. Lee paid $4,200 in actual warranty claims in the year.
- The company had a corporate tax rate of 40% for current and future years. The rate for 20X4 was 38%.

**Required:**

Calculate the taxable income, current income tax expense, the balance in the DIT account at year end, and the DIT expense.

**Solution**

**CPA Way step: Analyze Major Issues**

**Current portion of income tax expense**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net income before taxes</td>
<td>$220,000</td>
</tr>
<tr>
<td><strong>Permanent differences</strong></td>
<td></td>
</tr>
<tr>
<td>Life insurance premiums</td>
<td>6,000</td>
</tr>
<tr>
<td>Interest and penalties on taxes</td>
<td>1,300</td>
</tr>
<tr>
<td>Dividends from taxable Canadian corporations</td>
<td>(1,600)</td>
</tr>
<tr>
<td><strong>Total Permanent differences</strong></td>
<td>225,700</td>
</tr>
<tr>
<td><strong>Timing differences</strong></td>
<td></td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>45,000</td>
</tr>
<tr>
<td>CCA</td>
<td>(50,000)</td>
</tr>
<tr>
<td>Warranty expense</td>
<td>8,000</td>
</tr>
<tr>
<td>Warranty costs paid</td>
<td>(4,200)</td>
</tr>
<tr>
<td><strong>Taxable income</strong></td>
<td>224,500</td>
</tr>
<tr>
<td><strong>Tax rate</strong></td>
<td>× 40%</td>
</tr>
<tr>
<td><strong>Current portion of income tax expense</strong></td>
<td><strong>$89,800</strong></td>
</tr>
</tbody>
</table>
Deferred portion of income tax expense

DIT account, December 31, 20X4

\[
\text{NBV/UCC: } $780,000 \text{ NBV} - 748,000 \text{ UCC} = 32,000 \times 38% \quad \text{CR} \quad $12,160
\]

Warranty in DIT

\[
\text{DR} \quad 2,204
\]

Total opening balance in DIT : $12,160 CR + $2,204 DR = $9,956 CR

DIT account, December 31, 20X5

\[
\begin{align*}
\text{NBV/UCC difference} \\
\text{NBV: } $780,000 \text{ Beginning} - 45,000 \text{ Depreciation} = $735,000 \\
\text{UCC: } $748,000 \text{ Beginning} - 50,000 \text{ CCA} = 698,000 \\
\text{Taxable temporary difference at year end} = 37,000 \\
\text{Tax rate} \times 40% \\
\text{Deferred tax liability, end of year} \quad \text{CR} \quad 14,800
\end{align*}
\]

\[
\begin{align*}
\text{Warranty liability, end of year: } $2,204/0.38^1 \\
= $5,800 \text{ Beginning balance} + 8,000 \text{ Expense} - 4,200 \text{ Costs} = $9,600 \\
\text{Deductible temporary difference at year end: } $9,600 - $0 \\
\text{Deferred tax asset, end of year: } $9,600 \times 40% \quad \text{DR} \quad 3,840 \\
\text{DIT account balance, December 31, 20X5} \quad \text{CR} \quad $10,960
\end{align*}
\]

\[
\begin{array}{c|c}
\text{DIT account} & \\
\hline
9,956 & \text{Bal., Dec. 31, 20X4 (12,160 – 2,204)} \\
1,004 & \text{DIT expense, 20X5 (10,960 – 9,956)} \\
10,960 & \text{Bal., Dec. 31, 20X5}
\end{array}
\]

1. Use the tax rate at the time of calculation of the original balance.
PART 4

Leases are rental agreements. However, because accounting is concerned with the substance of the transaction (what is actually happening) rather than its form (the contract), leases are often not accounted for as rental expense/income. Instead, under IFRS 16 Leases, a lessor (the entity that leases an asset to someone) must account for a lease as an asset sale with vendor financing (finance lease) if one or more of certain criteria are met. If none of the criteria are met, then the lessor must account for the lease as a rental agreement (operating lease). For their part, lessees (the persons or entities that lease an asset from the lessor) are to account for all leases (except for short-term and low-value leases) as a purchase with a financing component.

Lease classification — Lessor

Lessors must determine whether their leases are operating leases or finance leases. If any one of the following criteria is met, then the lease is considered a finance lease:

1. Does the lease transfer ownership of the asset to the lessee at the end of the lease term?
2. Does the lessee have a bargain purchase option (BPO) available? A BPO is an opportunity for the lessee to purchase the asset for a price much lower than its fair value at the end of the lease term. If there is a BPO, IFRS assumes that it will be exercised.
3. Does the lease term allow the lessee to benefit from the asset for the major part of the economic life of the asset, even if title is not transferred?
4. Is the present value of the lease payments approximately the same as the fair value?
5. Are the leased assets of such a specialized nature that only the lessee can use them without major modification?

Accounting for operating leases — Lessor

When the lease is determined to be an operating lease, the lessor will account for the lease as follows:

- The leased asset will remain on the lessor’s books, and depreciation will be calculated annually.
- Lease receipts will be classified as lease revenue, normally recognized on a straight-line basis over the lease term.
- Operating costs such as insurance and maintenance will be recognized as expenses following normal accounting principles.

Accounting for finance leases — Lessor

Once the lessor has determined that the lease is a finance lease, it must then assess whether the finance lease is a financing-type lease (direct financing lease) or a manufacturer/dealer-type lease. If the lessor acquires the asset and immediately leases it out, then it is a direct
financing lease. If, however, the lease terms are offered in order to help sell the lessor’s products, then it is a manufacturer/dealer lease.

For all finance leases, the lessor calculates the lease payments required to recover the fair value of the asset at its required rate of return over the life of the lease. This rate is called the interest rate implicit in the lease.

The lessor’s return on investment includes the expected value of the asset when returned (as represented by any guaranteed or unguaranteed residual value in the lease contract). If the lessee will pay any executory costs (such as insurance or maintenance), these costs are not included in the calculation of the lease payments and will reduce the appropriate expense when received.

With a finance lease, the leased asset is removed from the lessor’s books, and a receivable calculated as the present value of the lease payments takes its place. During the course of the lease, the lessor will recognize interest revenue on the lease based on the rate implicit in the lease and the opening balance in the lease receivable account. No depreciation is recorded because the asset has been removed from the books.

Note that when calculating present value (PV), because lease payments are made at the beginning of the period, the calculator should be set to BGN mode.

**Direct financing lease**
In a direct financing lease (provided by a finance company or other lender), a lease receivable is set up for the PV of the lease payments, and the asset is removed from the accounting records. Then the lease receivable is reduced as the payments are received. Remember that the first lease payment will be made at the lease’s inception.

**Example**
Marsden Corp., a public corporation, agreed to lease to Hiddleston Inc. equipment with a fair value of $3,200,000. The equipment was purchased at its fair value and leased out immediately. Lease payments will be made annually on January 1, beginning in 20X5, the inception of the lease. Other lease details are as follows:

- The lease term is six years.
- The life of the equipment is seven years.
- The non-guaranteed residual is $200,000.
- Marsden’s required rate of return for transactions of this nature is 8%, which is unknown to the lessee.
- Hiddleston’s incremental borrowing rate is 7%.

**Required:**

a) Determine the fixed payments due each year.
b) Determine whether the lease is a finance or operating lease from the perspective of the lessor.

c) Prepare Marsden’s journal entries on January 1, 20X5.

**Solution**

a) BGN; I/Y = 8; N = 6; PV = –$3,200,000; FV = $200,000; CPT PMT = $615,691

b) Criteria 2 and 4 on the list of criteria are met, as follows:

- **Criterion 2:**
  - Economic life $6 / 7 = 85.7\%$
  - Criterion met

- **Criterion 4:**
  - FMV = $3,200,000
  - PV of the lease payments = BGN; I/Y = 8; N = 6; PMT = $615,691; FV = $200,000; CPT PV = $3,200,000
  - $3,200,000 / $3,200,000 = 100\%, so the PV of the lease payments is approximately the same as the fair market value. Criterion met.

  The lease is therefore a finance lease.

c) **January 1, 20X5**

- **Dr Lease receivable (PV of lease payments)** 3,200,000
  - **Cr Equipment** 3,200,000

- **Dr Cash** 615,691
  - **Cr Lease receivable** 615,691

  Note that these entries could be combined, but they are separated here for clarity.

**Manufacturer/dealer lease**

In a manufacturer/dealer lease, when there is no unguaranteed residual, the lease receivable and sales revenue will be identical, calculated as the PV of the lease payments. In addition, a journal entry to record cost of goods sold (COGS) (DR) and inventory (CR) will be made to record the cost of the asset.

If there is an unguaranteed residual, the accounting is a little more complex: both the sales revenue and COGS will be reduced by the PV of the unguaranteed residual.

**Accounting for leases — Lessee**

The rules for dealing with leases under IFRS 16 changed as of January 2017, with the new standard coming into effect as of January 1, 2019.
Under the new standard, the normal rule is for lessees to capitalize all leases, recognizing an asset and a liability. Exceptions can be made, however, for leases of low-value assets or for short-term leases. At the start of a lease contract, the lessee recognizes a right-of-use (ROU) asset (the asset under lease) and a lease liability that reflects the obligation to make payments under the lease. During the course of the lease, the ROU asset is depreciated (based on the period of expected use, which may be either the asset’s useful life or the lease term), and interest expense is recorded based on the lease obligation and the rate implicit in the lease.

The cost of ROU assets consists of the following:

- the initial measurement of the lease liability, which excludes payments made on or before the start of the lease
- PLUS any lease payments made at or before the start date of the lease
- PLUS any initial direct costs incurred by the lessee
- PLUS the estimated costs of decommissioning and site restoration obligations
- LESS any lease incentives received

The lease liability is calculated using the following information:

- fixed payments less any lease incentives
- residual value guarantees payable by the lessee

but excludes such items as:

- executory costs (for example, maintenance and insurance)
- unguaranteed residual values

Items such as variable lease payments, the exercise price of a purchase option and penalties for lease termination will complicate the calculation and are dealt with in the course notes.

Generally, executory costs, as non-lease components, are accounted for separately from the lease but can be combined with it if the business elects to (as a practical expedient).

The discount rate depends on whether the lessee knows the rate implicit in the lease. If the lessee knows it, then that rate is used in calculating the PV. If the lessee does not know it, then the lessee uses its own incremental borrowing rate.

**Example**

Using the information from the previous lease example:

a) Calculate the amount of the ROU asset under the contract.

b) Prepare the journal entries for Hiddleston related to the lease and the initial lease payment, as well as any adjusting journal entries at year end.
Solution

a) Present value of lease payments: BGN; I/Y = 7; N = 6; PMT = $615,691; FV = $0; CPT PV = $3,140,146

b) The following journal entries would be prepared by Hiddleston related to the lease for its year ended December 31, 20X5:

January 1, 20X5
DR ROU equipment (PV of lease payments) 3,140,146
CR Lease liability 2,524,455
CR Cash 615,691

Note that when the first payment occurs at the beginning of the lease, the journal entry is always recorded as above. The lease is always recorded net of the first payment.

December 31, 20X5
DR Interest expense (2,524,455 × 7%) 176,712
CR Lease liability 176,712

DR Depreciation expense — ROU equipment 523,358
CR Accumulated depreciation — ROU equipment 523,358

Substantive differences between IFRS and ASPE — Leases
The ASPE criteria for determining whether a lease is an operating lease or a finance lease for the lessor are similar to the IFRS criteria. Under IFRS, the lease term is for the major part of the economic life of the asset, and under ASPE, the lease term is for at least 75% of the asset’s life. Under IFRS, the PV of the lease payment is substantially all of the fair value of the ROU asset, and for ASPE, the criterion specifies that the PV of the lease payments must be at least 90% of the value.

ASPE requires that the lessee discount the lease payments at the lesser of the rate implicit in the lease and the lessee’s incremental borrowing rate.

Accounting for pension plans and other employee future benefits — Governing standards
IAS 19 Employee Benefits governs both short-term benefits (such as wages, bonuses and vacation) and long-term benefits (such as sabbatical leave, long-term disability benefits and pensions).

Accounting for employee benefits — Short-term and long-term
Short-term benefits (payable within one year) are expensed as they are earned by the employee. Long-term benefits, with the exception of pensions, are expensed when the benefit
is earned at the PV of the estimated benefit. Remeasurement adjustments to the long-term benefits flow through profit or loss.

**Accounting for pension plans — Overview**

The essence of a pension plan is that in exchange for the employees working for the company today, the employer agrees to pay employees a salary now and a pension when they retire. The terms of the pension plan dictate an employee’s future entitlement. The important point to note is that the reason employees will receive the pension in the future is that they are working for the company now. Hence, in keeping with the precepts of accrual accounting, the cost of providing this future benefit needs to be recognized in the period during which the service is provided.

Because their potential payouts lie far in the future, pension plans involve many critical estimates. Actuaries use complex calculations to produce these estimates and provide the journal entries required to account for the pension plan. However, within this course, some problems may require you to solve for missing actuarial numbers, based on the accounting numbers provided.

**Accounting for defined contribution plans**

Defined contribution plans define the annual contributions employers must make. Pensions paid depend on contributions plus earnings. Accounting is straightforward; payments made are expensed.

**Accounting for defined benefit plans**

Defined benefit plans define the eventual benefits (pensions) paid to employees. Employers must make payments to a trustee that, over time, will fund the pensions to be paid to employees. Actuaries develop estimates of future retirement benefit payments to be made to an employee according to the stipulations contained in the pension agreement.

Following are formulas for calculating the present value of the defined benefit obligation (PVDBO) and plan assets at year end, and for pension expense for the year.

**PVDBO** (the present value of expected future payments to settle the obligation resulting from employee service in the current and prior periods):

- Beginning PVDBO balance
- +/- Value of plan amendments or past service costs (PSC) (this is the actuarial PV of pension entitlements granted for work in periods prior to a new pension plan, or the actuarial PV of retroactive improvements or curtailments to the plan)
- + Current service cost (CSC) (generally accrued at the end of the year, this is the actuarial PV of the cost of pension entitlements earned in the current period)
- – Payments to retirees (this reduces the obligation)
Interest on defined benefit obligation \[\text{Interest rate} \times (\text{Beginning defined benefit obligation} + \text{PSC})\]; changes to opening defined benefit obligation are pro-rated for months outstanding

Actuarial (gain) loss due to change in actuarial assumptions and experience adjustments (losses increase the obligation; gains reduce it)

\[\text{Ending PVDBO balance}\]

**Plan assets** (the assets held by the pension trust that will be used to fulfil the liability to employees when they retire):

- Opening assets, beginning of the year
- Funding (employer payments to plan)
- Payments to retirees (paid out of these assets)
- Accrued interest on plan assets \[\text{Interest rate} \times (\text{Beginning asset balance} + \text{Funding pro-rated by month} – \text{Payments pro-rated by month})\], which is the expected income on the assets
- Remeasurement gains (losses) — this is the difference between actual and expected income earned by plan assets (gain if actual > expected; loss if actual < expected)

\[\text{Closing balance, end of year}\]

**Net pension liability** = **Pension liabilities** – **Pension assets**

**Pension expense** = **CSC** + **PSC** + **Interest on PVDBO** – **Accrued interest on plan assets**

Assets held and invested by the trustee will generate earnings that will reduce the amount that needs to be contributed by the employer.

When completing the journal entries for defined benefit pension plans, remeasurement gains/losses arising from the difference between expected and actual returns on plan assets, as well as actuarial gains/losses due to revaluations, are recorded in OCI.

**Example**

The following information is available for Kahlı Corp.’s pension plan for 20X5. Kahlı reports under IFRS.

<table>
<thead>
<tr>
<th>20X5</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair value of plan assets, January 1</td>
<td>$320,000</td>
</tr>
<tr>
<td>Defined benefit obligation, January 1</td>
<td>430,000</td>
</tr>
<tr>
<td>CSC</td>
<td>36,600</td>
</tr>
<tr>
<td>Discount rate on the liability/plan assets</td>
<td>10%</td>
</tr>
<tr>
<td>Cost of past service benefits effective December 31, 20X4</td>
<td>80,000</td>
</tr>
</tbody>
</table>
Remeasurement loss  5,600
Employer contributions, January 1  56,000
Benefits paid to retirees, December 31  34,000
Actuarial loss due to change in actuarial assumptions, January 1  20,600

**Required:**

a) Calculate the plan assets at December 31, 20X5.

b) Calculate the PVDBO at December 31, 20X5.

c) Calculate the net pension liability at December 31, 20X5.

d) Calculate pension expense for the year ended December 31, 20X5.

**Solution**

a) **Reconciliation of pension assets**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening assets, January 1</td>
<td>$320,000</td>
</tr>
<tr>
<td>+ Funding (beginning of year)</td>
<td>56,000</td>
</tr>
<tr>
<td>– Payments to retirees (end of year)</td>
<td>(34,000)</td>
</tr>
<tr>
<td>+ Expected return on assets [10% × ($320,000 + $56,000)]</td>
<td>37,600</td>
</tr>
<tr>
<td>Expected value of plan assets</td>
<td>379,600</td>
</tr>
<tr>
<td>+ Unexpected gain (loss) on plan assets</td>
<td>(5,600)</td>
</tr>
<tr>
<td>Closing balance, December 31, 20X5</td>
<td>$374,000</td>
</tr>
</tbody>
</table>

b) **Reconciliation of defined benefit obligation**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening defined benefit obligation, January 1</td>
<td>$430,000</td>
</tr>
<tr>
<td>+ Past service cost, January 1, 20X5</td>
<td>80,000</td>
</tr>
<tr>
<td>+ CSC (accrued end of year)</td>
<td>36,600</td>
</tr>
<tr>
<td>– Payments to retirees</td>
<td>(34,000)</td>
</tr>
<tr>
<td>+ Interest [10% × ($430,000 + $80,000)]</td>
<td>51,000</td>
</tr>
<tr>
<td>+ Actuarial (gain) loss</td>
<td>20,600</td>
</tr>
<tr>
<td>Closing balance, December 31, 20X5</td>
<td>$584,200</td>
</tr>
</tbody>
</table>

c) **Net pension liability**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pension assets</td>
<td>$374,000</td>
</tr>
<tr>
<td>Pension liabilities</td>
<td>584,200</td>
</tr>
<tr>
<td>Net pension liability</td>
<td>$210,200</td>
</tr>
</tbody>
</table>

d) **Pension expense**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current service cost</td>
<td>$ 36,600</td>
</tr>
<tr>
<td>Past service cost</td>
<td>80,000</td>
</tr>
<tr>
<td>+ Interest on obligation</td>
<td>51,000</td>
</tr>
<tr>
<td>– Expected return on assets</td>
<td>(37,600)</td>
</tr>
<tr>
<td>Pension expense</td>
<td>$130,000</td>
</tr>
</tbody>
</table>
Substantive differences between IFRS and ASPE — Employee benefits

There are many similarities between ASPE Section 3462 Employee Future Benefits and IAS 19, in particular regarding the short- and long-term employee benefits and defined contribution plans. However, for defined benefit plans, ASPE does not use OCI, so remeasurements are expensed through profit and loss.

Practice questions

1. Multiple-choice questions:

   i. GBSJ Refining, a publicly traded company, has entered into an agreement with FP Inc. to obtain the use of a specialized piece of equipment through a lease. Significant modification would be required to make this equipment available to others after the lease has expired. Terms of the lease are as follows:

      | Description                        | Term     |
      |------------------------------------|----------|
      | Lease term                         | 8 years  |
      | Expected life of the equipment     | 10 years |
      | Implicit interest rate             | 6%; known to lessee |
      | GBSJ’s borrowing rate              | 4%       |
      | Annual lease minimum payment       | $80,000 (made at the beginning of the year) |
      | Fair value of the equipment        | $600,000 |

   Based on the information given, what is the amount of the ROU asset that GBSJ would record at the inception of the lease?

   a) $446,591  
   b) $496,784  
   c) $526,591  
   d) $600,000

   Solution

   Option c) is correct. The implicit interest rate is used rather than the lower of the two rates, as IFRS specifies that the discount rate to be used in calculating the PV of the minimum lease payments is the interest rate implicit in the lease, if this is known to the lessee.

   The ROU asset is the PV of the minimum lease payments:

   
   BGN; FV = $0; PMT = $80,000; I/Y = 6; N = 8; CPT PV = $526,591 (no entry need be made for FV when it is zero).

   Option a) is incorrect. It reduces the PV of the lease payments by the first payment. This calculates the lease liability at inception after the first payment.
Option b) is incorrect. It does not account for the fact that the payment is made at the beginning of the year, and it leaves the BGN option off.

Option d) is incorrect. This is the fair value of the equipment rather than the PV of the lease payments.

ii. Sunnyside Manufacturing is a private company using ASPE. It has entered into an agreement with FP Inc. to lease a piece of production equipment. Terms of the lease are as follows:

- Lease term: 5 years
- Expected life of the equipment: 6 years
- Implicit interest rate: 8%; known to the lessee
- Sunnyside’s borrowing rate: 6%
- Annual lease payment: $60,000 (made at the beginning of the year)
- Fair value of the equipment: $320,000
- Leased asset: Reverts to the lessor at the end of the lease

What is the amount and type of the liability?

a) An operating lease of $60,000
b) A finance lease of $198,728
c) A finance lease of $207,906
d) A finance lease of $260,000

Solution

Option c) is correct. Sunnyside is reporting using ASPE. Since the lease term is greater than 75% of the asset’s life ($5/6 = 83$%), the lease is considered a finance lease. Because ASPE is being used, the discount rate is the lesser of the implicit interest rate and Sunnyside’s borrowing rate.

The ROU asset is the fair value of the lease payments.

BGN; FV = $0; PMT = $60,000; I/Y = 6; N = 5; CPT PV = $267,906 (ROU)
Lease liability = ROU – Lease payment = $267,906 – $60,000 = $207,906

Option a) is incorrect. This mistakenly assumes it is an operating lease.

Option b) is incorrect. This uses the implicit interest rate of 8% instead of Sunnyside’s borrowing rate of 6%.

Option d) is incorrect. This uses the fair value less payment as the amount to capitalize.
iii. Erin Co. is a publicly traded company. The following information is available for Erin’s defined benefit pension plan for 20X5:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service costs for 20X5</td>
<td>$25,000</td>
</tr>
<tr>
<td>Accrued benefit obligation, January 1, 20X5</td>
<td>$298,000</td>
</tr>
<tr>
<td>Fair value of plan assets, January 1, 20X5</td>
<td>$172,500</td>
</tr>
<tr>
<td>Remeasurement gain</td>
<td>$7,750</td>
</tr>
<tr>
<td>Post-retirement benefits paid, December 31, 20X5</td>
<td>$35,000</td>
</tr>
<tr>
<td>Discount rate</td>
<td>9%</td>
</tr>
<tr>
<td>Cash paid into pension plan, December 31, 20X5</td>
<td>$75,000</td>
</tr>
</tbody>
</table>

What is the balance in pension assets on December 31, 20X5?

a) $228,025  
b) $235,775  
c) $263,025  
d) $317,800

**Solution**

Option b) is correct.

Pension assets on December 31, 20X5:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening balance in plan assets, January 1, 20X5</td>
<td>$172,500</td>
</tr>
<tr>
<td>Expected interest on plan</td>
<td>15,525</td>
</tr>
<tr>
<td>Post-retirement benefits paid</td>
<td>(35,000)</td>
</tr>
<tr>
<td>Cash paid into pension plan</td>
<td>75,000</td>
</tr>
<tr>
<td>Expected value of plan assets, December 31, 20X5</td>
<td>228,025</td>
</tr>
<tr>
<td>Remeasurement gain</td>
<td>7,750</td>
</tr>
<tr>
<td>Closing balance, plan assets, December 31, 20X5</td>
<td>$235,775</td>
</tr>
</tbody>
</table>

Option a) is incorrect. This does not include the remeasurement gain.

Option c) is incorrect. This excludes the benefits paid: $172,500 + $15,525 + $75,000 = $263,025.

Option d) is incorrect. This is the calculation for the defined pension obligation: $298,000 + $25,000 + $29,800 – $35,000 = $317,800.
2. Childcraft Corp. is a public company. It maintains a defined benefit plan for select employees. On January 1, 20X5, the actuarial obligation was increased by $720,000 because of a favourable plan amendment. Childcraft has a December 31 year end. Pertinent information with respect to its pension plan follows:

<table>
<thead>
<tr>
<th></th>
<th>20X5</th>
<th>20X4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liabilities — actuarial value, December 31</td>
<td>$9,333,600</td>
<td>$8,250,000</td>
</tr>
<tr>
<td>Assets — market value, December 31</td>
<td>6,450,000</td>
<td>5,800,000</td>
</tr>
<tr>
<td>Current service cost</td>
<td>320,000</td>
<td>N/A</td>
</tr>
<tr>
<td>Plan contribution, December 31, 20X5</td>
<td>290,000</td>
<td>N/A</td>
</tr>
<tr>
<td>Benefits paid, December 31, 20X5</td>
<td>254,000</td>
<td>N/A</td>
</tr>
<tr>
<td>Discount rate used in actuarial assumptions</td>
<td>8%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Required:**

a) Reconcile the change in pension assets in 20X5.

b) Reconcile the change in the defined pension obligation in 20X5.

c) Calculate pension expense for the year ended December 31, 20X5.

**Solution**

**CPA Way step: Analyze Major Issues**

a) **Reconciliation of change in pension assets**

<table>
<thead>
<tr>
<th></th>
<th>20X5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening assets, January 1</td>
<td>$5,800,000</td>
</tr>
<tr>
<td>+ Funding (end of year)</td>
<td>290,000</td>
</tr>
<tr>
<td>– Payments to retirees</td>
<td>(254,000)</td>
</tr>
<tr>
<td>+ Expected return on assets [8% × ($5,800,000)]</td>
<td>464,000</td>
</tr>
<tr>
<td>Expected value of plan assets</td>
<td>6,300,000</td>
</tr>
<tr>
<td>+ Unexpected gain (loss) on plan assets (calculated)</td>
<td><strong>150,000</strong></td>
</tr>
<tr>
<td>Closing balance, December 31, 20X5</td>
<td>$6,450,000</td>
</tr>
</tbody>
</table>

b) **Reconciliation of change in defined pension obligation**

<table>
<thead>
<tr>
<th></th>
<th>20X5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening accrued benefit obligation, January 1</td>
<td>$8,250,000</td>
</tr>
<tr>
<td>+ Plan amendment, January 1, 20X5</td>
<td>720,000</td>
</tr>
<tr>
<td>+ CSC (accrued end of year)</td>
<td>320,000</td>
</tr>
<tr>
<td>– Payments to retirees</td>
<td>(254,000)</td>
</tr>
<tr>
<td>+ Interest [8% × ($8,250,000 + $720,000)]</td>
<td>717,600</td>
</tr>
<tr>
<td>Expected closing balance</td>
<td>9,753,600</td>
</tr>
<tr>
<td>+ Actuarial (gain) loss (calculated)</td>
<td><strong>(420,000)</strong></td>
</tr>
<tr>
<td>Closing balance, December 31, 20X5</td>
<td>$9,333,600</td>
</tr>
</tbody>
</table>
c) **Pension expense**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current service cost</td>
<td>$320,000</td>
</tr>
<tr>
<td>Past service cost</td>
<td>$720,000</td>
</tr>
<tr>
<td>+ Interest on obligation</td>
<td>$717,600</td>
</tr>
<tr>
<td>– Expected return on assets</td>
<td>$(464,000)</td>
</tr>
<tr>
<td><strong>Pension expense</strong></td>
<td><strong>$1,293,600</strong></td>
</tr>
</tbody>
</table>
PART 5
Earnings per share (EPS) is a measure of corporate performance that calculates the earnings available for each common share outstanding. All public companies must disclose basic EPS. Organizations with a simple capital structure (that is, with no potentially dilutive instruments such as convertible bonds, preference shares and warrants or options) are required to present only basic EPS, while companies with complex capital structures must present basic and diluted EPS.

Governing standards
IAS 33 *Earnings per Share* is the standard for public companies. Private enterprises do not have to report EPS.

EPS measurement — Basic
The formula for basic EPS is as follows:

Basic EPS = Profit or loss available to common shareholders / Weighted average number of common shares outstanding (WASO)

Profit or loss, which may also be referred to as net income, is the profit reported after tax but before any adjustment for OCI.

Profit or loss that “belongs to” or is attributable to common shareholders is net income for the year less the amount that must be paid to preference shareholders for the current year. The amount that must be paid to preference shareholders for the current year is dividends declared if shares are non-cumulative and the annual dividend entitlement, declared or not, if shares are cumulative.

For WASO, determine the number of shares outstanding at each point in the year where a change in the number of shares outstanding occurs. Multiply this by the number of months of the year that they were outstanding (for example, 3/12). If additional shares are issued as a stock dividend or stock split, weight these shares back to the beginning of the year and work them back through all comparative data.

EPS measurement — Diluted
Diluted EPS must be calculated if there are options, contingently issuable shares, or preference shares or bonds that are convertible. It incorporates the effects of all dilutive potential common shares (PCS) outstanding during the period. Dilutive PCS are PCS that, if converted to common shares, would decrease EPS or increase the loss per share. Examples of possibly dilutive PCS include employee stock options, convertible bonds and warrants or options. Diluted EPS shows the maximum possible dilution to basic EPS.
The procedure for calculating diluted EPS is as follows:

1.Ascertain all PCS.
2.Calculate incremental EPS for each class of PCS to determine whether it will result in a dilution or anti-dilution of EPS. Incremental EPS is the change in the numerator of the basic EPS calculation if the instrument was fully converted to shares, divided by the change in the denominator, assuming full conversion. You must use after-tax amounts for items that are affected by tax, such as bond interest. In addition, if the instrument was issued partway through the current year, the numerator and denominator must be pro-rated for time as appropriate.
3.Order the incremental EPS from the most dilutive (lowest incremental EPS) to the least dilutive (highest incremental EPS).
4.Successively use the ordered incremental EPS to recalculate provisional EPS until diluted EPS is determined. If the EPS increases from the previous calculation during this process, then that instrument is anti-dilutive, and the diluted EPS will be the number calculated after the previous PCS. That is why it is critical to complete Step 3 (ordering) before calculating diluted EPS.

Generally, calculating the change in the numerator and denominator of the basic EPS calculation is straightforward. For example, when convertible preferred shares are assumed converted, the numerator will increase with the amount of the preference share dividend that will not have to be paid. In the case of a convertible bond, the numerator will increase by the amount of the after-tax interest that would not have to be paid if the bonds were converted. In both situations, the denominator will increase by the number of common shares that will be issued on conversion.

**Example**

Nalliah Corp. had the following capital structure at December 31, 20X5:

<table>
<thead>
<tr>
<th>Bond/Share Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-year, 6%, $1,000 face value bonds, each convertible to four common shares</td>
<td>$2,200,000</td>
</tr>
<tr>
<td>Preference shares, $6 cumulative, convertible to three common shares, 100,000 shares authorized, 12,000 issued and outstanding</td>
<td>$560,000</td>
</tr>
<tr>
<td>Common shares, unlimited authorized, 15,000 issued and outstanding at January 1, 20X5</td>
<td>$682,000</td>
</tr>
</tbody>
</table>

Net income for the year ended December 31, 20X5, was $780,000. Common share transactions were as follows:

- March 1: A 10% stock dividend was issued.
- July 1: 1,000 shares were reacquired and cancelled.

Dividends have not been declared for three years. The income tax rate is 40%.

What is the basic EPS for 20X5? What is the diluted EPS for 20X5?
Basic EPS

Weighted average number of common shares outstanding:

January 1: \(15,000 \times 1.1 \times 12/12 = 16,500\)
July 1: \((1,000) \times 6/12 = (500)\)

Profit or loss attributable to common shareholders:

Profit or loss \(\$780,000\)
Less: dividends on preference shares \((12,000 \times \$6)\) \((72,000)\)
Profit or loss attributable to common shareholders \(\$708,000\)

Basic EPS \((\$708,000/16,000) = \$44.25\)

Note that only the current year’s preference share entitlement to dividends is subtracted from the net income. This adjusts the current year’s net income for the current year’s dividends not attributable to common shareholders. Since dividends on cumulative preferred shares are always deducted in calculating basic EPS, dividends in arrears have already reduced basic EPS in a previous year and therefore do not reduce basic EPS when paid.

Diluted EPS

Step 1: There are two PCS: 6% convertible bonds and convertible preference shares.

Steps 2 and 3: Calculate each potentially dilutive instrument’s change in the numerator and denominator of the basic EPS calculation and rank from most to least dilutive.

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
<th>EPS effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>6% convertible bonds</td>
<td>Interest savings net of tax: ([6% \times $2,200,000 \times (1 - 40%)] = $79,200)</td>
<td>Increase in number of shares: (($2,200,000 / 1,000) \times 4 = 8,800) shares</td>
</tr>
<tr>
<td>Convertible preference shares</td>
<td>Savings on preference dividend (($6 \times 12,000) = $72,000)</td>
<td>Conversion of convertible preference shares ((12,000 \times 3) = 36,000) shares</td>
</tr>
</tbody>
</table>

Step 4:

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
<th>EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic EPS</td>
<td>$708,000</td>
<td>16,000</td>
</tr>
<tr>
<td>Convertible PS</td>
<td>72,000</td>
<td>36,000</td>
</tr>
<tr>
<td>Subtotal</td>
<td>780,000</td>
<td>52,000</td>
</tr>
<tr>
<td>6% bonds</td>
<td>79,200</td>
<td>8,800</td>
</tr>
<tr>
<td>Diluted EPS</td>
<td>$859,200</td>
<td>60,800</td>
</tr>
</tbody>
</table>
EPS measurement — Complicating factors

When basic EPS is negative, all PCS are anti-dilutive, as adding anything positive to the profit or loss attributable to the common shareholders and/or adding shares to WASO will decrease the loss per share. In other words, if basic EPS is negative, then diluted EPS will be equal to basic EPS.

EPS presentation and disclosure

Basic and diluted EPS from continuing operations must both be presented on the statement of comprehensive income, even if they are the same. EPS from discontinued operations may be presented or disclosed.

Accounting changes

Accounting changes can be dealt with either retrospectively (apply the change by restating prior-period financial results) or prospectively (apply the change in the current and future financial statements). There are three types of accounting changes:

- change in accounting policy, accounted for retrospectively
- change in accounting estimate, accounted for prospectively
- error correction, accounted for retrospectively

Accounting changes in the financial statements may have a dramatic impact on the consistency and comparability of year-to-year results.

Determining the nature of the accounting change

The following decision tree is useful in identifying the type of accounting change and how it should be treated.
Retrospective application of an accounting change is subject to the impracticability constraint. This constraint allows leeway in the application of retrospective adjustments if it is impracticable to apply the adjustments, even after the entity has made every reasonable effort to do so.

**Accounting for changes in accounting policy**

Under IFRS, voluntary accounting policy changes must result in information that is reliable and more relevant, to help preserve the interests of users.

A change in accounting policy occurs when an entity adopts a policy different from the one previously used. In order for users of the financial statements to understand the effects of a change in accounting policy:

- The previous year’s results must be restated.
- The nature and justification for the change must be disclosed.
- Items related to prior years (such as changes in accounting policies and accounting errors) are not recorded in the current year’s income but are reported retrospectively in the year to which they relate.

*Subject to the impracticability constraint.*
The cumulative effect of each adjustment to prior years, net of tax, is shown as an adjustment to retained earnings at the beginning of the period. For changes that involve current or deferred tax effects, those accounts are adjusted as well.

**Example**

Solterman Inc. began operations on January 1, 20X7. The company has always used first in, first out (FIFO) to value its inventories. At its year end, December 31, 20X9, management decided that the weighted average method would provide more relevant information given recent changes to industry practices. Solterman uses a perpetual inventory system.

The following are the balances of inventories at each date:

<table>
<thead>
<tr>
<th></th>
<th>FIFO</th>
<th>Weighted average</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 31, 20X8</td>
<td>$260,000</td>
<td>$230,000</td>
</tr>
<tr>
<td>December 31, 20X9</td>
<td>$310,000</td>
<td>$300,000</td>
</tr>
</tbody>
</table>

Prepare any entries required to adjust the records at December 31, 20X9, for the change in inventory valuation methods. Assume a tax rate of 40% and assume that closing entries have not yet been made for 20X9.

To adjust opening retained earnings:

- **DR Retained earnings** [$30,000 \times (1 – 0.40)] \(\implies\) 18,000
- **DR Income taxes receivable** ($30,000 \times 0.40) \(\implies\) 12,000
- **CR Inventory** \(\implies\) 30,000

This entry adjusts the beginning inventory down by $30,000. The opening retained earnings is lower, because net income for the previous year is lower as ending inventory is lower. The company would file an amendment to its tax return and receive a refund of taxes paid in 20X8.

A second entry is needed, however, because the previous entry is an adjustment to opening inventory. A year-end count has already been carried out, and ending inventory has been independently determined, although currently recorded using FIFO. If the adjustment to opening inventory above is left in inventory, then the inventory number or ending inventory for 20X9 will be misstated. The second required entry is:

- **DR Inventory** \(\implies\) 30,000
- **CR COGS** \(\implies\) 30,000
To adjust the 20X9 ending inventory:

<table>
<thead>
<tr>
<th></th>
<th>20X8 — change to ending inventory</th>
<th>20X9 — change to opening inventory</th>
<th>20X9 — change to ending inventory</th>
<th>Net effect on 20X9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening inventory</td>
<td>Unchanged</td>
<td>Decreased</td>
<td>Unchanged</td>
<td>Unchanged</td>
</tr>
<tr>
<td>Purchases</td>
<td>Unchanged</td>
<td>Unchanged</td>
<td>Unchanged</td>
<td>Unchanged</td>
</tr>
<tr>
<td>Cost of goods available for sale</td>
<td>Unchanged</td>
<td>Decreased</td>
<td>Unchanged</td>
<td>Unchanged</td>
</tr>
<tr>
<td>Ending inventory</td>
<td>Decreased $30,000</td>
<td>Unchanged by 20X8 adjustment</td>
<td>Decreased $10,000</td>
<td>Decreased $10,000</td>
</tr>
<tr>
<td>COGS</td>
<td>Increased $30,000</td>
<td>Decreased $30,000</td>
<td>Increased</td>
<td>Decreased $20,000</td>
</tr>
<tr>
<td>Effect on net income</td>
<td>Decreased $30,000</td>
<td>Increased $30,000</td>
<td>Decreased $10,000</td>
<td>Increased $20,000</td>
</tr>
</tbody>
</table>

To adjust the 20X9 ending inventory:
DR COGS 10,000
CR Inventory 10,000

This journal entry adjusts inventory to the weighted average cost amount, based on the year-end count.

A single journal entry may be prepared to record the 20X9 adjustments, but separate entries have been prepared to illustrate that the opening and closing inventory adjustments both affect profit in the second year.

To record taxes on the net credit change to COGS in the current year from the above entries, which results in a net increase in income tax expense:
DR Income tax expense ($20,000 × 0.4) 8,000
CR Income tax payable 8,000

**Accounting for changes in estimates**

Changes in estimates are accounted for prospectively, not retroactively. The prospective treatment means that the new policy is put in use, based on existing balances, as of the beginning of the current fiscal year, regardless of when in the year the change was identified. This also applies to changes in policy arising from new standards when those standards allow for prospective application, and to other changes if it is not practicable to use other methods.

**Example**

Kumar Corp. revised its maintenance and repair policy on equipment as of January 1, 20X5. As a result, the expected useful life has increased, as has the residual value. Following is information regarding the equipment at December 31, 20X5, the company’s year end:

- The equipment was purchased on January 1, 20X3.
The balance in equipment is $480,000 and in “accumulated depreciation — equipment,” $120,000. No depreciation has yet been charged for 20X5.
Kumar uses straight-line depreciation.
The total useful life will be increased by four years.
The new residual value is $20,000; the original was $0.

Should the adjustment be retrospective or prospective? Why?

Because there are new maintenance policies in place, you are dealing with new information. Therefore, this will be accounted for prospectively. It is not an error, because the underlying circumstances have changed.

Journal entry required to record depreciation expense on the equipment for the year ended December 31, 20X5:

In this scenario, it is necessary to first calculate the originally estimated life of the asset.

\[
\frac{480,000}{\text{number of years}} \times 2 = 120,000
\]
\[
\frac{480,000}{\text{number of years}} = 60,000
\]
\[
= 480,000 \div 60,000 = 8 \text{ years}
\]

Revised depreciation expense per year, calculated as the revised remaining depreciable amount divided by the revised remaining useful life:

\[
= \frac{(480,000 - 120,000) \text{ NBV} - 20,000}{(8 \text{ original} + 4 \text{ additional years} - 2 \text{ already passed})}
\]
\[
= $34,000 \text{ per year}
\]

December 31, 20X5
DR Depreciation expense — equipment 34,000
CR Accumulated depreciation — equipment 34,000

**Accounting for prior-period errors**

Errors are corrected retrospectively with restatement.

**Example**

In 20X7, it was determined that in 20X5, James Inc. had failed to adjust rent expense of $400,000 that had been paid in advance in 20X4. The amount is material. The tax rate is 40%.

The journal entry necessary to correct the prior-year error at December 31, 20X7, is as follows:

December 31, 20X7
DR Retained earnings \([400,000 \times (1 - 0.4)]\) 240,000
DR DIT account \((400,000 \times 0.4)\) 160,000
CR Prepaid rent 400,000
As the error involves a temporary difference (prepaid rent), the tax effects of the error must be debited to the deferred income tax account, as it is reversing the original DIT liability.

Practice questions

1. Multiple-choice questions:

   i. Which of the following is a distinguishing factor in classifying an item as a change in accounting estimate as opposed to the correction of an error?

      a) A change in accounting estimate is largely a matter of professional opinion as opposed to a question of fact.
      b) A change in accounting estimate results from new information.
      c) A change in accounting estimate affects more than one accounting period.
      d) A change in accounting estimate is very rare.

   Solution

   Option b) is correct. A change in accounting estimate is an adjustment of the carrying amount of an asset or a liability, or the amount of the periodic consumption of an asset, that results from the assessment of the present status of, and expected future benefits and obligations associated with, assets and liabilities. Changes in accounting estimates result from new information or new developments and, accordingly, are not corrections of errors.

   Option a) is incorrect. While this sounds reasonable, it is not the important distinguishing factor because a change in estimate must be supported by more than opinion.

   Option c) is incorrect. A change in estimate could affect more than one period, but this could also be true of the correction of an error. Therefore, this is not a distinguishing factor.

   Option d) is incorrect. The frequency of occurrence is not a determining factor in classification.

   ii. TL Co. purchased a machine with an estimated six-year useful life on April 1, 20X5, for $12,000. TL incorrectly expensed this machine in 20X5, and the error was discovered in 20X6. Assume that TL uses straight-line depreciation, that there is no income tax and that the 20X6 books are not closed. What would be the impact on retained earnings on December 31, 20X6, to correct this error?

      a) There would be no impact on retained earnings.
      b) Decrease retained earnings by $3,500.
      c) Increase retained earnings by $8,500.
      d) Increase retained earnings by $10,500.
Solution

Option d) is correct. The entry to correct this error is shown below:

\[
\begin{align*}
\text{DR Machinery} & \quad 12,000 \\
\text{DR Amortization expense (20X6)} & \quad 2,000 \\
\text{CR Retained earnings} & \quad 10,500 \\
\text{CR Accumulated depreciation} & \quad 3,500 \\
(1.75^{1} \text{ years} \times \$12,000 / 6 \text{ years}) & \quad 1.75 \times 20 = 35 \text{ years since April 1 20X5}
\end{align*}
\]

As the 20X6 books are still open, amortization expense should be recorded for 20X6; therefore, retained earnings increase by $10,500.

Option a) is incorrect. The retained earnings will be impacted by the error correction.

Option b) is incorrect. It assumes that the impact on retained earnings is the same amount as the adjustment on accumulated depreciation (1.75 years \times \$12,000 / 6 years = \$3,500).

Option c) is incorrect. It estimates the impact on retained earnings by assuming that the 20X6 books are closed:

\[
\begin{align*}
\text{DR Machinery} & \quad 12,000 \\
\text{CR Retained earnings} & \quad 8,500 \\
\text{CR Accumulated depreciation} & \quad 3,500 \\
(1.75 \text{ years} \times \$12,000 / 6 \text{ years}) & \quad 1.75 \times 12 = 21 \text{ years since April 1 20X5}
\end{align*}
\]

2. The capital structure of Collins Corp. at December 31, 20X4, was as follows:

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference shares, $2 cumulative, each share convertible to five common shares, 5,000 shares issued and outstanding</td>
<td>$ 600,000</td>
</tr>
<tr>
<td>Common shares, unlimited shares authorized, 10,000 shares issued and outstanding</td>
<td>820,000</td>
</tr>
<tr>
<td>8% convertible bonds, each $1,000 bond convertible to 12 common shares</td>
<td>2,000,000</td>
</tr>
</tbody>
</table>

On October 1, 20X5, 12,000 common shares were issued for $744,000. Collins had a net income of $56,000 for the year ended December 31, 20X5. The income tax rate is 40%.

Required:

a) Calculate basic EPS for the year ended December 31, 20X5.
b) Calculate diluted EPS for the year ended December 31, 20X5.
Solution

CPA Way step: Conclude and Advise

Computation of basic EPS:

Weighted average number of common shares outstanding:
Shares outstanding — January 1 10,000 10,000
Weighted shares issued — October 1 12,000 × 3/12 3,000
Weighted average number of common shares outstanding 13,000

Profit or loss attributable to common shareholders:
Profit or loss $56,000
Less: dividends on preference shares (5,000 × $2) (10,000)
Profit or loss attributable to common shareholders $46,000

Profit or loss attributable to common shareholders $46,000
Weighted average number of shares outstanding 13,000

Basic EPS ($46,000 / 13,000) = $3.54

Effect of convertible preference shares:
Numerator:
Savings on preference dividend $10,000

Denominator:
Increase in number of shares (5,000 × 5) 25,000 shares

EPS effect = $10,000 = $0.40 per share — dilutive, as < $3.54
25,000

Effect of convertible bonds:
Numerator:
Interest savings (net of tax): [8% × $2,000,000 × (1 – 40%)] = $96,000

Denominator:
Increase in number of shares: ($2,000,000 / 1,000) × 12 = 24,000 shares

EPS effect = $96,000 = $4.00 per share — anti-dilutive, as > $3.54
24,000
Rank most to least dilutive. Because the convertible bonds are anti-dilutive, they will not be used in the calculation of diluted EPS. Therefore, only the convertible preference shares are used in the calculation.

<table>
<thead>
<tr>
<th></th>
<th>Numerator</th>
<th>Denominator</th>
<th>EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic EPS</td>
<td>$46,000</td>
<td>13,000</td>
<td>$3.54</td>
</tr>
<tr>
<td>Convertible PS</td>
<td>10,000</td>
<td>25,000</td>
<td></td>
</tr>
<tr>
<td>Diluted EPS</td>
<td>$56,000</td>
<td>38,000</td>
<td>$1.47</td>
</tr>
</tbody>
</table>
PART 6
The statement of cash flows (SCF) provides information about an enterprise’s cash flows to supplement the information in the statement of financial position (SFP) and the statement of comprehensive income (SCI). The SCF shows the relationship between income and cash flows from operations, it helps assess the impact of investing and financing decisions on cash flows, and it allows readers to assess financial flexibility and liquidity.

Sections and methods — Statement of cash flows
Operating cash flows are associated with the entity’s day-to-day activities, which are recorded under net income in the SCI. Investing cash flows are associated with long-term assets. Financing cash flows are caused by debt and share transactions. Investing and financing items appear on the SCF if they involve cash inflows or outflows during the period. Non-cash investing or financing transactions are excluded from the statement, but they must be disclosed if material.

If the indirect method is used to present cash flows from operations, the operating activities section will reconcile earnings to cash flows from operations. This involves adjusting for all non-cash revenue and expense items and changes in working capital. If the direct method is used, the operating activities section is essentially redone on a cash basis, and it will individually disclose cash received from customers, cash paid to suppliers, to employees, for operating expenses and for income taxes.

Specific transactions and the SCF
Following is a summary of how certain transactions fit into the SCF.

Contingent liabilities
Because contingent liabilities are not accrued in the financial statements and do not involve cash, they are not recorded on the SCF.

Accrued provisions
Under the indirect method, if a potential liability requires accrual as a provision rather than being a contingent liability, the provision expense must be added back to net income. Under the direct method, the provision will not be included on the SCF. Accordingly, if the expense is recorded as a separate expense, it will be ignored when the SCF is prepared; if the expense is one of several different types included in a single expense, such as operating expenses, it must be removed from the expense.

Decommissioning obligations
The recognition of a decommissioning obligation does not involve cash, as decommissioning costs will be incurred at some future date when the asset is no longer in use. As a result, decommissioning expenses should not be recorded on the SCF. Treatment under the indirect and direct methods is the same as for accrued provisions.
Deferred tax expense
The SCF will include only the amounts of income tax actually paid or received for the year. As deferred tax expense is a non-cash expense, it is not reported on the SCF. Accordingly, when the indirect method is used, the expense must be added back to net income as an adjustment to the cash flows from the operating activities section. The reverse is true for deferred tax recoveries — that is, they are subtracted from net income. In either case, no adjustment is required if the direct method of presentation is used.

However, we normally consider current and deferred taxes together when we evaluate cash flows arising from the payment of income taxes. Recall that income tax paid equals the sum of current and DIT expense less the sum of the change in current and DITs payable, where “change” is a positive number for increases and a negative number for decreases. Essentially, rather than ignoring the DIT expense, both the total income tax expense and the changes in the current and deferred tax balances on the SFP are included, and they offset each other; therefore, the resulting number is the cash flows from current income tax only.

Leases
On the SCF, the initial recognition of a leased asset and obligation is a non-cash transaction. Payment of the liability is a financing outflow. If the indirect method is used, depreciation is added back to net income.

Pensions
The SCF reflects cash paid in the operating activities section. Using the indirect method, the pension expense is added back to net income, and then the pension contributions are deducted in operating activities. The value of pension fund assets (held by the trustee) and the actuary’s estimate of the pension liability to employees must be disclosed. When the direct method is used, the amount paid to the pension trustee should be shown as a cash outflow, and if the expense is shown separately, the expense is ignored. If the expense is combined with other expenses in one category, the pension expense must be removed from the total expense when determining the amount paid for operating expenses.

Example
Moser Corp. has provided the following comparative data for the year ended 20X5. The company reports using IFRS.
Moser Corp.
Statement of financial position
As at December 31

<table>
<thead>
<tr>
<th>Assets</th>
<th>20X5</th>
<th>20X4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$107,000</td>
<td>$82,000</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>119,000</td>
<td>90,000</td>
</tr>
<tr>
<td>Allowance for doubtful accounts</td>
<td>(11,200)</td>
<td>(4,800)</td>
</tr>
<tr>
<td>Investments at FVPL</td>
<td>35,000</td>
<td>36,000</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>14,000</td>
<td>3,600</td>
</tr>
<tr>
<td>Inventory</td>
<td>175,000</td>
<td>102,000</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>455,000</td>
<td>360,000</td>
</tr>
<tr>
<td>(including assets under lease)</td>
<td>(231,000)</td>
<td>(174,000)</td>
</tr>
<tr>
<td>Accumulated depreciation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$662,800</td>
<td>$494,800</td>
</tr>
</tbody>
</table>

| Liabilities and shareholders’ equity        |       |        |
| Accounts payable                            | $70,000 | $78,400 |
| Salaries payable                            | 9,800  | 3,600  |
| Other accrued liabilities                   | 10,400 | 9,600  |
| Unearned revenue                            | 8,400  | 7,200  |
| Income taxes payable                        | 11,200 | 6,000  |
| DIT liability                               | 7,000  | 21,600 |
| Provision for lawsuit                       | 21,000 | —      |
| Obligation under lease                      | 35,000 | —      |
| Common shares                               | 217,000 | 162,000 |
| Preference shares                           | 28,000 | 21,600 |
| Retained earnings                           | 245,000 | 184,800 |
|                                             | $662,800 | $494,800 |

Moser Corp.
Statement of profit or loss
For the year ended December 31, 20X5

| Revenue                                     | $481,250 |
| COGS                                        | (168,750) |
| Operating expenses                          | (118,750) |
| Other operating expenses                    | (43,750)  |
| Unrealized holding loss on investments at FVPL| (1,000)   |
| Net income before taxes                     | 149,000  |
| Income tax expense                          | (44,700) |
| Net income after taxes                      | $104,300 |
Other information:

1. Moser Corp. elects to record interest as operating activities and dividends paid as financing activities.
2. The following were included in operating expenses:
   - salaries expense: $48,000
   - interest expense: $4,000
3. The accrual for the lawsuit was included in other operating expenses.
4. No preference dividends were issued during the year.
5. There were no purchases or sales of investments at FVPL during the year.
6. There were no sales of property, plant and equipment.
7. Accounts payable represents inventory purchases on account.
8. On December 31, 20X5, an ROU asset was acquired at a cost of $45,000, and the first lease payment was paid.

To prepare Moser's SCF for the year ended December 31, 20X5, using the direct method:

Moser Corp.
Statement of cash flows (direct)
For the year ended December 31, 20X5

Cash flows from operating activities:
- Cash received from customers (Note 1) $ 453,450
- Cash paid to suppliers (Note 2) (250,150)
- Cash paid to employees (Note 3) (41,800)
- Cash paid for operating expenses (Note 4) (35,700)
- Interest paid (4,000)
- Income taxes paid (Note 5) (54,100)
Cash used from operating activities $ 67,700

Cash flows from investing activities:
- Purchase of equipment (Note 6) $ (50,000)
Net cash from investing activities $ (50,000)

Cash flows from financing activities:
- Sale of common shares ($217,000 – $162,000) 55,000
- Sale of preference shares ($28,000 – $21,600) 6,400
- Lease payment (10,000)
- Dividends paid on common shares (Note 7) (44,100)
Net cash from financing activities 7,300

Net increase in cash 25,000
Beginning cash 82,000
Ending cash $107,000
Notes:

1. Cash received from customers
   - Revenue: $481,250
   - Less: increase in accounts receivable ($119,000 – $90,000) = (29,000)
   - Add: increase in unearned revenue ($8,400 – $7,200) = 1,200
   - Cash received from customers: $453,450

2. Cash paid to suppliers
   - COGS: $168,750
   - Add: increase in inventory ($175,000 – $102,000) = 73,000
   - Add: decrease in accounts payable ($78,400 – $70,000) = 8,400
   - Cash paid to suppliers: $250,150

3. Cash paid to employees
   - Salaries expense: $48,000
   - Less: increase in salaries payable ($9,800 – $3,600) = (6,200)
   - Cash paid to employees: $41,800

4. Cash paid for operating expenses
   - Operating expenses: $118,750
   - Less: bad debt expense ($11,200 – $4,800) = (6,400)
   - Less: depreciation expense ($231,000 – $174,000) = (57,000)
   - Less: salaries expense (separated out in direct method) = (48,000)
   - Less: interest expense (separated out in direct method) = (4,000)
   - Less: increase in other accrued liabilities ($10,400 – $9,600) = (800)
   - Less: increase in provision for lawsuit ($21,000 – $0) = (21,000)
   - Add: increase in prepaid expense ($14,000 – $3,600) = 10,400
   - Cash paid for operating expenses: $35,700

5. Income taxes paid
   - Income tax expense: $44,700
   - Add: decrease in DIT liability ($21,600 – $7,000) = 14,600
   - Less: increase in income taxes payable ($11,200 – $6,000) = (5,200)
   - Income taxes paid: $54,100

6. Cash flows from investing activities
   - December 31, 20X5, balance in PPE: $455,000
   - Less: December 31, 20X4, balance in PPE: $360,000
   - Net increase in PPE: 95,000
   - Less: ROU asset: 45,000
   - Purchase of equipment: $50,000

(Net increase in PPE: $45,000)
(7) Dividends paid on common shares

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning retained earnings</td>
<td>184,800</td>
</tr>
<tr>
<td>Ending retained earnings</td>
<td>245,000</td>
</tr>
<tr>
<td>Net income</td>
<td>104,300</td>
</tr>
<tr>
<td>Dividends paid</td>
<td>60,200</td>
</tr>
</tbody>
</table>

**Financial statement users**

There are many different types of financial statement users, and these can be either internal or external. Examples of internal users are management, the Board of Directors and employees. External users include shareholders, creditors, the Canada Revenue Agency and regulatory bodies. Each has a unique view of the financial statements and uses them in different ways. Only one set of financial statements is prepared to satisfy all users’ needs, so it is important that companies choose accounting policies and present their financial information in a manner that most accurately reflects the results of their operations and net assets.

**Interim financial reporting**

Interim financial reports are financial statements that are prepared and distributed for periods shorter than the fiscal year, as some regulatory organizations (such as stock exchanges) require more frequent financial statement publication. IAS 1 *Presentation of Financial Statements* and IAS 34 *Interim Financial Reporting* govern these interim presentations.

**Management discussion and analysis**

The management, discussion and analysis (MD&A) section of a company’s annual report is designed to give users information to supplement the four financial statements and their notes. The requirements for the MD&A’s preparation have not been established by IFRS, but rather by securities regulators. CPA Canada issued a guidance document, which outlines the MD&A’s objectives:

- Enable readers to view the company’s performance, financial condition and future prospects through management’s eyes.
- Provide material information to readers that may not be fully reflected in the financial statements.
- Supplement and complement the information in the financial statements by helping readers to understand what the financial statements show and do not show.
- Outline key trends and risks that have affected or could affect the current and future financial statements.
- Provide discussion about the quality of earnings and cash flows, and potential variability of the components within earnings and cash flows.
In addition, the MD&A should provide users with information about:

- core businesses
- objectives and strategy
- capability to deliver results — resources, risks and relationships
- results and outlook
- key performance measures and indicators

**Financial statement analysis**

Ratio analysis and benchmarking help users to review a company’s year-to-year performance (trend analysis) as well as compare its performance with that of other companies in the industry. In addition, this analysis allows users to refer to past performance to predict future outcomes when no significant changes in operations have occurred. Following is a brief discussion about four categories of ratios.

**Profitability**

These ratios help users to analyze the efficiency of a company’s operations.

**Gross margin**

\[
\text{Gross margin} = \frac{\text{Gross profit}}{\text{Net sales}} \times 100\%
\]

The gross margin is the percentage difference between the cost of the product sold and its sales value. A higher value is generally more favourable.

**Profit margin on sales**

\[
\text{Profit margin on sales} = \frac{\text{Profit or loss}}{\text{Net sales}} \times 100\%
\]

The profit margin on sales assesses the income level after the deduction of operating expenses and shows, for each dollar of sales, how much is being returned in profit or loss. A higher positive value is more favourable.

EPS is another profitability ratio.
**Liquidity**

Liquidity ratios are designed to provide information regarding a company’s ability to pay its liabilities as they come due.

**Current ratio**

\[
\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}
\]

The current ratio calculates the company’s ability to pay its current debts as they come due, with its more liquid (current) assets. Higher is generally better, although the company might be using its short-term assets to generate more long-term profits, which would reduce the ratio.

Following are some points to look for in liquidity ratios:

- Always look at the industry average. A low ratio may be the industry norm.
- A high ratio could mean that the entity maintains excessive cash on hand, accounts receivable, or inventory balances. Idle cash earns little or no return, negatively affecting the total return to shareholders.
- Ratios that are decreasing over time may indicate liquidity problems.

**Asset management**

Asset management ratios are designed to provide information about how fast cash is flowing into or out of a company and how efficiently it is managing its asset resources.

**Accounts receivable turnover**

\[
\text{Accounts receivable turnover} = \frac{\text{Credit sales}}{\text{Average accounts receivable}}
\]

The accounts receivable (A/R) turnover ratio gives the average number of times A/R is collected during the year. Ideally, credit sales are used, but if that information is not available, then total revenue is used. A higher ratio indicates a better use of assets, as cash is tied up in accounts receivable for a shorter period of time. It is possible, however, for the ratio to be too high. If it is difficult to obtain credit or if payment terms are too tight compared to competitors, sales may be lost to them.

**Accounts receivable days**

\[
\text{A/R days} = \frac{\text{Average accounts receivable}}{\text{Credit sales}} \times 365
\]
Alternative calculation:

A/R days = $\frac{365}{\text{accounts receivable turnover}}$

The A/R days ratio translates the A/R turnover ratio into the average number of days it takes to collect A/R. Lower is more favourable; however, if it is too low, perhaps the company’s credit terms could be less stringent. If they are too stringent, it is possible the company is losing sales to competitors with better terms from the customers’ perspective.

**Solvency**

The more debt a company has in relation to its shareholders’ equity, the riskier the company is deemed to be. These ratios measure the level of indebtedness (riskiness) of a company and how well it is able to pay its debt.

**Total debt to equity**

Total debt to equity = $\frac{\text{Total debt}}{\text{Shareholders’ equity}}$

The percentage calculated shows the total debt-to-equity capital. Interpretation of the ratio requires significant judgment and an understanding of the risks faced within the industry and the company. A higher ratio is less favourable in a company with unstable cash flows, as the company is more highly leveraged (riskier). At the same time, a very low debt-to-equity ratio is less favourable in a stable operating environment, as the opportunity to benefit from the use of leverage is forgone.

**Interest coverage / Times interest earned**

Interest coverage = $\frac{\text{Earnings before interest and taxes (EBIT)}}{\text{Interest charges}}$

Interest coverage is a measure of a company’s ability to make its interest payments, effectively calculating the number of times it could pay its interest charges from current EBIT.
Practice questions

1. Multiple-choice questions

i. The following information was extracted from Reboot Inc.’s financial records at year end:

<table>
<thead>
<tr>
<th></th>
<th>Dec. 31, 20X5</th>
<th>Dec. 31, 20X4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income taxes payable</td>
<td>$3,000</td>
<td>$2,600</td>
</tr>
<tr>
<td>DIT</td>
<td>2,800</td>
<td>3,400</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>9,000</td>
<td>8,700</td>
</tr>
</tbody>
</table>

What is the total of income taxes paid that will be presented on the 20X5 SCF under the direct method?

a) $8,000  
b) $8,800  
c) $9,000  
d) $9,200

Solution

Option d) is correct. Income taxes paid = Income tax expense – Increase in taxes payable + Decrease in DIT = 9,000 – 400 + 600 = $9,200.

Option a) is incorrect. This subtracted the decrease in DIT.

Option b) is incorrect. This added the increase in taxes payable and subtracted the decrease in DIT.

Option c) is incorrect. This did not take into account taxes payable and DIT.

ii. Rajan Marketing has a markup of 25% and a gross profit of $460,000 for 20X5. What were sales for the year?

a) $345,000  
b) $575,000  
c) $1,840,000  
d) $2,300,000

Solution

Option d) is correct. If the markup is 25%, then revenue is 125% of COGS.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>125%</td>
</tr>
<tr>
<td>COGS</td>
<td>100%</td>
</tr>
<tr>
<td>Gross profit</td>
<td>25%*</td>
</tr>
</tbody>
</table>

\((460,000 / 0.25^*)\) COGS + 460,000 gross margin = 1,840,000 + 460,000 = $2,300,000 sales revenue

Option a) is incorrect. This assumed $460,000 was the total sales and then calculated COGS.

Option b) is incorrect. This assumed $460,000 was COGS and then added the markup.

Option c) is incorrect. This correctly calculated COGS but neglected to add gross profit to get sales.

iii. The following information relates to a company's financial statements at year end for 20X4 and 20X5.

<table>
<thead>
<tr>
<th></th>
<th>20X5</th>
<th>20X4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts receivable</td>
<td>$330,000</td>
<td>$360,000</td>
</tr>
<tr>
<td>Sales</td>
<td>$1,820,000</td>
<td>$720,000</td>
</tr>
<tr>
<td>Percentage of sales on credit</td>
<td>30%</td>
<td>28%</td>
</tr>
</tbody>
</table>

What is the accounts receivable turnover for 20X5?

a) 1.58
b) 1.66
c) 5.28
d) 5.52

**Solution**

Option a) is correct. \((0.30 \times 1,820,000) / [(330,000 + 360,000) / 2] = 1.58 \text{ times.}\)

Option b) is incorrect. This took only current A/R — it did not average beginning and ending A/R.

Option c) is incorrect. This used total sales instead of credit sales.

Option d) is incorrect. This used total sales and did not average A/R.
2. Zimmerman Corp. has provided the following comparative data for the year ended 20X5.

**Zimmerman Corp.**  
**Statement of financial position**  
**As at December 31**

<table>
<thead>
<tr>
<th>Assets</th>
<th>20X5</th>
<th>20X4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$200,400</td>
<td>$197,600</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>142,800</td>
<td>117,000</td>
</tr>
<tr>
<td>Allowance for doubtful accounts</td>
<td>(13,440)</td>
<td>(6,240)</td>
</tr>
<tr>
<td>Investments at FVPL</td>
<td>42,000</td>
<td>46,800</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>16,800</td>
<td>4,680</td>
</tr>
<tr>
<td>Inventory</td>
<td>210,000</td>
<td>132,600</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>546,000</td>
<td>468,000</td>
</tr>
<tr>
<td>(including assets under lease)</td>
<td>(277,200)</td>
<td>(226,200)</td>
</tr>
<tr>
<td>Accumulated depreciation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$867,360          $734,240

<table>
<thead>
<tr>
<th>Liabilities and shareholders’ equity</th>
<th>20X5</th>
<th>20X4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts payable</td>
<td>$84,000</td>
<td>$101,920</td>
</tr>
<tr>
<td>Salaries payable</td>
<td>11,760</td>
<td>4,680</td>
</tr>
<tr>
<td>Other accrued liabilities</td>
<td>12,480</td>
<td>12,480</td>
</tr>
<tr>
<td>Unearned revenue</td>
<td>10,080</td>
<td>9,360</td>
</tr>
<tr>
<td>Income taxes payable</td>
<td>13,440</td>
<td>7,800</td>
</tr>
<tr>
<td>DIT liability</td>
<td>8,400</td>
<td>28,080</td>
</tr>
<tr>
<td>Pension liability</td>
<td>72,000</td>
<td>91,000</td>
</tr>
<tr>
<td>Provision for lawsuit</td>
<td>25,200</td>
<td>—</td>
</tr>
<tr>
<td>Obligation under lease</td>
<td>42,000</td>
<td>—</td>
</tr>
<tr>
<td>Common shares</td>
<td>260,400</td>
<td>210,600</td>
</tr>
<tr>
<td>Preference shares</td>
<td>33,600</td>
<td>28,080</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>294,000</td>
<td>240,240</td>
</tr>
</tbody>
</table>

$867,360          $734,240
Zimmerman Corp.  
Statement of operations  
For the year ended December 31, 20X5

Revenue $ 560,200  
COGS (182,600)  
Operating expenses (134,800)  
Other operating expenses (55,000)  
Unrealized holding loss on investments at FVPL (4,800)  
Net income before taxes 183,000  
Income tax expense (54,900)  
Net income after taxes $ 128,100

Additional information:
1. Pension expense of $21,000 is included in operating expenses. The company’s contributions to the pension plan in 20X5 were $40,000.  
2. No FVPL investments were purchased or sold during the year.  
3. On December 31, 20X5, the company leased an asset (fair value of $46,000) and made the first lease payment of $4,000.  
4. Plant assets were purchased for $32,000.  
5. During the year, preference and common shares were sold.  
6. Zimmerman elects to record interest paid as an operating activity and dividends paid as a financing activity.

Required:  
Prepare Zimmerman’s SCF for the year ended December 31, 20X5, using the indirect method.

Solution

CPA Way step: Assess the Situation
Zimmerman needs a Statement of Cash Flow for the year ended December 31, 20X5.

CPA Way step: Analyze Major Issues
1. The lawsuit expense represents a non-cash expense, and it must be added back to profit or loss in the “cash flows from operating activities” section.  
2. The value of the investments classified at FVPL has decreased by $4,800, an unrealized loss that does not involve cash flows. Hence, the unrealized loss must be added back as an adjustment to net income.  
3. $54,900 income tax expense + $19,680 decrease in DITs = $74,580 income taxes paid.
4. $240,240 opening retained earnings + $128,100 net income – $294,000 closing balance = $74,340 cash dividends declared. Since there are no dividends payable outstanding, the entire balance must have been paid in cash. There are also no opening dividends payable that would have been paid in cash in the current year.

5. For common and preference shares issued, subtract the beginning balance from the ending:
   - Common = $260,400 – $210,600 = $49,800
   - Preference = $33,600 – $28,080 = $5,520

**CPA Way step: Conclude and Advise**

<table>
<thead>
<tr>
<th>Cash flows from operating activities</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit or loss</td>
<td>$128,100</td>
</tr>
<tr>
<td>Adjustments for:</td>
<td></td>
</tr>
<tr>
<td>Depreciation ($277,200 – $226,200)</td>
<td>51,000</td>
</tr>
<tr>
<td>Bad debt expense ($13,440 – $6,240)</td>
<td>7,200</td>
</tr>
<tr>
<td>Provision for lawsuit expense 1</td>
<td>25,200</td>
</tr>
<tr>
<td>Holding loss on securities classified as FVPL 2</td>
<td>4,800</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>54,900</td>
</tr>
<tr>
<td>Pension expense</td>
<td>21,000</td>
</tr>
<tr>
<td></td>
<td>292,200</td>
</tr>
<tr>
<td>Increase in accounts receivable</td>
<td>(25,800)</td>
</tr>
<tr>
<td>Increase in inventory</td>
<td>(77,400)</td>
</tr>
<tr>
<td>Increase in prepaid expenses</td>
<td>(12,120)</td>
</tr>
<tr>
<td>Decrease in accounts payable</td>
<td>(17,920)</td>
</tr>
<tr>
<td>Increase in salaries payable</td>
<td>7,080</td>
</tr>
<tr>
<td>Increase in other accrued liabilities</td>
<td>—</td>
</tr>
<tr>
<td>Increase in unearned revenue</td>
<td>720</td>
</tr>
<tr>
<td>Increase in income taxes payable</td>
<td>5,640</td>
</tr>
<tr>
<td>Cash generated from operating activities</td>
<td>172,400</td>
</tr>
<tr>
<td>Remittance to pension trust</td>
<td>(40,000)</td>
</tr>
<tr>
<td>Income taxes paid</td>
<td>3 (74,580)</td>
</tr>
<tr>
<td>Net cash from operating activities</td>
<td>$57,820</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cash flows from investing activities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase of plant assets</td>
<td>(32,000)</td>
</tr>
<tr>
<td>Net cash used in investing activities</td>
<td>(32,000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cash flows from financing activities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment under lease</td>
<td>(4,000)</td>
</tr>
<tr>
<td>Payment of cash dividends</td>
<td>4 (74,340)</td>
</tr>
<tr>
<td>Sale of common shares</td>
<td>5 49,800</td>
</tr>
<tr>
<td>Sale of preference shares</td>
<td>5 5,520</td>
</tr>
<tr>
<td>Description</td>
<td>Amount</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Net cash from financing activities</td>
<td>(23,020)</td>
</tr>
<tr>
<td>Net increase in cash</td>
<td>2,800</td>
</tr>
<tr>
<td>Cash, January 1, 20X5</td>
<td>197,600</td>
</tr>
<tr>
<td>Cash, December 31, 20X5</td>
<td>$200,400</td>
</tr>
</tbody>
</table>