**Advanced Long-term Debt-Paying Ability Analysis**

**Learning Outcomes**

After completing this module, students will be able to:

1. Review the potential impact of future income tax assets or liabilities on operations.
2. Capitalize leases and other forms of off-balance sheet financing.
3. Assess the disclosures for defined contribution and defined benefit plans.
4. Appraise different financial risks and risk management strategies.
5. Demonstrate hedge accounting using fair value and cash flow hedges.
6. Account for compound financial instruments and financial guarantees.
7. Classify financial instruments as liabilities or equities.
8. Assess executive and director compensation systems.
9. Evaluate a company’s long-term debt-paying ability.

**Introduction**

There is much more to financial statement analysis than calculating a 5-year trend of some key financial ratios with an industry average or benchmark. The interim and annual financial reports corporations issue are complex documents based on 61 IFRS Standards and Interpretations and 12 Canadian Securities Administrators (CSA) National and Multilateral Instruments. Financial analysts must thoroughly understand these complex documents and how different financial statement items are recognized and disclosed to assess a firm’s performance. This module examines long-term debt-paying ability, including income taxes, leases, benefit plans, financial liabilities, and share-based compensation.

**1.1 | Income Taxes (IAS 12)**

A company’s accounting income under IFRS and taxable income under the Income Tax Act (ITA) differ. Accountants must reconcile these two amounts at year-end to correctly record income taxes in the financial statements. Differences are classified as either:

**Permanent differences.** Accounting transactions that are never taxable or tax-deductible under the ITA but are included as revenues and expenses when calculating accounting income under IFRS. For example, intercorporate dividends between Canadian corporations are not taxed, while goodwill impairments cannot be deducted under the ITA but are recognized under IFRS.

**Temporary differences.** Accounting transactions that are taxable or tax-deductible under both the ITA and IFRS, but the timing varies. For example, depreciation is often calculated using the straight-line method, but companies must use an accelerated depreciation method called Capital Cost Allowance (CCA) for tax purposes. The yearly depreciation and CCA will differ in each period. Still, the total amount deducted over the asset’s life will be the same using these methods.

Permanent differences are added to or subtracted from accounting income, giving adjusted accounting income. Temporary differences are added to or subtracted from adjusted accounting income, giving taxable income. Exhibit 1 reconciles the accounting and taxable income of Rodeo Industries.

**Exhibit 1: Tax Reconciliation Table**

|  |  |
| --- | --- |
| (CAD ‘000) | **Income Before Tax** |
| Accounting income | 910,000 |
|  Permanent differences | 10,150 |
| Adjusted accounting income | 920,150 |
|  Temporary differences | 177,800 |
| Taxable income | 1,097,950 |

Income tax expense for accounting purposes is calculated based on adjusted accounting income, not accounting income. IFRS does not include permanent differences in the calculation of income tax expense, as these differences will never be taxable or tax-deductible under the ITA. Income tax expense equals CAD 230,038 (CAD 920,150 x 0.25), assuming an income tax rate of 25.0%. Taxable income is higher than adjusted accounting income because of the positive temporary differences, so Rodeo would have to pay taxes of CAD 274,488 (CAD 1,097,950 x 0.25). This amount is called the current income tax expense.

|  |  |
| --- | --- |
| Current income tax expense | 274,488 |
|  Income taxable payable | 274,488 |

Rodeo pays CAD 44,450 (CAD 274,488 - CAD 230,038) more in income tax expense due to the temporary differences. This may occur because the ITA requires Rodeo to delay deducting certain expenses to later periods or pay taxes on revenues earlier than IFRS prescribes. The additional taxes paid are called deferred income taxes.

|  |  |
| --- | --- |
| Deferred income taxes | 44,450 |
|  Deferred income tax expense | 44,450 |

Income tax expense for accounting purposes is the net of current income tax expense and deferred income tax expense. Income tax expense is presented on the income statement as:

|  |  |  |
| --- | --- | --- |
| Income before taxes |  | 910,000 |
| Income tax expense |  |  |
|  Current  | (274,488) |  |
|  Deferred | 44,450 | (230,038) |
| Net income |  | 679,962 |

Income tax is CAD 230,038, but Rodeo must pay CAD 274,488 or CAD 44,450 more due to the temporary differences. The prepaid income taxes of CAD 44,450 are presented as a non-current deferred income tax asset on the balance sheet. This asset will disappear in the future as the temporary differences reverse. Deferred income tax assets occur if taxable income is above adjusted accounting income. Likewise, deferred income tax liabilities occur if taxable income is below adjusted accounting income, meaning the company puts off paying taxes. These amounts are presented on the balance sheet as:

|  |  |  |  |
| --- | --- | --- | --- |
| Other Assets |  | Current Liabilities |  |
|  Deferred income tax assets | 44,450 |  Income taxes payable | 274,488 |

Temporary differences can be either:

**Deductible temporary differences**. Accounting transactions that will be tax deductible in the future, resulting in a deferred income tax asset. For example, a company sells a product with a 2-year warranty and records estimated warranty expenses of CAD 100,000 at the time of sale. Warranty expenses are only recognized for tax purposes when they are incurred. If the company incurred CAD 40,000 in the first year, a deductible temporary difference of CAD 60,000 (CAD 100,000 – CAD 40,000) would generate a CAD 15,000 (CAD 60,000 x 0.25) deferred income tax asset on the balance sheet. This asset represents the future tax savings to be realized when the remaining CAD 60,000 in warranty expenses are deducted next year.

**Taxable temporary differences**. Accounting transactions that will be taxable in the future will result in a deferred income tax liability. For example, a company records straight-line depreciation of CAD 500,000 but claims CCA of CAD 1,000,000, reducing its taxable income and delaying paying CAD 125,000 (CAD 1,000,000 – CAD 500,00) in income taxes. These taxes will have to be paid in the future when CCA falls below straight-line depreciation, so a deferred income tax liability of CAD 50,000 is recognized.

When preparing a tax reconciliation table at year-end, companies have multiple deductible and taxable temporary differences. If the net amount is positive, taxable income will be above adjusted accounting income, and the company will prepay taxes, resulting in a deferred income tax asset. If the net amount is negative, taxable income will be below adjusted accounting income, and the company will delay paying some of its taxes, resulting in a deferred income tax liability.

IFRS requires that companies also provide a reconciliation of the statutory tax rate and the actual tax rate, showing the effects of the permanent differences and a breakdown of the temporary differences making up deferred income tax assets or liabilities, including any loss carryforwards.

**Loss Carrybacks and Carryforwards**

Business tax losses can be carried back three years and forward 20 years and applied against business tax profits, reducing the taxes paid. This means companies pay taxes on their lifetime business income. For example, assume a company earned CAD 50,000 yearly in its first three years of operations but lost CAD 200,000 in the fourth year. It would pay income taxes of CAD 12,500 (CAD 50,000 x 0.25%) in each of the first three years, assuming a tax rate of 25.0%. The CAD 200,000 loss in year 4 could be carried back three years, and a tax refund of CAD 37,500 (CAD 50,000 x 3 x 0.25) would be received. Tax authorities only give a refund in the fourth year equal to what was earned in the first three years. If they gave a CAD 50,000 refund (CAD 200,000 x 0.25) on the full loss, they would be giving more than the CAD 37,500 (CAD 12,500 x 3) paid in taxes. The CRA limits tax refunds to taxes paid in the previous three years, but any unused losses can be carried forward and applied against taxable income for the next 20 years to reduce taxes. Refunds are only given in the future when the company makes money to ensure that the government does not waste resources supporting failing firms. Loss carrybacks and carryforwards also help stabilize the economy by injecting funds through tax refunds when businesses are doing poorly and removing funds through higher taxes when the economy becomes overheated.

**Reassessment of Deferred Income Tax Assets**

Deferred income tax assets include potential tax savings from deductible temporary differences and unused loss carryforwards. They are only recognized if probable meaning they have more than a 50% chance of being used. When assessing probability, future taxable income, future reversals of existing taxable temporary differences and tax-planning strategies such as not claiming a full year’s amount of CCA to increase business tax profits are considered. Unrecognized loss carryforwards that are not probable are disclosed in the explanatory notes to the financial statements, as they may still have considerable value.

The value of deferred income tax assets should be reassessed annually, and a gain or loss recognized if the probability of realizing the assets or the tax rate changes. Deferred income tax assets are worth more if the tax rate rises, as the tax savings are calculated using a higher rate. The opposite is true if the tax rate falls. Any adjustments to deferred income tax assets are included in deferred income tax expense.

**1.2 | Leases (IFRS 16)**

**Rationale for Leasing**

Leasing is an important source of financing, with 80% of U.S. companies leasing some or all of their equipment and software. With leasing, one company, called the lessor, owns the asset and rents it to another company called the lessee. Leasing provides lessees with several advantages.

A lease can be negotiated faster than a commercial loan because of a less rigorous credit assessment process, since the lessor owns the asset and can reclaim it quickly for non-payment. A down payment is typically not required, allowing a company to save precious working capital. A lease usually has a fixed interest rate, providing greater certainty to the lessee and fewer lending conditions and collateral requirements than a loan. The lessor also has greater flexibility to adjust lease payments to better match a company’s cash flow needs using stepped, seasonal, or skipped payments. If the lessee already owns an asset, they can sell it to a lessor and rent it back to generate needed cash flows in a sale-leaseback agreement. This financial flexibility leads to higher lease payments because of greater risk for the lessor, but the lessee may decide it is worth the cost.

Short-term leases greatly simplify a lessee’s operations. Lessors can take responsibility for buying, installing, maintaining, disposing of, and replacing a lessee’s equipment on an ongoing basis in exchange for regular lease payments. Many lessors specialize in leasing specific assets like airplanes or mining and forestry equipment. This expertise allows them to buy assets from competing vendors and resell them at the end of the lease for the best possible price. They can also more accurately estimate residual values, reducing the risk of the agreement. Any savings this expertise generates can be shared with the lessee through lower lease payments.

An organization with a zero or low marginal tax rate, such as a non-profit or company experiencing losses, can lease assets from a lessor with a higher marginal tax rate. The lessor owns the asset and realizes greater tax savings by being able to deduct depreciation and receiving any tax credits. These tax savings can be shared with the lessee through lower lease payments in a tax-oriented lease. In a leveraged lease, the tax savings are even higher as the established lessor can borrow more heavily than the smaller lessee to finance the asset due to their stronger credit position.

Another advantage of leasing is that it makes a lessee’s financial performance appear better when compared to competitors who purchase their assets. Consider a simple balance sheet:

**Exhibit 2: A Balance Sheet**

|  |  |
| --- | --- |
| **Assets** | **Liabilities** |
| **Equity** |

When a company leases an asset instead of buying it using a commercial loan, the asset and corresponding loan do not appear on the balance sheet. This is called off-balance sheet financing. As a result, the total assets and liabilities are lower, while equity is mainly unaffected. These changes significantly impact some financial ratios that financial analysts use to evaluate a company’s performance or that lenders use as loan conditions.

**Total asset turnover (**$\frac{Sales}{Total Assets})$**.** This ratio measures how efficiently a company utilizes its assets. By leasing instead of buying, total assets fall, but sales are unchanged, causing the ratio to rise. This makes the lessee appear more efficient.

**Debt-to-total-assets ratio (**$\frac{Liabilities}{Total Assets}$**).** This ratio measures a company’s dependence on borrowing to finance its operations. By leasing instead of buying, both total liabilities and total assets fall. When the numerator and denominator of a ratio below 1.0 fall by the same amount, the ratio falls. This makes the lessee appear less dependent on debt.

**Rate of return on assets (**$\frac{Net income}{Total Asset}$**).** This ratio measures the profitability of a company. By leasing instead of buying, total assets will fall, and net income typically increases, causing the ratio to rise. This makes the lessee appear more profitable. Net income increases because, in the early years of a lease, lease expense is lower than the interest and depreciation expense a company would have accrued if it had purchased an asset.

Before January 1, 2019, to prevent this manipulation of the lessee’s financial statements, IFRS required that all leases be capitalized if the risks and rewards of ownership had passed from the lessor to the lessee. This means the lessee is treated as the asset’s owner and must put the corresponding asset and loan on its balance sheet. The following factors were considered when determining if the risks and rewards of ownership had passed:

* Lessee assumes ownership of the asset at the end of the lease or the lease has a bargain purchase option.
* The present value of the future lease payments substantially equals the value of the leased asset.
* Lease term is for a major part of the asset’s economic life.
* Lease is for a specialized asset that can only be used by the lessee.
* Lessee is responsible for any gains/losses on the residual value.
* Lessee can extend the lease at a rent substantially below market value.
* Lessee bears the loss of cancelling the lease.

The problem with this approach is that these factors were easy to circumvent. Lessees intentionally structured their lease agreements so that the risks and rewards of ownership did not pass, and the manipulation continued. Professional analysts and bank lending officers knew of this problem and adjusted financial statements and loan conditions to compensate, but the average user did not have that expertise. IFRS 16 Leases recognizes this problem, and effective January 1, 2019, requires that all leases be capitalized unless the lease term is less than 12 months or the asset is of low value.

**Lease Capitalization and Financial Disclosures**

To capitalize a leased or “right-of-use” asset, the lessee determines the present value of all future lease payments. A lease payment is equivalent to a loan payment when capitalizing a lease, so taking the present value strips these blended equal monthly payments of their interest, leaving the principal portion of the loan only. As leases do not have a down payment, this amount equals both the value of the asset and the liability. The asset is classified as a fixed asset on the balance sheet and is depreciated over the lease term. The portion of the liability due within the year is classified as a current liability, while the remainder is classified as long-term debt.

The interest rate used to determine the present value of the lease payments is the implicit rate in the lease or the lessee’s incremental borrowing rate if the implicit rate is not available. The implicit rate in the lease is the interest rate that equates the value of the asset today with future lease payments and the estimated residual value of the asset, and is the lessor’s rate of return. The incremental borrowing rate is the interest rate a lessee would pay if it purchased the asset and financed it with a commercial loan with similar security.

After initial recognition, the leased asset is depreciated and accounted for using the cost or revaluation model, while the lease liability is accounted for like any other loan. The amounts capitalized should also be adjusted to reflect subsequent modifications to the lease payments or terms.

Lease assets and liabilities must be disclosed separately in the financial statements, as leased assets are not acceptable collateral since the company is not the legal owner. The explanatory notes to the financial statements include important lease information that may affect the company’s performance, such as lending covenants imposed by lease agreements; risks from variable lease payments; lease extension or termination options; and lessee guarantees of asset residual amounts.

Other off-balance sheet financing techniques, like sales finance companies, joint ventures, research partnerships, and loan guarantees, were used to hide assets and liabilities. IFRS has been modified to ensure a company’s assets and liabilities are recognized correctly in most cases, so leverage ratios are not understated. Off-balance has become much less of a problem for users.

**1.3 | Benefit Plans (IAS 19)**

Employers often provide generous retirement benefits, particularly pensions and healthcare, to attract and retain the best employees. The future cost of these benefits has rapidly grown due to increasing life expectancies, an aging population, and advances in medical knowledge. Governments require companies to establish formal benefits plans to meet these obligations. The employer makes regular contributions to a fund which are invested until the benefits are paid. With competitive pressures, companies often struggle to make these large payments, significantly impacting their business operations. Financial analysts must understand how benefit plans work, particularly when examining companies experiencing financial distress.

**Benefit Plan Terminology**

**Post-employment benefit plans.** Plans where employers provide benefits to their employees in retirement.

**Defined contribution plan.** Plans where an employer makes fixed contributions over an employee's working life, but is not obligated to make further payments if the fund is insufficient to pay the promised benefits. These plans are growing in popularity because they are less risky for employers. Benefit plan expense equals the amount of the fixed contribution only. A benefit plan liability or asset only exists if the fixed contributions are not paid on time or the employer overpays.

**Defined benefit plan.** Plans where an employer makes fixed contributions over time and is obligated to make further payments if the fund established is insufficient to meet the promised benefits. These deficiencies are a serious risk for employers, so the use of defined benefit plans is declining. A typical defined benefit pension plan in Canada promises employees 2.0% of an employee’s average yearly pay based on their best five years of service times each year of service to a maximum of 35 years. Long-term employees with an average CAD 150,000 salary over their best five years and 35 years of service could earn a CAD 105,000 (CAD 150,000 x 0.02 x 35) annual pension. These benefits may also be indexed for inflation.

**Multi-employer benefits plans.** Defined contribution or defined benefit plans, where more than one employer pools their assets to fund the benefits promised to employees. Contribution and benefit levels are the same regardless of who employs the plan recipients.

**Defined benefit obligation (DBO).** The present value of all plan benefits promised to employees in the future for current and past service.

**Actuarial assumptions.** Estimates of the variables used by actuaries to determine a benefit plan’s DBO. Demographic assumptions deal with characteristics of the plan members, including mortality estimates; turnover, disability, and early retirement rates; the proportion of dependents eligible for benefits; the portion who select the plan’s different payment options; and medical claim frequency rates. Financial assumptions include the discount rate used to determine the DBO; rate of compensation increase adjusted for inflation, seniority, promotion, and labour supply and demand; rate of increase in medical costs, including administrative expenses adjusted for inflation and changes in medical technology; and the probability that employees will satisfy the vesting period. Plan benefits are vested when employees earn the right to the benefits, even if they terminate employment. Governments typically require employers to vest pension benefits after two years of employment as workers are changing jobs more frequently and will not remain with the same employer for their entire working lives. Financial assumptions should be unbiased (i.e., not overly aggressive or conservative), based on market expectations over the future benefit period, and consistent. For example, high discount rates are not consistent with low rates of compensation increase, as both are affected by the underlying inflation rate. Companies may manipulate actuarial assumptions to reduce the DBO.

**Discount rate.** IFRS specifies that the rate is equal to the current yield on high-quality corporate bonds to prevent companies from lowering their DBO by using a higher discount rate. The bonds used should have the same currency and duration as the benefit plan to provide the most comparable rate. Government bond rates should be used if quotations for high-quality corporate bonds are unavailable.

**Defined benefit plan assets.** Investments held by the plan for the sole purpose of funding the DBO. The assets are measured at fair value.

**Net defined benefit obligation.** Plan deficit or surplus resulting from netting the DBO and plan assets, which appears as the net defined benefit plan liability or asset on the balance sheet. The plan assets and DBO are not included on the plan sponsor’s balance sheet, as the company is only responsible for the deficit or surplus. Deficits are addressed through higher plan contributions or more aggressive investment strategies. Surpluses are reduced by lowering plan contributions, although pension advisory boards and unions will resist this, as a surplus may be due to short-term stock market fluctuations.

**Exhibit 3: Benefit Plan Deficits and Surpluses**

|  |  |  |
| --- | --- | --- |
| **Plan Assets** | **Defined Benefit Obligation** | **No Balance Sheet Disclosure** |
| **Fully Funded Plan** |

|  |  |  |
| --- | --- | --- |
|  | **Defined Benefit Obligation** | **Net Defined Benefit Plan Liability** |
| **Plan Assets** |
| **Underfunded Plan or****Fund Deficit** |

|  |  |  |
| --- | --- | --- |
| **Plan Assets** |  | **Net Defined Benefit Plan Asset** |
| **Defined Benefit Obligation** |
| **Overfunded Plan or** **Fund Surplus** |

**Defined benefit plan cost.** A defined benefit plan's annual cost includes service costs, net interest costs/income, and remeasurement costs.

**Current service costs.** Increase in the DBO resulting from the additional future benefits earned by employees for their service in the current period.

**Past service costs.** Change in the DBO resulting from an amendment to the plan’s promised benefits earned in previous years or a plan’s curtailment. A curtailment is a significant reduction in the number of employees covered by the plan.

**Service costs.** Current service, past service costs, and the gain or loss on the settlement of a plan are combined under IFRS and are referred to as service costs. A settlement is when the plan is eliminated, and the recipients are bought out.

**Net interest costs/income.** Interest cost is the increase in the DBO due to the passage of time as the employer is discounting the DBO at the discount rate for one less year. The expected return on plan assets is also calculated at the discount rate and is deducted from interest cost to give net interest cost/income. In the long term, interest costs and expected returns should be the same, but in the short term, the actual return on plan assets may be higher or lower than the expected return due to market fluctuations.

Net interest costs/income is calculated as the discount rate times the net benefit plan obligation at the beginning of the year. Net interest costs occur when the plan has a deficit and are the cost to the company of deferring payment on the plan. Net interest income occurs when the plan has a surplus and is the income earned by prepaying the plan.

**Actuarial gains/losses.** Decreases (gains) or increases (losses) in the DBO caused by changes in actuarial assumptions. Benefit plans must be reevaluated at least every three years under IFRS.

**Remeasurement costs.** Results from 1) actuarial gains and losses, and 2) the difference between the actual return on the plan assets and the expected return on the plan assets when calculating net interest cost/income. Asset returns are calculated net of any management costs and taxes.

**Recognition and Financial Disclosures**

The annual cost of a defined benefit plan equals its service costs, net interest costs/income, remeasurement costs, and any gain or loss on the settlement of the plan. Service costs and net interest costs/income are classified as operating expenses when calculating net income. Net interest costs/income may be classified separately as a non-operating interest expense, as it is the cost of not paying the liability on time or the benefit earned from overpaying. Remeasurement costs are recognized in OCI and not amortized to net income, as it is assumed the plan will last indefinitely and the differences between the actual and expected returns will eventually net to zero. The net defined benefit plan asset or liability is the difference between the plan assets and DBO and is shown as a long-term asset or liability on the balance sheet. The current portion of the asset or liability is not shown separately.

The explanatory notes in the financial statements for defined benefit plans are extensive. Companies should provide an overview of the plan including the benefits promise; a description of the governance structure such as the membership and responsibilities of the oversight board; a breakdown of the defined benefit plan cost; and a reconciliation of the opening and closing balances of the plan assets and DBO as shown in Exhibit 4. This plan has a discount rate of 5.45%.

**Exhibit 4: Defined Benefit Plan Disclosures**

|  |  |
| --- | --- |
| **CAD (000s)** | **2023** |
| **Defined benefit plan cost** |  |
|  Service costs | 263.3 |
|  Net interest costs | 315.4 |
|  Remeasurements | (20.7) |
|  Total | 558.0 |
|  |  |

|  |  |
| --- | --- |
| **Change in defined benefit obligation** |  |
| Beginning defined benefit obligation | 32,820.5 |
|  Service costs | 263.3 |
|  Interest costs | 1,798.5 |
|  Benefits paid | (1,526.9) |
|  Actuarial losses or gains | - |
| Ending defined benefit obligation | 33,355.4 |
|  |  |
| **Change in defined benefit plan assets** |  |
| Beginning fair value of plan assets | 27,064.0 |
|  Actual return on plan assets | 1,503.8 |
|  Employer contributions  | 800.4 |
|  Benefits paid | (1,526.9) |
| Ending fair value of plan assets | 27,841.3 |
|  |  |
| Beginning net defined benefit liability | 5,756.5 |
| Ending net defined benefit liability | 5,514.1 |

The DBO increased by CAD 534.9 from CAD 32,820.5 to 33,355.4. Service costs were CAD 263.3, interest costs were CAD 1,798.5, and employee benefits were CAD -1,526.9. Interest costs were calculated as the beginning DBO balance of CAD 32,820.5 times the discount rate of 5.48%. There were no actuarial losses or gains as benefit plans must only be revalued every three years.

The fair value of the defined benefit plan assets increased by CAD 777.3 from CAD 27,064.0 to CAD 27,841.3. This was due to the actual return on plan assets of CAD 1,503.8 and employer contributions of CAD 800.4 minus CAD -1,526.9 in benefits to the plan recipients.

The defined benefit liability fell from CAD 5,756.5 (CAD 32,820.5 – CAD 27,064.0) to CAD 5,514.1 (CAD 33,355.4 – CAD 27,841.3). The funded status improved by CAD 242.4 (CAD 5,756.5 – CAD 5,514.1). Another way to measure this decline in the defined benefit liability is that the employer’s contribution of CAD 800.4 exceeded the defined benefit plan cost of CAD 558.0 by CAD 242.4, lowering the net defined benefit liability.

Companies should disclose the nature and risk of the plan assets by dividing their ending fair value into different investment classes. The classes may include:

* Cash and cash equivalents;
* Equity instruments segregated by industry type, company size, and geography;
* Debt instruments segregated by type of issuer, credit quality, and geography;
* Real estate segregated by geography;
* Derivatives segregated by type of underlying asset in the contract, for example, interest rate contracts, foreign exchange contracts, equity contracts, credit contracts, and longevity swaps;
* Investment funds segregated by type of fund;
* Asset-backed securities; and
* Structured debt.

They should describe whether the plan assets are well diversified or concentrated in one or more risky investment classes; are objectively valued using a quoted market price from an active market or valued using a company or third-party estimate; include any of the company’s financial instruments (i.e., stocks, bond, derivatives); or are used by the company in its operations. These factors raise doubts about a plan’s ability to fund its DBO with the plan assets.

Companies should also disclose:

* Descriptions of any plan amendments, curtailments, and settlements;
* Regulatory requirements such as minimum funding;
* Expected employer contributions for the next reporting period;
* Weighted average duration of the DBO;
* Actuarial assumptions used to measure the DBO;
* Actuarial gains and losses due to changes in demographic assumptions;
* Actuarial gains and losses due to changes in financial assumptions;
* Sensitivity analysis for each significant actuarial assumption and method used;
* DBO owed to current members, inactive members, and pensioners;
* DBO that is vested or not vested;
* Description of any asset-liability strategies used to manage risk;
* Funding arrangements for multi-employer plans;
* Responsibility for the obligations of other employers in multi-employer plans; and
* Allocation of the surplus or deficit on the settlement or withdrawal from a multi-employer plan.

The minimum funding requirement is the ratio of plan assets to DBO that a defined benefit plan must maintain. Employers will make additional contributions over a specified period if the assets are insufficient. The federal and provincial governments regulate pensions in Canada, and the funding rules vary. For example, the Ontario Provincial Government has two levels of funding. Going-Concern Funding requires a plan’s assets to equal 100.0% of the DBO. Any deficiencies must be eliminated within 10 years. Deficiency Funding is only required if the funding level falls below 85.0%, and deficiencies must be eliminated over 5 years.

**1.4 | Financial Liabilities (IFRS 7, IFRS 9, IAS 19, IAS 32, IAS 39)**

**Commercial Lending**

IFRS requires financial liabilities to be measured at their fair value initially, but subsequently at amortized cost using the effective interest rate method. The fair value of a commercial loan equals the present value of the expected future interest and principal payments at the appropriate market rate. The market rate reflects the riskiness of the loan from the lender’s perspective, incorporating factors such as the business's forecasted cash flow and any pledged collateral. The fair value and face value of a loan are the same if the interest rate used to calculate the future interest payments equals the market rate. Going forward and backward at the same rate cancels, leaving the loan’s face amount. An exception is a subsidized loan where the interest rate quoted is below the market rate, resulting in a fair value below the loan’s face value.

Commercial loans are grouped into different classes, like revolving credit agreements, notes, debentures, bonds, term loans, and mortgages. The liabilities in each class are detailed in a table in the explanatory notes to the financial statements, providing the amount, maturity date, and interest rate of each issue. The total of these classes less the current portion of long-term debt reconciles with the summary totals shown in the balance sheet.

**Exhibit 5 – Classification of Long-term Debt at Canadian Tire**



In subsequent reporting periods, the fair values of the different classes of liabilities must be disclosed in the explanatory notes so users can compare them to their carrying values. Certain liabilities are exempt from these requirements, including lease liabilities and any liability where the carrying amount is a reasonable approximation of fair value, such as accounts payable. Accounts payable have a short life, so any changes in the market rate will have a minimal effect on their fair value.

Other IFRS discloses include the carrying amount of any assets pledged as collateral; the terms and conditions of the pledge agreements; a description of defaults on interest, principal, sinking fund or redemption payments during the year; whether the defaults were remedied or renegotiated; and the carrying amount of any loans still in default. IFRS also requires companies to provide any additional information that may help users better evaluate their financial position and performance. This may include whether the revolving credit agreement is committed or non-committed; loan conditions that may impact decision-making; full or partial third-party guarantees; whether interest rates are fixed or floating; how floating interest rates are calculated; whether loans are senior or subordinate to other financial instruments; and flexible repayment options such as stepped, skipped, seasonal or balloon payments.

**Risk Management**

Companies should describe the risks affecting their financial assets and liabilities, and the strategies they have adopted to minimize exposures. Financial assets are exposed to credit and market risk, while financial liabilities are exposed to liquidity and market risk.

**Liquidity risk.** IFRS requires companies to provide a maturity analysis of when their financial liabilities are due to assess if they have sufficient cash to repay the debts or the needed borrowing capacity to roll over the loans. Companies should also describe the actions taken to manage liquidity risk, such as negotiating a revolving credit facility with a high borrowing limit, increasing cash reserves, implementing more accurate cash forecasting procedures, diversifying sources of financing, and carefully matching the maturities of their long-term assets and liabilities to minimize rollover risk. Rollover risk occurs when a company uses cheaper short-term debt to finance long-term assets like land, buildings, and equipment to lower interest expenses. The company may have difficulty replacing these short-term loans in an economic downturn. It is safer to finance long-term assets with long-term loans that do not have to be renewed as often to ensure financing is always available.

**Exhibit 6 – Maturity Analysis at Canadian Tire**

**Market risk.** IFRS requires a sensitivity analysis showing the impact that exchange rate, interest rate, and commodity price movements have on the fair value of their financial liabilities. Each risk variable can be tested separately or more advanced techniques like value-at-risk can be used that incorporate multiple variables at once.

**Derivatives and Hedge Accounting**

Companies usually buy derivatives to insure or hedge themselves against financial risks. A hedge allows a company or hedger to transfer its financial risks to a third party or speculator by entering a derivative contract with them. These contracts “derive” their value from an underlying asset price, interest rate, or index that moves in the opposite direction to the hedger’s position, offsetting any pre-existing risk. Speculators attempt to profit from forecasted short-term price movements and absorb the hedger’s risk as part of the process. These contracts include forwards, futures, options, and swaps.

For example, a farm plants wheat and hopes to receive CAD 710 per bushel in four months, but agricultural prices fluctuate considerably due to weather and geopolitical factors. The farm is concerned that if the price falls far below CAD 710, it will not be able to cover its production costs and could go bankrupt. The farm enters a derivative contract with a speculator. The contract says if the price rises above CAD 710, the farmer will pay the speculator the difference, but if it falls below CAD 710, the speculator will pay the farmer the difference. The farm benefits from being able to lock in a price of CAD 710 regardless of what happens to the price of wheat, but it had to give up any profit above CAD 710 to the speculator for this protection. The speculator enters this contract because they forecast wheat prices will rise above CAD 710. It makes a profit if it is right, but it loses if the price falls below CAD 710. Put another way, the farm has an underlying position in an asset, which is wheat. If the price of wheat rises, so will the value of the wheat asset. This is offset by the negative value of the derivative contract. If the value of the wheat asset falls, this will be offset by the positive value of the derivative contract.

IFRS requires derivatives to be recorded at fair value through profit or loss, which means any changes in the market value are included in net income. The gains or losses on derivatives can result in considerable variation in net income, so companies may adopt hedge accountingto better match any gains or losses on the derivatives with gains or losses on the assets, liabilities or cash flows being hedged. To qualify for hedge accounting, the company must identify the hedging relationship and describe the hedging strategy used, including the hedging instrument, the hedged item or transaction, the nature of the risk, and the effectiveness of the hedge in offsetting the changes in the fair value of the hedged item. A hedging relation only qualifies for hedge accounting if the hedge is expected to be highly effective, the effectiveness can be reliably measured, and the hedge’s effectiveness is measured regularly.

The two main types of hedging relationships are:

 **Fair value hedge**. Hedging the value of an existing asset or liability, such as a raw materials inventory or bank loan. The hedging instrument is recorded at fair value on the balance sheet, and any gains or losses are recognized in net income each period. The hedged item is also recorded at fair value on the balance sheet, and any gains or losses are recognized in net income. These gains or losses cancel out, leading to more stable net income. Without hedge accounting, the gains or losses on the hedging instrument would be recognized over time, while the gain or loss on the hedged item would be recognized when the asset was sold or used in production.

 **Cash flow hedge.** Hedging the value of forecasted cash flows, such as future material purchases. The hedging instrument is recorded at fair value on the balance sheet, and gains or losses are recorded in comprehensive income, not net income, making net income more stable. When the forecasted cash flows occur, resulting in an asset or liability, the net amount in comprehensive income is brought into net income. If the forecasted transaction does not occur, the net amounts in comprehensive income are immediately brought into net income. The purpose of a cash flow hedge is to defer the gains or losses on the hedging instrument to a future period(s) when the cash flows are expected to affect net income.

**Compound Financial Instruments**

Some debt instruments are convertible into an issuer’s common shares at a specified conversion ratio, such as 5-to-1, meaning each CAD 1,000 bond can be exchanged for five shares at a conversion price of CAD 20 per share. Conversion options are commonly used with unsecured, high-risk loans to compensate lenders. If a company is successful and its share price rises, investors will realize a sizeable profit on conversion. If the company continues to struggle, investors will still receive bond interest and rank ahead of equity holders if the company is forced to liquidate. The conversion feature is also an “equity kicker” or “sweetener,” which reduces the coupon rate and allows companies to issue bonds with fewer restrictive covenants. In Canada, convertible bonds can be traded on the Toronto Stock Exchange as they have an equity component. If the share price is well below the conversion price, conversion is unlikely to occur, so the convertible bonds will trade like a regular debt instrument.

IFRS requires compound financial instruments like convertible bonds to be recognized as separate liability and equity components on the balance sheet. Convertible bonds trade at a premium compared to straight bonds because investors are willing to pay more for the conversion feature. The premium is included in equity as it is part of the purchase price for the shares that will be issued if the bonds are converted. The premium is calculated by subtracting the fair value of an equivalent straight bond from the fair value of the convertible bond.

Convertible Bond = Straight Bond + Premium

After the liability and equity components are initially recognized, IFRS does not reclassify the liability as equity until the conversion takes place, even if it becomes economically advantageous for the holder to do so. If the bonds are converted, the liability component is included in equity. If the bond matures without conversion, the debt component is repaid, and the equity component remains part of equity.

**Financial Guarantees**

A financial guarantee is an agreement where a third party or syndicate of guarantors agrees to repay the debt owed to a lender if the borrower defaults. A company may require a guarantee to receive a high-risk loan or use it as credit enhancement to reduce its borrowing costs or improve its credit rating. Guarantees usually come from 1) a parent corporation helping a subsidiary, 2) a government organization promoting economic growth, 3) financial institutions through a backup line of credit or standby letter of credit that can be used to pay off the debt, or 4) a bond insurer. The guarantors may or may not charge a premium or standby charge, and may only guarantee a portion of the loan, such as the interest or principal payments. Bond insurers are well-capitalized companies with AAA credit ratings that can reduce the cost of borrowing for a company with a lower credit rating by guaranteeing its debt.

A financial guarantee is a liability recognized as the higher of 1) the unamortized premium revenue, or 2) any allowance established for expected credit losses. The unearned premium revenue is recognized on a straight-line basis over the life of the loan. Any impairment gains and losses on the expected credit losses are recognized in other comprehensive income and transferred to profit or loss when paid. In the past, these large potential impairment losses were often not recognized until paid, understating the firm’s liabilities. IFRS now requires an allowance for expected credit losses to be maintained, eliminating another type of off-balance sheet financing.

**Classification of Financial Instruments as Liabilities or Equities**

Equities are viewed as safer by investors as there are no required payments. Under IFRS, regardless of what a financial instrument is called legally, it is classified on the balance sheet according to its economic substance. It is classified as equity if 1) there is no contractual obligation to deliver cash or other financial assets, or 2) it will or may be settled with the issuer’s equity instruments. For example, preferred shares are classified as equity because they have unlimited lives, and the dividends can be delayed indefinitely, even if they are cumulative. If the company is required to make regular sinking fund payments to repurchase the preferred shares over a specific period (i.e., term preferred shares) or the shares are retractable, meaning the holder can force the company to repurchase the shares, there are required payments, and the financial instrument is classified as a liability. Interest, dividends, gains, or losses relating to financial instruments classified as liabilities are recognized as income or expenses in the income statement. Distributions to the holders of financial instruments classified as equity are recognized as adjustments to equity.

**1.5 | Share-Based Compensation (IFRS 2)**

**Executive Compensation**

Executive compensation comes in different forms:

**Salary and bonus.** Executives typically receive an annual base salary plus a bonus. The base salary is usually determined by benchmarking against comparable companies in the same industry. Salary is more influenced by the firm’s size and industry than by the manager’s experience and success, so it is poorly linked to performance. The bonus is typically based on an accounting measure such as earnings per share (EPS) or earnings before interest and taxes (EBITDA) over the year. A weighted average of multiple quantitative and qualitative measures is preferred as it provides a broader-based indication of performance. The minimum threshold to earn a bonus is typically set low, but the bonus rises to a predetermined maximum as performance improves. Large bonuses are preferred to large salaries as they are variable and fluctuate with the manager’s performance, while salaries are fixed and not related to performance.

**Benefits and other perquisites.**  Employees often receive health and welfare benefits such as drug and dental coverage, eye care, medical supplies, and paramedical services such as physiotherapists or chiropractors, as well as long-term disability and life insurance. Executives usually receive additional perquisites or perks because of their high position such as a driver, personal chef, a company jet, stays at 5-star hotels or company-owned apartments when travelling, charitable donations made on their behalf, club memberships, private boxes at sporting events, theatre tickets, free parking, use of a vacation home, tuition assistance or loans to purchase company stock. A payment is not classified as a perquisite if it is directly related to the performance of the executive’s job. These benefits may be needed to entertain clients or justified based on cost or personal security grounds, but the CCGG recommends that the compensation committee not allow them to become excessive. This is important to protect shareholders and not raise the suspicions of the media, regulators, or rank-and-file workers.

**Retirement plans.** Many companies offer Supplemental Executive Retirement Plans (SERPs) to attract and retain top executives. In Canada, the Income Tax Act limits the size of registered pension plan benefits to approximately CAD 160,000. SERPS allows companies to provide pensions above these limits to compensate high-paid executives. A typical SERP set up as a defined benefit plan gives a pension equal to 2.0% of salary or salary plus bonuses times the number of years of service to a maximum of 35 years. These plans are frequently a concern to shareholders as this is not a performance-based award, and the compensation committee may not be independent of management. The committee may give a benefit of more than 2.0% per year or provide bonus years for when executives did not work at the company. The Canadian Coalition for Good Governance (CCGG) recommends that SERP benefits be reasonable, and years of service not be awarded for the time that executives did not work. If additional years are provided, this should be disclosed along with the rationale in the management information circular.

**Severance and change-of-control entitlements**. Executives can be terminated with or without cause. Those terminated without cause must be given reasonable notice or an equivalent amount of severance or termination pay instead of notice. The amount varies with the executive’s service length, position, level of compensation, and age. Executives may also receive change-of-control payments if they are terminated when a company is taken over. Termination also includes constructive dismissal resulting from a downgrade in position or a reduction in pay. These payments help to ensure that an executive does not oppose a takeover to protect their position and will work in the best interest of the shareholders to negotiate the highest take-over premium possible. A “double-trigger” requirement must often be met to receive a change-of-control payout. This means another party must purchase more than 50% of the company, and the executive is terminated without cause within a fixed period after the acquisition. CCGG recommends that severance and change-of-control entitlements be reasonable and approximately equal. The board should not provide accelerated vesting for any deferred compensation except for change-of-control entitlements, as this is beyond the manager’s control. All severance and change-of-control provisions shall be disclosed in the management information circular.

**Long-term incentives (LTIs).**  These share-based compensation awards typically account for well over half of executive pay and are crucial in aligning the interests of executives with those of shareholders. LTIs help reduce agency costs and increase shareholder value by emphasizing long-term share price maximization. The main forms of long-term incentive pay include:

**Executive stock options (ESOs).** ESOs are a share-based compensation plan that gives an executive the right to buy a specified number of their employer’s common shares at a fixed exercise price following a predetermined vesting schedule. ESOs may vest immediately, but usually occur gradually in parts or at the end of the agreement. The exercise price is set at or above the current share price, so the ESOs are initially worthless or “underwater.” The company expects an executive will work to increase the firm’s share price over time. Eventually, it should rise above the exercise price, and the executive will realize a profit when the options are exercised and the shares are sold.

When examining ESOs, there are several important dates and periods. The grant date is when the options are issued to the executive. The measurement date is when the fair value of the equity to be issued is measured and is nearly always the same as the grant date. The vesting date is when an employee earns the right to the options. The service or vesting period is the time between the grant date and the vesting date when the executive earns the compensation, and the company recognizes the cost. The exercise date is when the options can first be converted into common shares on or after the vesting date. The trend is to extend the exercise date well beyond the vesting date to encourage managers to be more long-term thinkers. Executives who exercise their options after the exercise date will benefit from any further share price appreciation until that time. Most ESOs have a term of up to 10 years, after which the options expire.

ESOs appear to be an excellent way to align the interests of management and shareholders, but there are several serious issues. First, stock options have unlimited upside potential if the share price rises above the exercise price, but no downside risk if it falls below it. This encourages executives to incur excessive risk and manipulate the company’s financial statements to raise net income without fear of losing their own money. By deceiving investors about the firm’s performance, they can increase the share price and earn a greater return on their options. This deception will eventually be discovered, but by then, the executives have exercised their options, sold the shares, and left the company with their ill-gotten gains. Managers also engage in “front running,” where they exercise their options and sell the shares just before the company announces bad news, causing the share price to fall. A related practice is “pump and dump,” where executives exaggerate their company’s performance to inflate the share price before exercising their options and then selling their shares. Some companies are extending vesting periods beyond when managers leave or retire to make them longer-term thinkers and prevent these abuses. Other companies are incorporating various risk measures when evaluating executives to determine if they are inflating the company’s short-term performance for their own gain.

Second, some ESO features diverge from the principle that a significant part of executive compensation should be based on performance by allowing plans to be adjusted in response to lower expected payouts.

**Re-pricing.**  The exercise price is lowered during the vesting period after a decline in the share price, so the executive is motivated to stay at the firm and continue to perform. Alternatively, re-pricing may encourage executives to take on more risk to earn higher profits, knowing they will be protected if a project fails.

**Doubling-up**. More options are granted during the vesting period to compensate for a declining share price or a price that does not rise as quickly as executives expected. Again, this may be necessary to retain and motivate essential managers.

**Back-dating options.** The start date is reset to when the company’s share price was lower to justify a lower exercise price.

**Reload features.** Executives lock in profits over the life of an option contract. The exercise price is increased, and any profits earned are not lost if the share price later declines.

**Evergreen options.** These options have an unlimited life, so there is no strong link between an executive’s pay and performance.

Third, general increases or decreases in the stock market are not due to the executive’s actions, so ESOs do not effectively link pay with performance. An executive may be doing an excellent job keeping a struggling company solvent, but their stock options will likely be worthless, providing them with little reward for their efforts. Another executive may make several significant strategic errors but still receive a large payout on their ESOs simply because the stock market is booming, or the firm is a weak company in an otherwise strong industry with rising share prices. These problems can be addressed by only awarding options if the executive achieves specific performance goals, such as a specified return on equity, or by offering:

**Premium-priced options.** The exercise price is set at a high level, so executives are only paid for superior performance.

**Index options.** Executives are only rewarded if they outperform a stock index such as the S&P 500, which incorporates general stock market movements.

Fourth, ESOs may substantially dilute earnings per share and the stake of some shareholders, causing them to lose control or influence in the company. This can be addressed by using capped stock options that reduce the number of options issued by limiting an executive’s payout. Also, boards can stipulate that shares issued as part of an option plan must be matched by an equal number of stock repurchases, leaving the number of outstanding shares unchanged. Finally, the options can be settled in cash using stock appreciation rights (SARs). SARs operate similarly to stock options. Instead of having the executive buy shares at the exercise price and reselling them for a profit, the company provides a cash payout equal to the difference between their market value and exercise price, so no new shares are issued.

Fifth, executives may try to monetize or hedge their stock options to protect themselves against a decline in the share price. Monetizing means exercising the options and selling the shares while the executive is employed with the company. Hedge means to issue a protective put, another type of stock option, that pays out if the company’s share price falls. Monetizing and hedging negate the alignment of management and shareholders’ interests that ESOs created.

Sixth, stock returns include the stock price appreciation and the dividend yield. ESOs only receive the stock price appreciation, so executives might reduce the dividend to help grow the company even if there are no positive net present value projects.

Finally, private companies have difficulty using stock options because their shares do not trade publicly. This can be solved using a “phantom” stock plan where the share price is estimated using the different business valuation models examined in Module: Business Valuation. The same approach could also be applied to divisions within a larger public company using tracking shares. These shares are created by dividing a company’s operations into business units and estimating a share for each unit based on profits. These share prices are used to construct separate stock option plans for each business unit that better measure performance than a stock option plan based on the company’s overall share price.

**Restrictive share units (RSU).** RSUs are a share-based compensation plan where executives receive a specified number of their employer’s common shares following a predetermined vesting schedule if they remain employed for a specific period. Once vested, employees receive the shares or are given an equivalent amount of cash. Whether the RSU is equity-settled or cash-settled depends on how concerned the company is about its cash position, share price dilution, or loss of control. For example, an employee received a grant of 10,000 RSUs that vest equally over the next five years if they remain with the company. The employee would receive 2,000 shares or an equivalent cash amount at the end of each year. If they leave earlier or are terminated, the remaining shares are forfeited. Since the contract specifies the number of shares to be issued, the employee benefits if the share price rises, providing an extra incentive. Often, RSUs have accelerated vesting provisions where shares vest more quickly due to superior performance or if another firm acquires the company. This feature is important if employees are concerned about termination when new owners take control. A vesting period of three to five years is normal.

**Performance share units (PSU).** These compensation plans are like RSUs except the share grant only vests if specified performance conditions are met, such as achieving a quantitative goal like a certain EBITDA, growth rate, or share price or a qualitative goal like completing a new product launch. PSUs are preferred to RSUs because vesting is dependent on performance.

**Deferred share units (DSUs).** Some companies allow executives to convert all or a portion of their bonuses into deferred share units (DSUs). Each DSU gives executives the right to one share plus extra DSUs equivalent to any cash dividends paid in the future. DSUs are paid out to executives in cash or actual shares upon their resignation, retirement, or death. Companies offer DSUs to increase executive share ownership, providing an added incentive to maximize the firm’s share price. Companies frequently match executive purchases of DSUs up to a specified level to increase the conversion rate, but these units do not vest immediately. DSUs also provide executives with additional tax advantages compared to buying common shares.

Stock options were once the predominant form of long-term pay, but they are being replaced by stock grants like RSUs, PSUs and DSUs. Stock options encourage risky behaviour and are worthless if a company’s share price falls below the exercise price. Stock grants retain considerable value if the share price declines, so they continue to motivate employees. There is also less share price dilution with stock grants since fewer shares must be issued to supply the same reward, and both plans are usually cash-settled. If stock grants are issued, they are not included in diluted EPS until they vest, while stock options are included when they are first granted.

The CCGG recommends emphasizing PSUs or a mixture of PSUs and RSUs in long-term pay systems. Executives should be required to hold a significant portion of their wealth in company shares or PSUs and RSUs. The minimum investment is a multiple of base pay or total compensation. The multiple and amount invested usually grows with the executive’s term of employment. If stock options are used, they should contain performance requirements, limit the impact of dilution, and have no repricing provision. Monetizing and hedging should be forbidden for stock options, RSUs, and PSUs. The board may grant exceptions in exceptional circumstances, but these should be given sparingly and disclosed to shareholders.

**Director Compensation**

Director compensation systems, like those of executives, should be aligned with the interests of shareholders to minimize agency costs and maximize shareholder value. Pay must be high enough to attract qualified directors, but not so high as to compromise their independence and objectivity. Directors must be willing to oppose actions that are not in the shareholders’ best interests and resign from the board if necessary. If their compensation is too high or based on the firm’s financial performance, directors may become captive of management and take on additional risk or manipulate earnings, just like executives, to maximize short-term profits. CCGG recommends that directors use their compensation to acquire an equity stake in the firm, so they are focused on shareholders’ long-term interests.

Directors should purchase an equity stake in the company upon joining the board and add to that investment over time. The minimum investment should be set equal to some multiple of each director’s annual compensation, and they should have to hold that investment for a minimum of one year after resignation or retirement from the board. Directors should be required to use their director’s fees to purchase shares or cash-settled RSUs if the company does not want to issue additional shares. ESOs should be avoided as they encourage short-term decision-making. None of the RSUs should have vesting or performance provisions that might prevent the director from acting independently. Directors should not be able to monetize or hedge their positions to ensure the continued alignment of directors’ and shareholders’ interests.

**Accounting for Share-based Compensation**

Compensation expense is recognized over time as managers provide services to the company along with a corresponding increase in equity in an equity-settled share-based compensation arrangement, or an increase in liabilities in a cash-settled share-based compensation arrangement. The expense is calculated using the market value of the stock option or stock on the grant date. If the market value is unavailable, the company should estimate it using a valuation technique such as Black Scholes. The market value of the stock option or stock is multiplied by the number of stock options or stocks expected to vest, and this amount is amortized over the vesting period.

Share-based compensation arrangements may vest immediately, but more likely they vest conditionally on the employee remaining with the company for a specified period. The number of equity instruments awarded will decline as shares are forfeited due to voluntary or involuntary turnover. The company should estimate the number of equity instruments expected to vest initially and revise that estimate annually. On the final date of the vesting period, this estimate equals the number of equity instruments awarded. Cumulative compensation expense over the life of the share-based compensation arrangement is based on the number of equity instruments that ultimately vest. No compensation expense is recognized if the equity instruments do not vest.

**1.5 | Long-term Paying Ability Checklist**

In addition to examining a company’s leverage and coverage ratios to determine if it is over-leveraged or is having difficulties servicing its debt, financial analysts must find answers to other important questions using explanatory notes to the financial statements and other disclosures.

1. Does the company have high business risk (i.e., variable of EBIT) due to cyclical sales or high operating leverage limiting how much it can safely borrow?
2. Is the company defaulting on interest, principal, sinking fund, redemption requirements or violating other loan conditions? Have any loans already been renegotiated? Did the renegotiations result in accelerated repayments or higher interest rates?
3. Do loan conditions designed to protect collateral and conserve cash for debt servicing place operational limitations on the company?
* Current ratio, net working capital, or other ratio requirements
* Restrictions on share repurchases or dividend payments
* Restrictions on the acquisition of new fixed assets
* Restrictions on the issuance of new debt
* Restrictions on sale or sale/leaseback of assets
1. Is short-term borrowing committed or non-committed?
2. What does the maturity analysis of the company’s long-term debts indicate? Is the company mismatching the maturities of its long-term assets and liabilities? Are there any large loan “balloon” payments due shortly? Are they able to roll over their obligations with lenders?
3. Are floating interest rates and foreign currency loans properly hedged, or is the company exposed to fluctuating rates? What does the sensitivity analysis say about exposure to these risks? Are other commodity risks being hedged effectively?
4. Are defined benefit pension and healthcare plans underfunded? Are the liabilities rapidly increasing due to increasing life expectancies and healthcare costs? Are the company’s actuarial assumptions reasonable? Does the company frequently change assumptions? Are the actuarial assumptions consistent?
5. Are financial instruments correctly categorized as debt or equity, so the leverage ratios are accurate?
6. Are any convertible debts likely to be turned into equity soon, avoiding further debt payments? Have these convertible debts been reclassified as equity?
7. Have all off-balance sheet financing arrangements besides leases been capitalized?
8. Have deferred income tax assets consisting of loss carryforwards and temporary differences been properly valued? Is it probable (i.e., over a 50% chance) that they will be realized?
9. Are the executive and director compensation plans reasonable? Did the shareholders support the compensation plan (i.e., “say on pay”) at the annual meeting?

Other factors may indicate a company has better long-term debt-paying ability than thought, causing analysts to improve their assessment. These include:

* + - Unused borrowing capacity on existing loan agreements;
		- Unpledged assets that can be used as collateral for new loans;
		- Highly marketable financial and fixed assets that can be quickly liquidated;
		- Quick access to the public debt and equity markets as a publicly traded company;
		- A strong credit rating that makes it easier to negotiate new financing;
		- Parent company that can provide loan guarantees and direct financing;
* Strong track record of profitability that attracts new lenders;
* Operating in a stable industry where companies are not prone to financial distress;
* A large company with significant market power when dealing with lenders and suppliers;
* High level of discretionary expenses such as marketing, training, or advertising that can be reduced if funds are needed;
* Lower business risk due to less operating leverage, allowing more borrowing; and
* Reduced exposure to strikes and other potential supply problems.