**Financial Reporting Quality**

**Learning Outcomes**

After completing this module, students will be able to:

1. Explain the earnings quality dilemma and the steps being taken to address it.
2. Describe the accounting standards relevant to financial reporting quality.
3. Evaluate the earnings quality of a company.
4. Evaluate the cash flow quality of a company.
5. Evaluate the balance sheet quality of a company
6. Evaluate the financial reporting quality of a company using the Beneish model.
7. Recommend changes to a firm’s financial statements to address financial reporting quality issues.

**Introduction**

Novice users of financial statements assume that what they are reading is an accurate portrayal of a company’s performance as these statements were approved by the firm’s auditors. Despite all the effort that goes into preparing the financial statements and the accompanying notes, management’s considerable discretion when constructing them limits their accuracy and the user’s ability to analyze a firm’s performance and compare it to industry peers. International Financial Reporting Standards (IFRS) allow firms to choose between different accounting policies such as the FIFO or average cost methods for inventory valuation or the straight-line or accelerated depreciation approaches when expensing fixed assets. Businesses rely on estimates of useful lives, bad debts, and returns and can choose whether their assets and liabilities are valued at historical cost or fair market value. Major assets like patents and goodwill are excluded from the balance sheet if they are developed internally as are certain off-balance sheet liabilities. Companies decide whether to classify assets and liabilities as current or long-term and long-term obligations as either liabilities or equities. Revenue recognition, cost recognition, the timing of discretionary expenses, asset revaluations, impairment losses and reversals, and the classification of revenues and expenses as operating or non-operating are all management decisions.

This considerable discretion allows companies to manipulate their financial performance and deceive boards of directors and current and potential investors. There is a joke in accounting where one accountant says “What is your net income?” The other replies “What do you want it to be?” This answer is indicative of the great latitude that accountants have in reporting a company’s financial results. The ability to identify financial reporting quality issues and adjust a firm’s financial statements to better measure its performance is an important skill for financial analysts.

* 1. **| IFRS Relevant to Financial Reporting Quality**

To identify financial reporting quality issues and adjust a firm’s financial statements, a financial analyst must have a thorough understanding of several relevant accounting standards.

**Revenue recognition.** Under IFRS revenue is recognized when 1) there is a binding sales contract, 2) it is probable that the company will collect the consideration, and 3) the good or services are transferred to the customer and they have control over them. When determining control, companies consider if the customer is obligated to pay for them, has legal title, is in physical possession, has accepted the asset, and has assumed the risks and rewards of ownership meaning they will receive any future benefits from the assets or absorb any losses. At this point, the company has likely completed all work required under the contract and is entitled to recognize the revenue.

More complex, long-term contracts such as construction projects are divided into different performance obligations. The sale price is allocated to each of the performance obligations and is recognized in parts as the project is completed. Progress is measured using output methods such as performance to date, milestones reached, the time elapsed, and units produced or delivered. Input methods such as labour hours, machine hours, or costs incurred relative to total expected costs are also used. Costs directly traceable to manufacturing the product or delivering the service are deferred and matched against the revenues as they are recognized. If payment is deferred, accounts receivable are measured at the present value of the future cash flows using an appropriate discount rate. The increase in the value of the receivable each year due to the passage of time (i.e. company is discounting the payments for one less year) is recorded as interest revenue.

**Discontinued operations.** This is a business component that has been disposed of in the current year or is being held for sale. A component is a cash-generating unit or group of cash-generating units that can be distinguished, both operationally and financially, from the rest of the company and usually represents a major product line, operations in a geographical area, or a subsidiary. A potential sale must be highly probable to be classified as held for sale. This requires that:

* Authorized managers commit to the plan
* Assets are available for immediate sale in their current condition
* An active program to sell the asset has been initiated
* The asking price is reasonable relative to the component’s fair value
* The sale is probable within a year or more than a year if the conditions are outside management’s control and the firm remains committed to the plan
* The plan is unlikely to be withdrawn or undergo significant changes
* Shareholder approval is highly probable

Discontinued operations that were disposed of or are being held for sale should be reported separately at the bottom of the income statement just before net income as they are not part of the company’s continuing operations and, therefore, are not representative of its future operations. The pre-tax profits or losses, pre-tax gains or losses on the disposal of assets, and related income taxes are disclosed. Further write-downs to fair value may be subsequently recognized for discontinued operations that are being held for sale. A gain may also be recognized for any subsequent increase in their fair value, but it cannot be more than the cumulative loss previously recognized based on the conservatism principle.

**Comprehensive income.** Companies disclose both net income and comprehensive income under IFRS. This can be done on the income statement or in a separate statement of comprehensive income. Comprehensive income includes certain unrecognized gains and losses. Once these gains and losses are realized, they are included in net income except for defined benefit plan gains and losses. Net income is generally more stable than comprehensive income because it normally recognizes gains and losses when realized which makes it more useful to users.

**Exhibit 1: Statement of Comprehensive Income**

|  |  |
| --- | --- |
| Net income | CAD 77,250 |
| Items that may be reclassified as net income |  |
|  Foreign currency translation  | (3,500) |
|  Cash flow hedges  | (2,785) |
|  Asset revaluations | (1,000) |
|  Available-for-sale financial asset  | 320 |
|  Equity investments  | 5,870 |
| Items that are never reclassified to net income |  |
|  Defined benefit plans  | 3,430  |
| Total comprehensive income | CAD 79,585 |

**Non-IFRS disclosures.**  A firm’s management discussion and analysis (MD&A) may contain adjustments to the company’s audited financial statements, particularly its earnings. Companies feel these “non-IFRS” disclosures more accurately measure their financial performance. For example, companies may exclude non-core or non-recurring items from net income such as restructuring charges or gains and losses on asset sales.

**Accounts and notes receivable.** Short-term receivables are recorded at their transaction price minus allowances for bad debts, sales returns, and damaged items. Even though payment is deferred, accounts receivables are not recorded at their present value as the difference is immaterial due to the short duration of these transactions. Long-term notes receivables are measured at amortized cost along with any impairment losses and reversals.

**Inventories.** Categories include raw materials, parts, supplies, work-in-progress and finished goods. The specific identification method is used when costs are directly attributable to certain inventory items, while FIFO or average cost is used for identical items. Inventory is recorded at the lower of cost or net realizable value (NRV) which equals its estimated selling price less any costs to complete and sell the units. Impairments can be reversed but only up to the inventory’s original cost.

LIFO is not allowed under IFRS but is an option under U.S. GAAP. When prices are rising, FIFO gives a lower cost of sales and a higher inventory valuation compared to the average cost method. This is because older units are expensed first and ending inventory consists of recent inventory purchases. Having different costing methods makes comparisons with other companies or the industry average difficult.

**Property, plant, and equipment.** These assets are initially recorded at the cost of putting them into place and condition for use. Managers have considerable discretion in deciding what costs are capitalized.

**Exhibit 2: Cost Capitalization**

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| --- | --- |
| **Capitalize*** The present value of the purchase price plus duties and taxes less any discounts, rebates, tax credits, and other government assistance
* Delivery and handling
* Site preparation, installation, assembly, and professional fees
* Testing minus the value of scrap materials
* Costs of self-constructing an asset
* Interest costs during development
* Costs of dismantling and removing old equipment and restoring the site
 | **Do Not Capitalize*** Cost of opening a new facility or location
* Advertising and promotion costs for new products
* General administration or selling costs
* Abnormal wastage during testing or self-construction
* Costs of relocating or reorganizing part of a company’s operations
* Internal profits on self-construction
* Losses while sales from new assets are being developed and put into use
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Cost capitalization ends and depreciation begins once the asset is available for use. Subsequent maintenance and repairs are expensed while the cost of replacing major components or conducting major inspections are capitalized.

Major assets are divided into significant components with different useful lives such as a transport truck and its engine and each is depreciated separately. The depreciation method selected such as the straight-line, declining balance, or units-of-output approaches should reflect the pattern in which the asset’s benefits are being consumed. Depreciation methods and estimates of useful life and residual value are reviewed annually and any revisions are treated as changes in accounting estimate and applied prospectively. Gains or losses are recognized when the asset is sold or abandoned.

Either the cost or revaluation model is used to account for changes in the value of assets after they are acquired, but the model chosen can vary by asset class. The cost model only recognizes asset impairments and reversals up to the asset’s original carrying value, while the revaluation model recognizes changes in value above or below carrying value. The cost model is the most commonly used because of its simplicity, but the revaluation model is frequently employed with asset classes that appreciate such as land or building.

**Cost model.** Under this model, assets are carried at their cost less accumulative depreciation and impairment losses. Their carrying values are reviewed at the end of each reporting period for indications of impairment. These include:

* Significant changes in the technological, market, economic or legal environment
* Increases in discount rates
* Physical damage or obsolescence
* Accuracy of current useful life and residual value estimates
* Asset carrying values that are above current market values
* The decision to idle or sell specific assets or restructure or discontinue certain business operations
* Forecasted declines in sales
* Dividends that exceed the net income of a subsidiary, joint venture, or associate

An impairment loss is recognized in profit and loss (i.e. in the income statement) if the recoverable amount is below the carrying amount. Depreciation is also adjusted to reflect the new carrying value, residual value, and estimate of useful life. The recoverable amount is the lesser of 1) an asset’s fair value less selling costs and 2) its value in use. Value in use is the present value of the cash flows the asset is expected to generate including its residual value. The discount rate reflects the time value of money, the riskiness of the asset, and any asset potential liquidity problems the company may experience selling the asset.

Impairment losses should be calculated for individual assets, but if that is not possible, they are calculated based on the cash-generating unit the assets belong to. A cash-generating unit is the smallest identifiable group of assets that generate cash inflows within a business. For a cash-generating unit, impairments are allocated to the assets in the group on a pro-rata basis after reducing any goodwill allocated to the cash-generating unit to zero. No assets are reduced below the higher of their fair value or value in use so additional allocations to the other assets in the cash-generating unit may have to be made to compensate.

Reversals of impairment losses for individual assets can be recognized in profit or loss in subsequent periods but only up to the asset’s original carrying value. For cash-generating units, impairment losses can be reversed except for the portion previously allocated to goodwill. Reversals are allocated on a pro-rata basis, but the value of individual assets cannot exceed the lower of their fair value or original carrying value which may necessitate allocations to other assets in the cash-generating unit.

**Revaluation model.** With this model, revaluations are done when the carrying value and fair value of an asset are significantly different. Revaluations occur from one to five years depending on the price volatility of the asset, but assets are subject to regular depreciation in the interim. If one asset in a class is revalued, all assets in the class are revalued to avoid selective revaluation. Decreases in carrying value are recognized in profit or loss unless they are reversing previous increases recognized in comprehensive income. Increases in carrying value recognized as part of a revaluation are recognized in comprehensive income unless they reverse previous decreases recognized in profit or loss.

**Borrowing costs.** Interest costs attributable to the acquisition, construction, and production of assets for internal use or sale that take substantial time to complete should be capitalized. Interest can be calculated using interest incurred on the loans taken out to directly fund the asset, or by applying a capitalization rate (i.e. the firm’s weighted average cost of borrowing) to the expenditures incurred. Interest capitalization begins when expenditures are first made, and activities begin. They cease when substantially all activities are complete. Any interest income earned on borrowed funds that are not currently being used is deducted from the interest capitalized. Capitalized interest cannot exceed actual interest.

**Intangible assets.** These are assets such as computer software, patents, copyrights, customer lists, licences, quotas, or franchises that lack physical substance. They are recognized at cost and can be bought separately, purchased as part of a business acquisition, awarded at no charge by the government, or developed internally. Intangible assets given at no charge by the government may be recognized at fair value or a nominal amount such as CAD 1 plus any further costs incurred preparing the asset for use. After the acquisition, intangible assets are accounted for using either the cost or revaluation model like property, plant and, equipment but with some differences that reflect the asset’s unique nature and more uncertain value. These include:

* The evaluation model can only be used if an active market exists
* Intangible assets may have indefinite or definite useful lives
* Residual value is assumed to be zero unless a third party agrees to buy the asset at the end of its useful life, or an active market exists
* The amortization method selected should reflect the consumption of benefits, but straight-line depreciation can be used if the consumption pattern is not determinable
* Are tested for impairment annually if they have indefinite lives or have not yet been put into use

**Leases.** All lease agreements are capitalized except those under 12 months or with low values. An asset and liability are recognized equal to the present value of the lease payments over the lease term using the implicit rate in the lease or the lessee’s incremental borrowing rate if the implicit rate is not available. The implicit rate equates the fair value of the leased asset now with the lease payments and guaranteed and unguaranteed residual in the future ─ it is the lessor’s rate of return. The incremental borrowing rate is what the lessee would pay on a loan of equal length with similar security. Subsequently, the leased asset can be accounted for using either the cost or revaluation models while the lease liability is accounted for like other loans. Lease assets and liabilities are revalued to reflect modifications to the lease payments or other terms of the lease agreement.

**Research and development costs.** Research is general scientific investigation while development involves designing specific new products or services. Costs incurred during the research phase of a project are expensed because their future value is difficult to assess, and the costs are not easily traceable to a specific asset. Development costs are only capitalized if:

* The product is technically feasible
* Management is committed to producing or using the product
* Management can sell or use the product
* A large enough internal or external market exists so the product is feasible
* Adequate resources are available to complete and sell the product

Only costs that are directly attributable to the development of an asset should be capitalized. General administrative costs, training expenditures, and initial operating losses are not capitalized. Costs of developing brands, mastheads, publishing titles, customer lists, and similar items are not capitalized because they cannot be easily separated from general business expenses. Companies cannot subsequently capitalize development costs that have previously been expensed. Impairment losses are recognized if the conditions for capitalization are no longer met or the asset’s recoverable amount falls below its carrying value.

**Exploration costs for mineral resources.** Accounting policies should be established describing what costs are capitalized. Either the cost or revaluation model can be used to account for exploration assets. Factors to consider in valuing these assets include:

* Are the exploration rights about to expire? Will they be renewed?
* Is further exploration planned or budgeted?
* Have commercially viable quantities of mineral resources been discovered or will the project likely be abandoned?
* Is the company unlikely to recover the full amount of its exploration costs?

Once a project is technically feasibly and commercially viable, the exploration asset is reclassified as property, plant, and equipment or intangible assets.

**Investments.** Companies have different motives for investing in the debt and equity securities of other firms.

**Exhibit 3: Investment Motives**

|  |  |  |  |
| --- | --- | --- | --- |
| **Types of Influence** | **Ownership** | **Accounting****Methods** | **Name of Relationship** |
| No influence | <20% | Amortized costFair value through profit or lossFair value through other comprehensive income | Portfolio investment |
| Significant influence | 20-49% | Equity method | Associate or affiliate |
| Joint control | 50% | Equity method | Joint venture |
| Control | 50%+ | Acquisition method | Subsidiary |

Portfolio investments are purchased to earn interest or dividend income until the funds are needed for operations such as a seasonal inventory buildup, major capital purchase, dividend, business opportunity, or unexpected loss. Passive investments are not purchased to influence, control, or jointly control another company. The three methods used to account for passive investments include:

**Amortized cost (also called held-to-maturity).** Used to account for debt securities that a company has the intent and ability to hold until maturity. Interest income is reported in profit and loss using the amortized cost method. Gains or losses are not recognized in profit or loss each year as changes in the market value of debt securities will likely average to zero if the investment is held to maturity. This results in stabler annual profits that are more representative of a firm’s long-term performance. If the company does not intend or is unable to hold the debt security to maturity, then one of the other methods is adopted.

**Fair value through profit or loss (also called available-for-trading).**  Used to account for debt and equity securities that a company trades regularly. Interest and dividend income are reported in profit and loss, and the investment is reported at fair value on the balance sheet. Unrealized and realized gains and losses are reported in profit and loss each year as trading in securities is the investor’s primary business.

**Fair value through other comprehensive income (also called available-for-sale).**  Used to account for debt and equity securities that will be sold in the future as funds are required for operations. Interest and dividend income are reported in profit and loss, and the investment is reported at fair value on the balance sheet. Unrealized gains and losses are recorded in other comprehensive income, while realized gains and losses are recorded in profit or loss. Like the amortized cost method, this results in stabler profits that are more representative of a firm’s long-term performance.

If a portfolio investment’s fair value cannot be accurately estimated, it is carried at cost. To simplify record keeping, companies may elect to use fair value through profit or loss for any of their investments. Financial assets are classified as either current or long-term depending on whether they mature or the company plans to sell them over the next 12 months.

The equity method is used to account for investments in associate firms where the company has significant influence or joint control. Significant influence is assumed at between 20% and 49% ownership unless it is demonstrated to exist at less than 20% or not exist at 20% or more. Factors to consider when deciding if significant influence exists include:

* Representation on the board of directors
* Participation in decision making especially dividend payments
* Material intercompany transactions
* Exchange of personnel between companies
* Provision of essential technical information

Investments in associates are recorded at the cost of the shares plus the investor’s portion of the investee’s profit or loss minus any dividends received each year adjusted for 1) changes in the associate’s depreciation expense due to the revaluation of its assets as part of the acquisition, and 2) any unrealized profits on upstream or downstream sales between the two firms. Upstream sales are from the associate to the investor, and downstream sales are from the investor to the associate. Profits on these non-arm’s length transactions are not recognized until the products are resold to outside customers. Impairment losses and reversals are recognized when appropriate.

When one company acquires control of another firm, the financial statements of the two entities are consolidated using the acquisition method. The financial statements of the parent and its subsidiary are combined showing the income, assets, and liabilities that the parent company has control over. Identifiable assets and liabilities, including those that were not previously recognized such as internally developed intangible assets, are measured at their fair value on the acquisition date and any additional amount paid is recognized as goodwill. Unrealized profits on upstream and downstream transactions between the parent and subsidiary are eliminated. Parent companies and their subsidiaries must adopt the same accounting policies and reporting period as they are considered one economic entity.

If a company purchases less than 100% of a subsidiary, it must disclose a non-controlling interest which the portion of the firm’s combined income and equity that the parent does not own. It is shown at the bottom of the income statement and statement of comprehensive income and in the equity section of the balance sheet.

**Goodwill.** This is the difference between the cost of an acquired company and the fair value assigned to its assets and liabilities. Goodwill is only recognized if it is purchased so internally developed goodwill is not permitted. This is based on the objectivity principle which states assets are only recognized if their value has been verified in an arm’s length transaction.

All goodwill is allocated to a firm’s cash-generating units at the time of acquisition. It is not amortized regularly, but impairment losses are recorded if the recoverable amount of the cash-generating unit falls below its carrying value. Impairment losses are used to reduce the cash-generating unit’s goodwill first and then its other assets. A cash-generating unit’s goodwill must be tested for impairment annually or more often if warranted. Goodwill impairments cannot be reversed even if market conditions later change.

**Provisions.** A liability is an obligation resulting from past events that require a future outflow of resources. A provision is a liability of uncertain timing or amount. It is only recognized as a liability on the balance sheet if it is probable and the obligation can be measured with sufficient reliability. An event is probable if it is more likely than not to be realized (i.e. more than a 50% chance of occurring).

A provision should be measured at its present value using a discount rate that reflects the risks and uncertainties of the obligation. The increase in the provision’s value due to the passage of time is recognized as interest expense. A provision is revalued in the future if more objective evidence becomes available about the amount of the obligation or the discount rate changes. If the provision is no longer probable, it is eliminated. Provisions are common with land restoration, legal, warranty, refund, and restructuring costs.

Restructuring a company includes selling or discontinuing a line of business, closing locations, revamping organizational structures, or changing strategic direction. When accounting for these costs, IFRS requires that:

* A formal restructuring plan is implemented before a provision is recognized. Proof of implementation may include board approval, a public announcement, negotiating severance pay with employees, or selling assets.
* Only expenditures that are directly related to the restructuring be included in the provision. Ongoing expenses such as marketing costs or the cost of training and relocating employees who remain with the company are classified as regular operating expenses.
* No costs are charged against the provision in the future which are unrelated to the original provision.
* Future operating losses and expected future gains or losses on asset sales are not included in the provision. Gains or losses are only recognized when a binding agreement is negotiated.

**Related party transactions.** A person or their close family member is a related party to a company if they are 1) able to exercise direct or indirect control, joint control, or significant influence over the company or 2) they are key management personnel including a director of the company or its parent. Close family members include a spouse, children, a spouse’s children, or other dependents. Another company is a related party to a reporting company if they are a 1) member of a group of related companies as a parent, subsidiary, associate, or joint venture, or 2) benefit plan provider such as a pension plan.

Related party transactions are categorized by the nature of the relationship. The categories include 1) their parent company, 2) those with joint control or significant influence over them, 2) their subsidiaries, 3) their associates, 4) joint ventures they are part of, 5) key management personnel of the company or its parent, and 6) other related parties. For each of these categories, the following must be disclosed: the amount of any transactions; all outstanding accounting balances such as accounts receivables or payables; any future commitments to deal with them; terms and conditions of any agreements including forms of consideration; security pledged and guarantees given or received; and bad debts expense recognized that period and any remaining bad debt allowances. All parent and subsidiary relationships are disclosed regardless if any transactions occurred.

The type of compensation that key managers receive must also be disclosed to determine if any potential conflicts of interest exist. These compensation categories include short-term pay and benefits such as bonuses, long-term pay like stock options, post-employment benefits including pensions, and termination benefits particularly severance pay. Users need to know how managers are paid as it influences their behavior. For example, managers with poor termination benefits may oppose a corporate takeover even if it is in the shareholders’ best interest, or managers with mostly short-term pay may avoid long-term projects with greater risks but higher potential profits.

**Contingent liabilities and assets.** A contingent liability is an obligation that is not wholly within the control of management, not probable, or cannot be measured reliably. All contingent liabilities are noted unless their probability is remote. Examples of contingent liabilities include a potential payout in a current or potential lawsuit or tax obligation as part of a tax reassessment.

Contingent assets are possible assets resulting from past events that are contingent on future events that are not wholly within the control of management. Based on the conservatism principle, contingent assets should be reviewed regularly and are not accrued until they become virtually certain. If it is probable that benefits will be received, they are noted. If they are not probable, they must not be noted.

**Changes in accounting policy.** A summary of a firm’s accounting policies is included in the notes to the financial statements. Any new IFRS policies and changes to existing policies are applied retrospectively and prior earnings are restated based on the consistency principle. A policy can only be changed by a company if it improves financial reporting quality.

**Changes in accounting estimates and errors.** Changes in accounting estimates such as the bad debt percent or the useful life of an asset class are applied prospectively. Changes in depreciation methods are considered changes in accounting estimates. Error corrections are accounted for retrospectively.

**Events after the reporting period.** Companies have three months after year-end to publish their financial statements. If the conditions existed at year-end, any event occurring after year-end but before the issuance of the annual report is accrued in the financial statements to provide a more accurate measure of the company’s performance. Some examples include:

* + Settlement of a lawsuit
	+ Customer bankruptcy
	+ Asset impairment or reversal
	+ The actual cost of an asset purchased or the proceeds from a sale
	+ Profit-sharing or bonuses paid to executives
	+ Discovery of a fraudulent act or accounting error

If the conditions did not exist at year-end, the event should be noted if material. Some examples include:

* + Decline in the fair value of an investment
	+ Declaration of dividend
	+ Business acquisition or restructuring
	+ Plan to discontinue operations or reclassify assets as held for sale
	+ Major asset purchases
	+ Destruction of assets after a natural disaster
	+ Changes in asset prices, exchange rates, or tax rates
	+ Significant commitment such as a loan guarantee
	+ New litigation

**Post-employment benefit plans.** These plans typically provide pensions and health care benefits to employees in retirement. With a defined contribution plan, an employer makes regular contributions over an employee’s working life which are placed into a fund that is eventually used to pay for the benefits ─ the employee may or may not match these contributions. If the fund is insufficient to pay for the benefits promised, the employer is not obligated to make any additional contributions and the employees must make do with the funds available. With a defined benefit plan, an employer makes regular payments but is obligated to pay more if the fund is deficient. Defined benefit plans are riskier for companies because of this potential obligation, so they are increasingly being replaced by defined contribution plans.

Accounting for a defined contribution plan is simpler than a defined benefit plan. The annual expense equals the employer’s contribution and there is no balance sheet disclosure as the firm is not obligated to make any additional payments. For a defined benefit plan, the balance sheet disclosure is the net defined benefit asset or liability.

**Exhibit 4: Net Defined Benefit Asset or Liability**







Defined benefit obligation (DBO) equals the present value of all future benefits that the employees have earned. Plan assets consist of the employer and employee contributions plus the return the benefit plan manager was able to earn on these funds. The difference between the plan assets and the DBO is either a liability or an asset on the balance sheet. A liability means the plan is underfunded as the company has not accumulated enough to pay its obligations. An asset means the plan has more than enough to meet its obligations and the company may be able to reduce its future contributions to bring the plan back into balance.

Actuarial assumptions are used to estimate the value of the DBO and plan assets. Key assumptions include the discount rate; rate of compensation increase; rate of increase in future medical costs; employee mortality, turnover, disability, early retirement, and health care claim rates; dependent eligibility; and estimated remaining working lives of employees.

For a defined benefit plan, its annual expense has several components:

**Current service cost.** The present value of the future benefits earned by employees for service in the current period.

**Past service costs.** The present value of the future benefits earned by employees due to a retroactive adjustment to the plan’s benefits for previous years of service.

**Net interest costs.** This is the net of the expected return on the plan assets and the increase in the DBO due to the passage of time as the employer is discounting plan obligations for one less year as the workforce ages.

**Remeasurement costs.** This is the increase in the DBO due to 1) actuarial gains and losses and 2) the difference between the expected and actual return on the plan assets. Actuarial gains and losses occur when the assumptions used to compute the plan assets or DBO are modified causing the net defined benefit asset or liability to change. The average actual return on plan assets over time should closely approximate the expected return, but there will be yearly differences. Remeasurement costs are included in other comprehensive income to provide a stable profit or loss.

**Long-term liabilities.** These liabilities are initially measured at fair value, but then at amortized cost. The fair value of all liabilities must be disclosed except for lease liabilities; short-term payables as their carrying values likely approximate fair value; or when fair value cannot be accurately determined. An explanation of why fair value cannot be determined should be provided along with information that might help users make their own assessment. The derivative component of compound financial instruments like convertible bonds or preferred shares is accounted for separately.

**Deferred income taxes.** A firm’s accounting income under IFRS and taxable income according to the Income Tax Act (ITA) are rarely the same. Accountants typically prepare a tax reconciliation table that explains the differences which occur because some transactions are treated differently under the two sets of rules. Temporary or timing differences are transactions that are eventually treated the same under IFRS and the ITA, but it may take several years to balance out. Permanent differences are accounting transactions that are never taxable or tax-deductible under the ITA, so they are not included in the calculation of income tax expense for accounting purposes.

The tax effects of all the temporary differences are netted and treated as either a non-current deferred income tax asset or liability on the balance sheet until they eventually reverse themselves. Income tax expense on the income statement consists of current income tax expense which is payable in the current period under the ITA and deferred income tax expense which will be payable or receivable in a future period when the temporary differences are reversed. Temporary differences can either be taxable temporary differences that will be taxable in the future under the ITA resulting in a deferred income tax liability or deductible temporary differences that will be tax-deductible under the ITA in the future resulting in a deferred income tax asset.

Deferred income tax assets also include unused loss carryforwards as well as deductible temporary differences. ITA allows businesses to carry non-capital losses, which occur when a company loses money, back three years. These losses are applied against past taxable income reducing income taxes owed generating a tax refund. If the losses cannot be fully applied in the past three years due to insufficient income, they can be carried forward up to 20 years resulting in lower income taxes in those years. For capital losses, which occur when assets are sold, losses can be carried back three years but only applied against other capital gains. If these gains are insufficient, the capital losses can be carried forward indefinitely but only applied against capital gains.

The portion of the unused loss carry forward that can be recognized as an asset on the balance sheet is limited to the amount that has a 50% or higher probability of being eventually recognized. When assessing this probability, the company needs to consider their expected taxable income in future periods, the size of existing taxable temporary differences that will be reversed, and different tax planning strategies that can be implemented such as delaying capital cost allowance to increase future taxable income.

Deferred income assets resulting from temporary differences and unused loss carryforwards must be assessed annually and revalued upwards or downwards based on any changes in their probability or the future income tax rate. Any adjustments are included in deferred income tax expense.

**Derivative and hedge accounting.** Companies normally buy derivatives such as forwards, futures, options, or swaps to hedge their operations against financial risks such as changing commodity prices, interest rates, or exchange rates. Derivatives must be recorded at fair value through profit or loss. Recognizing frequent gains or losses on derivatives usually results in considerable variation in net income so companies have the option to adopt hedge accounting which lets them match any gains or losses on the derivatives with the gains or losses on the assets, liabilities, or cash flows being hedged resulting in a stabler profit or loss. A fair value hedge insures an existing asset like inventory while a cash flow hedge ensures future transactions such as a sale of goods.

* 1. **| Earnings Quality**

**Definition of Earnings Quality**

High-quality earnings accurately measure a firm’s financial performance by recognizing revenues and expenses at the appropriate time under IFRS and the different theoretical accounting principles particularly the revenue recognition and matching principles.

In the past, earnings were thought to be of high quality if they were conservative which means companies were slow to realize revenue but quick to recognize expenses. This approach understates earnings, so now the common opinion is that high-quality earnings must fairly state revenue and expenses. Accounting practices are referred to as being conservative if they understate a company’s financial performance (i.e. income statement) or position (i.e. balance sheet) in the current period and aggressive if they overstate it. Practices that are aggressive this period such as recognizing review prematurely may be conservative in future periods as revenue will be understated. The opposite may also be true.

**Earnings Quality Dilemma**

Managers are under tremendous pressure to perform financially and must meet or beat the consensus earnings forecasts of the equity analysts who follow their company’s stock for different money management firms. Portfolio managers who buy shares have limited investment horizons as they are evaluated based on their short-term performance despite the long-term nature of most investment portfolios. As a result, even a small negative variation from analysts’ consensus forecasts typically causes a major decline in a firm’s share price.

The financial pressure on management has many causes. CEOs receive a large portion of their pay from cash bonuses and long-term incentive pay such as stock options or restricted share units whose payouts are dependent on rising share prices. Companies need “in-the-money” stock options to attract and retain top managers. A high share price allows firms to negotiate more favorable terms when acquiring other businesses using stock swaps. Most bank loans stipulate companies meet certain ratio requirements that include earnings to retain their financing. Growing, stable profits are better received by a company’s board of directors and the stock market. CEOs are always fearful of losing their jobs because of significant earnings fluctuations or negative earnings surprises. An earnings surprise occurs when the consensus earnings forecast is different from the actual earnings per share (EPS) announced by the company.

Managers spend a lot of valuable time playing the “earnings game” or managing their earnings because of this financial pressure. They inflate a company’s actual earnings to meet profit targets or smooth earnings to avoid the scrutiny of the board and investors. Companies try to guide stock analysts to a specific EPS figure with their financial disclosures and usually err on the low side so their earnings announcement exceeds the consensus forecast resulting in a positive earnings surprise and a rising share price. If managers miss the target, they tend to do so by a large margin and save earnings for future periods. Earnings management is also referred to as “creative accounting,” “hocus-pocus accounting,” “cooking the books,” “making their numbers,” or “income smoothing.”

**Exhibit 5: Managing Earnings**

**Time**

**EPS**

**Inflated**

**Smooth**

Accounting earnings are not always a good measure of a corporation’s success or failure because of earnings management. Analysts may not detect these deceptive practices until it is too late leading to losses for investors. Valuable resources are wasted thinking of these earnings management schemes and moving analysts closer to the profit target a company wants. Smoothing out short-term variations in profits may provide analysts with a better measure of long-term performance, but inflating earnings hurt investors.

As discussed in the Module: Corporate Governance and Executive Compensation, the quality of corporate earnings has improved significantly since the Enron debacle in 2001 and the mortgage lending crisis in 2007. Public companies hire an external auditor to attest to the accuracy of their financial statements and these auditors are now better trained and much more independent. Boards of directors, audit committees, and the company’s internal auditors are more conscious of the need to avoid financial impropriety. Corporate whistleblower programs are becoming commonplace. CEOs and CFOs must now certify company earnings which means they are held accountable for any irregularities. Disgruntled shareholders and creditors are increasingly threatening companies with lawsuits when financial problems are discovered. Governments have passed legislation to improve financial reporting and hold violators accountable. International accounting and auditing organizations like the International Accounting Standards Board (IASB) and International Accounting and Assurance Standards Board (IAASB) are adopting more demanding standards. Finally, financial analysts are becoming savvier about detecting earnings management and adjusting a firm’s financial statements to better reflect its performance.

**Inflating and Smoothing Earnings**

As discussed, companies manage earnings to inflate or smooth out their yearly profits so they can maximize management compensation, attract new managers, meet loan requirements, and avoid the scrutiny of its board of directors and stock markets. This is accomplished primarily by manipulating revenue recognition, but they distort cost recognition as well. Firms also re-classify revenues and gains that are non-operating as operating items or expenses and losses that are operating as non-operating items to increase analysts’ expectations of their sustainable or recurring earnings. They may even try to hide regular expenses in restructuring provisions or discontinued operations. This practice is referred to as moving items “above the line” or “below the line.”

Stock analysts focus on operating income (i.e. “the line”) and not net income when evaluating a company’s performance because it reflects core income from continuing business activities which is more representative of its future performance. Operating income excludes non-recurring or one-time items such as discontinued operations, restructuring provisions, goodwill impairments, gains and losses on asset sales, and litigation settlements as well as items that are unrelated to the firm’s regular business operations such as investment income or gains and losses on the sale of financial assets like stock or bonds.

Many earnings management strategies are fraudulent and are increasingly being detected by more vigilant auditors and regulators. Other strategies allow managers to exercise their judgement and may be allowed by auditors or go undetected. The most common strategies include:

**Exhibit 6: Revenue Recognition Strategies**

|  |  |
| --- | --- |
| Backdate sales invoices | Invoices are backdated to before year-end so companies can meet their annual sales quotas. This reduces next year’s revenues, but sales can recover, or the firm may find a new way to manipulate its revenues before then. |
| Recognize revenue before finalizing a sales agreement | Revenue is not recognized until the two parties enter into a binding sales agreement. Recognizing sales prematurely increases current revenues. |
| Recognize revenue too quickly on long-term sales contracts | Profits on long-term contracts are recognized in parts over the contract’s life as the work is completed. A company may intentionally overvalue work completed in the initial stages to increase its current revenues.  |
| Manipulate discount rates when payments are delayed | When collections are deferred, a sale is recorded at the present value of its future cash flows. By recording these deferred revenues at their face value or using a discount rate that is below the current market rate, companies inflate their current revenues. |
| Recognize revenue even when return provisions cannot be reasonably estimated | Revenue recognition should be delayed until return provisions expire unless they can be reasonably estimated. |
| Recognize revenue when the ability to pay is questionable | Revenue recognition should be delayed until cash is collected if payment cannot be reasonably estimated using a bad debts provision. |
| Allocate more revenue to products sales than after-sales services | Some contracts, like those in the software industry, consist of an initial product sale followed by after-sales services like installation, training, or program customization. Revenue relating to product sales is recognized immediately but revenue for after-sales services is delayed until the work is completed. Managers increase current revenues by arbitrarily allocating a greater portion of the contract to product sales. |
| Falsify sales to fictitious customers | Desperate companies create fake invoices and ship products to secret company-owned facilities to make phony sales appear legitimate. |
| Provide generous credit terms, sales discounts, or return privileges | These incentives encourage customers to purchase inventory early without fear of loss, so the company can meet its annual sales quota. Again, this will reduce revenues next year, but sales may recover, or the firm may find a new way to manipulate its revenues before then. The high cost of these incentives hurts investors. This strategy is called “channel stuffing” or “trade loading” and is a serious global problem. |
| Provide free storage | Customers agree to buy products early if a company provides free storage until the product is needed which is usually well into the future. Higher storage costs hurt investors, but they help management meet its annual sales quota. These are called “bill-and-hold” transactions. |
| Grossed-up revenue | Revenues are inflated by including the value of goods and services the company does not own but re-sells for a fee or commission. Only the fee or commission should be included in sales. This is called “grossing up.” |
| Negotiate two-way sales transactions between related parties at inflated prices | Companies collude to increase revenues by selling fictitious output to each other from unused production capacity. No cash is involved in what is called “round-tripping.” |
| Time store openings, new product introductions, or acquisitions | If a company’s sales growth comes primarily from these sources, it could be hiding a problem with its existing operations. Analysts address this by examining same-store sales that exclude new store openings. They also separate existing sales from sales relating to new products and acquisitions. |
| Use reserves to hold back revenues until they are needed  | A company defers revenue in good years and recognizes it in future years to meet its profit targets or smooth earnings. These deferred revenues are held in “cookie jar” reserves. |

**Exhibit 7: Cost Recognition Strategies**

|  |  |
| --- | --- |
| Capitalize too many costs | Expenditures are capitalized and amortized over the period they benefit a firm if their future value is certain. Otherwise, they are expensed immediately based on the conservatism principle. Companies capitalize costs such as research and development, internal development of intangible assets, resource exploration, advertising, store opening, marketing, or new customer solicitation that have uncertain future values to increase their current earnings. Inventory should only include costs that are directly traceable to the product. Interest incurred outside the manufacturing period, storage costs relating to excess production, or administration costs that are not directly related to production need to be expensed. Fixed assets only include costs related to putting the assets into place and condition for use such as transportation, installation, or testing. |
| Manipulate accounting estimates | Accounting estimates such as bad debts percent, warranty claims, product returns, or useful lives are lowered to increase current earnings. |
| Use provisions for restructuring charges, bad loans, product returns, and other expenses to manipulate earnings | Managers overstate provisions and then partially reverse them in subsequent years by adjusting cost estimates, discount rates, and probabilities to meet profit targets or smooth earnings. |
| Reduce discretionary costs | Some expenses such as advertising, training, maintenance, or research and development are not driven by consumer demand like the cost of sales but are at management’s discretion. These costs are reduced to meet profit targets or smooth earnings but lowering these critical expenditures seriously impacts corporate performance. |
| Time asset impairment losses and reversals, and asset revaluations | These adjustments to receivables, inventory, fixed assets, intangibles, and goodwill are not made when incurred but are timed to help a company meet its profit targets or smooth its earnings. |
| Change the discount rate | Manipulate the discount rate to generate gains and losses on assets and liabilities that are valued at the present value of their future cash flows.  |
| Use vendor overpayments and rebates to manipulate expenses | Companies collude with their vendors to overpay for purchases in good years and receive rebates in bad years to meet profit targets or smooth earnings. Vendors agree with these fraudulent arrangements to retain valued customers. |
| Select accounting policies that smooth earnings  | Capitalizing expenditures and amortizing them over the period they benefit the company results in smoother earnings than expensing them all at once.  |

**Exhibit 8: Classification Strategies**

|  |  |
| --- | --- |
| Discontinued operations are frequent and often classified as held for sale but not subsequently sold | Poorly performing business components are classified as discontinued operations when they do not meet the requirements so their results can still be moved “below the line” where they are usually ignored by analysts. Discontinued operations should only be classified as held for sale if the disposal is highly probable  |
| Investment income and other non-operating income are classified as operating | These non-operating items are classified “above the line” to increase operating income. |
| Operating expenses and losses are classified as non-operating | These operating items are classified “below the line” to increase operating income. Managers may attempt to hide them in restructuring provisions and discontinued operations, so they are not noticed by analysts. |
| Adopt fair value through profit or loss for all short-term investments | Any gains on short-term investments are included in profit or loss instead of other comprehensive income to increase operating income. |

**Warnings of Earnings Management**

Financial statements are complex, so analysts often try to identify warning signs or “red flags” of earnings management that indicate further investigation is required. Some of these include:

**Exhibit 9: Warning Signs of Earnings Management**

|  |  |
| --- | --- |
| Rising unbilled receivables | Revenue is recognized prematurely before the billing date agreed to by the parties. This date is typically set soon after the work is completed. |
| Rising long-term receivables | Longer credit terms are used to increase sales. |
| Revenue growth is higher than industry peers | Aggressive revenue recognition policies have been adopted compared to the industry. |
| Falling accounts receivable turnover | Generous credit terms are used to increase sales resulting in higher receivable and lower turnover. |
| Seasonal items are sold at the wrong time of year and a large portion of sales are in the last quarter | Channel stuffing is used in the final quarter to meet the annual sales quota. |
| Barter or non-cash sales with related parties | “Round tripping” or swaps of unused production capacity are used to increase sales. |
| Vendor financing with customers that have questionable credit ratings | Companies selling high-priced products such as machinery often provide financing to their customers. Lending standards are relaxed to increase sales and earn more interest income, but bad debts increase in the future. |
| Deferred revenues fall/rise disproportionately | Revenue reserves are released/accumulated to raise/decrease sales. |
| Expense provisions fall/rise disproportionately | Expense provisions are released/accumulated to decrease/raise expenses. |
| Gross or operating profit margins rise dramatically | Operating expenses are reclassified “below the line” or capitalized when they should have been expensed to increase profits. |
| A large portion of earnings is from gains on asset sales | Current earnings are not sustainable as the firm is overly dependent on one-time items. |
| A large portion of earnings is from investment income | Heavily reliance on interest and dividend income conceals problems with core business operations. |
| Inventory turnover is falling | Inventories are not properly written down and non-traceable production costs are capitalized to reduce expenses. |
| Fixed asset turnover is falling | Amortization periods are extended, and more asset costs are capitalized to reduce expenses. |
| Maintenance, research and development, marketing, advertising fall as a percent of sales | Discretionary expenses are reduced or capitalized to lower expenses. |
| Unjustified changes in accounting estimates | Accounting estimates like the bad debts percentage are manipulated to reduce expenses. |
| Frequent changes in how expenses are classified | Accounting transactions are being moved “above the line” or “below the line” to meet profit targets or smooth earnings. |
| More restructuring provisions than usual | Operating expenses are being hidden “below the line” in restructuring provisions to increase operating income. |
| External auditors do a lot of other consulting work for the client | Audit firms overlook questionable accounting practices to retain lucrative consulting work that is often much more profitable than the audit. |
| Numerous secret side deals are negotiated with suppliers | Price rebates are given to lower expenses in exchange for higher prices in the future. |
| Large asset impairments and restructuring provisions are recognized | Managers recognize these expenses all at once in a financially challenging year when investors expect large losses and will likely ignore them. This “big bath” overstates future profits and makes it appear that management was successful in turning around operations. |
| Accounting policies in the notes to the financial statements contain questionable practices compared to the industry | Earnings management is used to meet profit targets or smooth earnings. |
| Numerous accounting policy changes, earnings restatements, and error corrections | Companies change accounting policies or apply them improperly to manipulate their financial performance. Auditors or regulators who detect these improprieties demand that the policies be changed or applied correctly causing adjustments to past earnings. |
| Misclassified after reporting period events | These events are incorrectly included or excluded from current income to meet profit targets or smooth earnings. |
| Overemphasis on non-IFRS disclosures | Managers stress non-IFRS earnings to hide the financial problems apparent in the company’s IFRS-compliant financial statements. |
| New auditors, CFO, or outside counsel, and investigations by government regulators | Questionable accounting practices are discovered that drive honest people out of the company. |
| Poor corporate governance, few independent directors, and inadequate internal controls | Inferior corporate oversight means earnings management goes undetected. |
| Executive compensation systems emphasize short-term profit maximization and stock option payouts | Management has a strong incentive to manage earnings as their compensation is closely linked with the firm’s financial results. |
| Always meet or exceed analysts’ earnings estimates | Management is playing the “earnings game,” so it does not disappoint its directors and investors. |
| The company is raising financing or struggling to comply with its loan conditions | Management has a strong incentive to manage earnings to secure or maintain its financing. |
| Flamboyant or “flashy” executives | These types of people use earnings management to feed their egos and build a false reputation as a skilled and successful manager. |

**Quantitative Earning Management Models**

**Beneish Model**

Instead of examining a company’s financial statements and other disclosures to assess its earnings quality, analysts can use quantitative models. The most popular is the Beneish Model which measures the probability of earnings manipulation based on several variables using a type of regression analysis called a probit model.

M-score = -4.84 + 0.920 (DSRI) + 0.528 (GMI) + 0.404 (AQI) + 0.892 (SGI) + 0.115 (DEPI) – 0.172 (SGAI)

+ 4.679 (Accruals) - 0.327 (LEVI)

Beneish found that firms with M-Scores above -1.78 are likely earnings manipulators, between -2.00 and -1.78 are possible manipulators, and below -2.00 are not manipulators. This model is problematic as some of the variables are not statistically significant and some of the coefficients have the wrong sign. The eight variables are:

**Exhibit 10: Beneish Model Variables**

|  |
| --- |
| Days sales receivable index (DSR) = (Receivables t / Sales t) / (Receivables t-1 / Sales t-1)Rising DSR means receivables are increasing relative to sales indicating more aggressive revenue recognition. |
| Gross margin index (GMI) = Gross margin t-1 / Gross margin tRising GMI means gross profit margins are declining which provides a greater incentive to manipulate earnings. |
| Asset quality index (AQI) = (1 – (PPE t + Current assets t) / Total assets t) / (1 – (PPE t-1 + Current assets t-1) / Total assets t-1)Rising AQI means there are more other assets such as intangibles or goodwill which indicates questionable cost capitalization. |
| Sales growth index (SGI) = Sales t / Sales t-1Rising SGI means sales are increasing so there is greater pressure to manipulate earnings to maintain the trend. |
| Depreciation index (DEPI) = (Depreciation t-1 / (Depreciation t–1 + PPE t-1)) / (Depreciation t / (Depreciation t + PPE t))Rising DEPI means falling depreciation relative to fixed assets due to greater cost capitalization. |
| Sales, general, and administration expenses index (SGAI) = (SGA t / Sales t) / (SGA t-1 / Sales t-1)Rising SGAI means reduced operational efficiency which encourages more earnings manipulation. |
| Accruals to total assets (ATA) = (Continuing income t – Cash flow from operations t) / Total assets tRising accruals signal greater earnings manipulation. |
| Leverage index (LEVI) = (Debt t / Total assets t) / (Debt t-1 / Total assets t-1)Rising LEVI means higher financial distress which increases the need to manipulate earnings. |

Other variables have been tried to improve the model’s predictability, but the results were inconclusive. A problem with quantitative models is that firms have learned to “game” them by manipulating their financial ratios to produce lower M-Scores. Beneish found the predictability of his model declined in a subsequent study as companies learned to manipulate it. Qualitative analysis involving a careful review of a firm’s financial disclosures for warning signs of earnings management should be employed along with any quantitative model.

**Coping with Managed Earnings**

What should an analyst do if they discover a company is engaging in earnings management? Some will simply recommend to their employer that they not invest or extend credit because of the irregularities, but this would ignore a large number of potentially lucrative investments considering how widespread earnings management is in the economy. An alternative is to restate a company’s profits, so they are less impacted by earning management. In practice, this is difficult because of the time and cost involved, a lack of information in the financial statement and notes, and an equity analyst’s limited accounting knowledge.

As discussed, earnings should reflect normal and continuing elements only and exclude non-recurring items especially those that are unrelated to the firm’s core operations. These include discontinued operations, restructuring provisions, asset impairments, gains or losses on asset sales, or unreasonably high amounts of investment income. More conservative revenue and cost recognition policies can be adopted. Accounting estimates can be reset so they match industry peers. Discretionary expenses can be returned to normal levels and costs that were improperly capitalized could be expensed.

* 1. **| Cash Flow Quality**

If accounting income cannot be adjusted to reduce the impact of earnings management because of the cost, a lack of information, or insufficient accounting expertise, then cash flow-based financial ratios can be employed which substitute cash flow from operations (CFO) for net income. Cash flow-based ratios are examined in Module: Financial Statement Analysis.

The cash to income ratio specifically measures cash flow quality by comparing CFO to operating income. Interest expense and income taxes are added to CFO because they are not included in operating income which makes the numerator and denominator in the ratio more comparable.

$$Cash to income ratio= \frac{Cash flow from operations+Interest expense+Incomes taxes}{Operating income}$$

If the cash to income ratio falls significantly below 1.0, the company is likely recognizing revenues prematurely. If this ratio was well below 1.0 but then suddenly improves, the company may be “stretching” payables; reducing inventory balances below regular levels; accelerating accounts receivable collections by tightening credit terms or using expensive cash discounts and factoring; or deferring discretionary costs such as maintenance, research and development, advertising, and training to raise CFO. These actions are not sustainable and may have serious long-term negative consequences for the firm.

CFO is harder to manipulate than accounting income, but it can still be distorted. IFRS gives companies considerable discretion when classifying certain transactions on the cash flow statement. These different classifications are used to increase or lower CFO.

* Normally interest paid and interest and dividend income received are classified as operating activities as they are included in net income. Interest paid can also be classified as a financing activity as it is the cost of borrowing that increases CFO. Interest and dividends received may be classified as investing activities as they are investment returns that lower CFO.
* Dividends paid to shareholders are normally classified as a financing activity because they are a cost of equity financing. They may be classified as an operating activity to assist users in determining an entity’s ability to pay dividends out of operating cash flows that lower CFO.
* Companies can capitalize additional costs as fixed or intangible assets, so they appear as investing and not operating activities increasing CFO. Non-recurring items such as restructuring charges or legal settlements can also be timed to distort CFO.

Under US GAAP, interest paid, and interest and dividend income received must be included in operating activities while dividends paid are always classified as financing activities. This provides a more accurate measure of the CFO needed to finance capital expenditures, make required principal payments, and pay dividends. These amounts must be disclosed separately under IFRS so they can be easily reclassified by analysts. Other adjustments relating to non-recurring items can be made if the data is available.

* 1. **| Balance Sheet Quality**

A high-quality balance sheet provides a complete and unbiased measurement of a company’s assets and liabilities. These values are needed to accurately determine a business’s net worth (i.e. assets minus liabilities) and calculate many of the financial and cash flow-based ratios used to measure its financial performance.

A complete and unbiased balance sheet means that all of a company’s assets and liabilities have been recorded and are accurately valued. Producing such a balance sheet and disclosing how these values were determined is the goal of IFRS. Despite recent IFRS initiatives like fair value accounting and lease capitalization, generating compliant financial statements is still a problem due to some ill-conceived accounting standards and the discretion firms have in selecting and implementing accounting policies.

Like the income and cash flow statements, analysts must carefully examine the quality of a firm’s balance sheet and make the necessary adjustments before analyzing its performance. Some areas of concern include:

**Reclassification of assets and liabilities.** Inventories and accounts receivable are typically classified as current assets, but companies may try to increase their accounts receivable and inventory turnover ratios by reclassifying some of them as long-term assets. Long-term assets, particularly long-term investments, can be re-classified as short-term investments or current liabilities can be reclassified as long-term liabilities to increase the current ratio.

**Inventories.** Inventories are valued at the lower of cost or NRV, but impairments can be reversed up to the asset’s original cost. Analysts need to ensure companies are being conservative when applying these rules and not using impairments and reversals to smooth earnings. IFRS requires that all impairments and reversals be explained in the notes to the financial statements.

Companies may attempt to increase operating income by capitalizing expenses as part of the inventory. As discussed, inventories should only include costs that are directly traceable to the product. Interest incurred outside the asset development period, storage costs relating to excess production, or administration costs not directly related to production are expensed.

**Fair value accounting.** Analysts ought to determine whether fair value estimates are based on objective market prices or subjective management assessments that are more easily manipulated. They also need to examine the different valuation models and inputs used to calculate the fair value to see if a company is systematically overvaluing its assets and undervaluing its liabilities, so the balance sheet appears stronger.

**Fixed assets and intangibles.** These assets should be recorded at fair value not historical cost to provide a better measure of their true worth. An asset’s fair value is difficult to estimate especially if there is no active market, so the cost model is more common than the revaluation model in practice. Like with inventory, analysts must ensure that companies are conservative when recognizing asset impairments and be wary of firms that use frequent impairments and reversals to smooth their earnings. Firms may try to increase their operating income by capitalizing expenses as part of fixed assets. Only costs related to putting the asset into place and condition are capitalized. Adjustments ought to be made for unreasonable depreciation policies and useful life and residual value estimates.

The values of internally developed intangible assets such as brands or patents are often understated or excluded entirely from the balance sheet because the development costs were difficult to trace to the asset, conditions for capitalizing costs were not met when the initial expenditures were made, and revaluation gains cannot be recognized unless there is an active secondary market. Analysts should reassess intangible assets at their fair value.

**Acquisitions and goodwill.** Goodwill is only recognized if it is purchased in a business acquisition, so a company’s assets will likely be understated if it grows internally. In an acquisition, the purchase price is allocated to the cash-generating unit’s identifiable assets and liabilities first up to their fair value and the remaining amount is recognized as goodwill. Firms may intentionally reduce these fair value estimates so they can overstate goodwill. Depreciation expense for the identifiable assets falls and goodwill is not amortized, so operating income is overstated making the acquisition appear more successful. Goodwill is also used to hide cases where firms overpay for acquisitions and want to avoid impairments.

Goodwill must be tested for impairment at least annually, but if the recoverable amount is manipulated so it does not fall below the cash-generating unit’s carrying value, then an impairment loss can be avoided or delayed until a future period. By then executives will have received significant compensation and may be able to convince analysts that the goodwill impairment is irrelevant as it is a non-cash item.

Other companies try to allocate as much of an acquisition’s purchase price to goodwill and current research and development projects as possible but then quickly realize an impairment loss on these assets. This results in a large loss in the current period, but net income in future years is higher with less development cost amortization and fewer goodwill impairments. Analysts will accept a large loss or “big bath” in the year of acquisition especially if the target company is experiencing financial difficulties and will likely ignore this one bad year. Acquisitions are also used to complicate a firm’s financial statements making it harder for analysts to compare them to previous years thus making it easier to hide accounting misstatements.

High goodwill relative to a company’s total assets or market value is a warning sign that a firm has allocated too many acquisition costs to goodwill. If goodwill becomes so large that it exceeds a firm’s market value, this indicates that the company’s identifiable assets are worthless which is unlikely. Analysts need to examine the recoverable amounts for all cash-generating units to determine if further goodwill impairments are justified.

**Asset turnover ratios.** Aggressive revenue recognition increases asset turnover due to higher sales. More capital-intensive companies with newer assets have lower fixed asset turnover than their competitors. Fixed asset turnover ratios will likely decline when new assets are purchased as it takes time to generate additional sales. Non-operating assets such as idle plants, facilities under construction, and excess cash and investments should be removed when measuring fixed asset turnover as they do not relate to a firm’s core business operations.

**Investments in associates.** The equity method is used to account for investments in associate firms where the investor has significant influence over their operations. Some investors intentionally keep their ownership stake below 50% so they can use the equity method instead of consolidating the firm. Under the equity method, the investor’s share of the associate’s net income is included in the investor’s net income like the consolidation method, but the associate’s sales, assets, and liabilities are not consolidated. This raises the investor’s net profit margin (i.e. net income ÷ sales) as the investor’s net income is higher while its sales are unchanged. The investor’s debt ratio also falls under the equity method when the associate firm’s liabilities are removed from the balance sheet and the investment is recorded as an asset net of these liabilities. Having several associate firms just below the 50% ownership level is a warning sign that the net profit margin and the debt ratio are being manipulated.

**Special purpose entities.** A company may decide to sell its receivables to a separate sales finance unit that can raise capital more cheaply and process collections quicker with fewer bad debts. Some firms intentionally own less than 50% of these units, so they can account for them using the equity method instead of consolidation. This “window dressing” allows companies to manipulate their current ratio. As discussed in Module: Financial Statement Analysis, if a firm sells its accounts receivable early and uses the proceeds to pay down its current liabilities, its current ratio will rise as long as the ratio is initially above 1.0. They may also sell receivables to the finance unit at inflated prices to overstate their operating income.

To prevent this abuse, IFRS has expanded the definition of control for these financing units or special purpose entities so they are consolidated even when a company owns less than 50%. Typically, companies have no equity in these units but exercise control by guaranteeing their debts.

**Off-balance sheet financing.** Some accounting standards do not recognize certain current and long-term liabilities. Investments in associates and special purpose entities are examples of off-balance-sheet financing, although the problem with special purposed entities has been addressed through new IFRS standards relating to what constitutes control. Another example until recently was leased assets. As discussed in the Module: Permanent Debt and Equity Financing, IFRS previously required firms to classify their leases as either capital or operating depending on the terms of the agreement. For long-term capital leases, the lease payments are equivalent to loan payments in that they cover a large portion if not all of the cost of the asset and any future interest. To make financial statements more comparable, IFRS required that these leases be capitalized which means an asset and liability equal to the present value of the future lease payments was recognized. This is similar to what would occur if the asset was purchased with a loan.

For shorter-term operating leases, no asset or liability was recognized, and only the annual lease payment was expensed on the income statement. Leaving the asset and liability off the balance sheet raised the firm’s asset turnover ratios, lowers its debt ratio, and generated a higher return on assets. To take advantage of this flawed accounting standard, companies intentionally modified the terms of their lease agreements, so most leases were classified as operating. Realizing their error, IFRS was recently modified so nearly all leases are capitalized.

**Deferred income tax assets.** This asset includes temporary differences between accounting and taxable income and any unused loss carryforwards. It must be reassessed annually and adjusted up or down. Unexplained changes are a warning sign of potential earnings and balance sheet quality issues.

**Contingent liabilities.** These liabilities are only recorded on the balance sheet if they are probable, otherwise, they are noted, or excluded entirely if their probability is remote. Companies may manipulate probability estimates to reduce their liabilities and improve their debt ratio and current ratio.

**Net benefit plan asset or liability.** This is the net of a defined benefit plan’s assets and DBO and is based on several actuarial assumptions. Companies can manipulate the plan’s annual expense and the net benefit plan asset or liability by changing these assumptions. IFRS requires the discount rate to equal the current yield on “high quality” corporate bonds to prevent companies from understating their DBO by using a higher discount rate, but the other assumptions are not prescribed. Analysts need to examine the level and changes in these assumptions to ensure they are reasonable compared to industry peers.