CHAPTER 16

COMPLEX FINANCIAL INSTRUMENTS

CHAPTER TOPICS CROSS REFERENCED WITH *CICA HANDBOOK*, PART I (IFRS) AND PART II (ASPE)

Financial Instruments—recognition and measurement	IFRS 9 (previously IAS 39)	Section 3856
Financial Instruments—presentation	IAS 32	Section 3856
Hedging	IAS 39	Section 3856
Specific Items—Stock-Based Compensation/Payments	IFRS 7	Section 3870

LEARNING OBJECTIVES

1. Understand what derivatives are and how they are used to manage risk.

2. Understand how to account for derivatives.

3. Analyze whether a hybrid/compound instrument issued for financing purposes represents a liability, equity, or both.

4. Explain the accounting for hybrid/compound instruments.

5. Describe the various types of stock compensation plans.

6. Describe the accounting for compensatory stock option plans.

7. Identify the major differences in accounting between ASPE and IFRS, and what changes are expected in the near future.

After studying the appendices students should be able to:

8. Understand how derivatives are used in hedging and explain the need for hedge accounting standards.

9. Understand how to apply hedge accounting standards.

10. Account for share appreciation rights plans.

11. Understand how options pricing models are used to measure financial instruments.

CHAPTER REVIEW

Introduction

Complex financial instruments, once uncommon, are now widely used by companies in an effort to manage risk, access pools of financing, and minimize cost of capital and taxes. In response to this trend, the accounting profession has developed a new framework for dealing with these instruments in the financial statements.

Chapter 16 focuses on complex financial instruments, including derivatives, which are discussed separately. Since employee compensation plans often include the issuance of derivatives such as stock options, this topic is also discussed.

Derivatives

1. Financial instruments may be primary or derivative. **Primary financial instruments** include most basic financial assets and financial liabilities such as receivables and payables as well as equity instruments such as shares. **Derivative instruments** on the other hand, are more complex, deriving their value from an underlying primary instrument. Derivatives are defined as financial instruments, which create rights and obligations that have the effect of transferring between parties to the instrument one or more of the financial risks inherent in an underlying primary instrument. They transfer risks that are inherent in the underlying primary instrument without the holder having to necessarily hold the underlying instrument. They have three characteristics:

    a. Their value changes in response to the underlying instrument.
    b. They require little or no initial investment, and
    c. They are settled at future date.

2. The use of derivatives both for speculation and risk management, particularly financial risk, has grown extensively. Companies use derivatives to manage:

    a. **Credit risk—**the risk that one of the parties to the contract will fail to fulfil its obligation under the contract and cause the other party loss; e.g., credit risk is usually associated with collection.

b. **Liquidity risk—**the risk that the company itself will not be able to honour the contract and fulfil its obligation. The more debt a company has, the greater the risk that it will not be able to repay the debt and the higher the liquidity risk.

c. **Market risk—**the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. The three types of market risk are:

- change in currency (currency risk),
- change in interest rate (interest rate risk), or
- other capital market forces (market price risk).

3. The **basic principles regarding accounting for derivates** are as follows:

a. Financial instruments (including financial derivatives) and certain non-financial derivatives represent rights or obligations that meet the definition of assets or liabilities and should be recognized in the financial statements when the entity becomes part to the contracts;

b. **Fair value is the most relevant measure**;

c. **Gains and losses should be booked through net income**.

Special optional hedge accounting exists for derivatives and other items that have been designated as being part of a hedging relationship for accounting purposes (refer to Chapter 2 on fair value measurement discussion and Appendix 2A. Appendix 16C discusses more advanced measurement techniques and models.

Non-Financial Derivatives and Executory Contracts

1. Derivatives may be financial or non-financial. A contract to buy pork bellies is an example of a non-financial liability. Purchase commitments are executory contracts. While the two have multiple similarities and it could be argued that both represent derivative contracts, executory contracts are not accounted for as derivates under ASPE on the basis that are not exchange traded. The difference between the two terms is that under IFRS, executory contracts are not accounted for as derivates if there is no settlement feature or where one exists but the company expects to take delivery or deliver the underlying asset.

Options, Forwards, and Futures

1. An option gives the holder the right to acquire (**call option**) or to sell (**put option**) an underlying instrument at a fixed price within a defined time period. A stock option derives its value from the share price of the underlying shares. It allows the holder to participate in the share value without actually holding the shares, and therefore the investment is much lower than if the shares had been purchased.

2. The option premium can be viewed as comprising two amounts:

   Option Premium = Intrinsic Value + Time Value

   The **intrinsic value** is the difference between the market price of the underlying and the preset strike or exercise price at any point in time. It represents the amount realized by the option holder if the option were exercised immediately. On the date of issuance, the intrinsic value is zero, because the market price is equal to the preset strike price. **Time value** refers to the option's value over and above its intrinsic value. Time value reflects the possibility that the option has a fair value greater than zero, because there is some expectation that the price of the underlying shares will increase above the strike price during the option term.

3. A gain or loss is recognized when there is a change in the value of the option.

4. Under a forward contract, the parties to the contract each **commit upfront to do something in the future**, e.g., one party to buy and the other to sell the underlying at a certain fixed price at a certain date. A forward contract is different from an option contract in that it not only transfers to the holder the rights to increases in value of the underlying primary instrument, it also creates an obligation to pay a fixed amount at a certain date. The purchased option, on the other hand, creates a right but not an obligation; the holder may choose to exercise the option but need not.

5. Assume that on January 1, 2014, Company A agrees to buy $1,000 US for $1,150 Canadian in 60 days from National Investment Corp. On the date the transaction is entered into, $1US = $1.10. No journal entry is recorded at this point. The value of the forward contract considers both the intrinsic value and the time value component and the difference between the spot rate and the forward rate is the present value of the future net cash flows of the contract.

In subsequent periods, until settled, the forward is re-measured at fair value depending on interest rates as well as what is happening with the spot rates. If the U.S. dollar appreciates in value, the forward contract now has value because the company has agreed to pay only the $1,150. If the fair value of the contract on January 31, 2014 was $1,120, the following journal entry would be prepared as the forward contract has declined in value:

Loss	30	
Derivative—Financial Asset/Liability		30

6. If on the settlement date, the US dollar has weakened further, Company A must nevertheless pay $1,150 Canadian, and it will receive fewer US dollars than expected. Assuming that on March 2, 2014 the settlement date, $1.00 US = $1.04 Cdn, and Company A actually took delivery of the U.S. dollars, the following entry would be made:

Cash (U.S.)	1,040 (current spot rate)	
Loss	80	
Derivative—Financial Asset/Liability	30 (carrying value)	
Cash (Cdn)		1,150

7. Forward contracts are not normally traded publicly. In the example above, the forward contract transferred the **currency risk** regarding the US dollars to Company A. There is also a **credit risk** and **liquidity risk,** that at the culmination of the contract, the counterparty to the contract—in this example, National Investment Corp—will not deliver, or will not be able to deliver, the underlying contract value.

8. The forward contract meets the definition of a financial liability and so the Derivative—trading account would be presented as a liability at the balance sheet date (or an asset, depending on its fair value).

9. Futures contracts, another popular type of derivative, are the same as forwards except for the following:

   a. they are standardized and trade on stock markets and exchanges, thus providing ready market values;

   b. they are settled through clearing houses, which removes the credit risk;

   c. there is a requirement to put up collateral in the form of a "margin" account. The margin account represents a percentage of the value of the contract.

Derivatives Involving the Entity's Own Shares

1. Examples of derivatives that are settleable using the entity's own shares include:
    1. Options
        a. Purchased call or put options to buy/sell the entity's own shares
        b. Written call or put options to buy/sell the entity's own shares

    2. Forwards
        a. To buy the entity's own shares
        b. To sell the entity's own shares

2. The following chart (based on Illustration 16-5 in the text) summarizes the accounting for own equity instruments under IFRS.

	IFRS Presentation	Analysis
Written call options	Equity	Holder has the right to buy a fixed number of shares for a fixed amount of cash and no contractual obligation to pay cash.
Written put options	Financial liabilities	Holder has the right to sell a fixed amount of shares to the company for a fixed amount of cash. Even though this is a fixed for fixed contract, the obligation to pay cash creates a liability.
Purchased call/put options	Contra equity	The company has the right to buy or sell a fixed amount of shares for a fixed amount of cash. There is no contractual obligation to pay cash. This is therefore equity.
Forward contract to buy shares	Financial liabilities	The company has committed to buy a fixed number of shares for a fixed amount of cash. Even though this is a fixed for fixed contract, the obligation to pay cash creates a liability.
Forward contract to sell shares	Equity	The company has committed to sell a fixed number of shares for a fixed amount of cash. There is no contractual obligation to pay cash. This is therefore equity.
Contracts that may or will be settled net (settlement option)	Financial assets/liabilities	These are not fixed for fixed contracts because they will be settled either in cash (net) or a variable number of shares that equal the net cash settlement value

Debt Versus Equity — Issuer Perspective

Presentation and Measurement Issues

1. Compound financial instruments have attributes of both equity and debt. They are sometimes referred to as **hybrid/compound instruments** because of these dual attributes. Convertible and perpetual debt are examples. With these instruments, the main accounting complexity lies in determining how to classify them on the balance sheet. Users rely on the **classification between debt and equity** to assess a company's liquidity and solvency; thus, the classification issue is significant. As these types of complex instruments proliferate, financial statement preparers and analysts are faced with the increasingly difficult task of classifying instruments that do not fit neatly into either the debt or equity category.

2. Determining a consistent presentation and classification of an instrument as a financial liability or an equity on financial statements is necessary in order to provide useful information to investors and creditors. When analyzing whether the contract is debt, equity, or both, the following must be considered:
    1. Contractual terms
        a. Does the instrument explicitly obligate the entity to pay out cash or other assets?
        b. Does the instrument give the holder the choice to force the company to pay out cash (in which case it may create an obligation for the entity)?
        c. Are there settlement options (in which case, it may create an obligation for the entity)?
    2. Economic substance
        Does the instrument contain any equity-like features that may need to be measured separately, such as convertible bonds?
    3. Definitions of financial statement items:
        a. A **financial liability** is defined under both IFRS and ASPE as a contractual obligation to do either of the following:
            i. to deliver cash or another financial asset to another party, or
            ii. to exchange financial instruments with another party under conditions that are potentially unfavourable.

        Under IFRS, using an entity's shares instead of cash to settle an instrument is still a financial liability.

b. An **equity instrument** (under both IFRS and ASPE) is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Under IFRS, an equity instrument exists as well if it will be settled by exchanging a **fixed number** of the issuer's own equity instruments for a **fixed amount** of cash or other assets (and it is not a liability).

3. Examples of Hybrid/Compound Instruments

a. **Convertible debt**: combines the benefits of a bond with the privilege of exchanging it for common shares at the holder's option. The embedded option to convert to common shares is an equity instrument; therefore, that part of the instrument is presented as equity. The remaining component is presented as a liability. (Note that ASPE allows the equity portion to be measured at $0).
b. **Puttable shares**: Liability. The holder has the right to exercise the option and therefore this is beyond the entity's control (exception in #3)
c. **Shares that give the holder the option to require the company to surrender a pro rata share of net assets upon windup**: May be presented as equity as long as there are "on-substance common shares".
d. **Mandatorily redeemable preferred shares**: meet the definition of a liability since there is an obligation for the company to pay cash. When the term expires, the company is obligated to buy back the shares from the holder.
e. **Debt with detachable stock warrants**. The warrants give the holder the right to buy common shares at a fixed price—the exercise or strike price—for a specified period of time: the exercise period. Because a market often exists to buy and sell these instruments, the warrants are equity instruments and, therefore, the instrument is part debt and part equity. The proceeds from the sale of debt with detachable stock warrants should be allocated between the two securities.
f. **Preferred Shares that must be repaid if certain conditions are met (e.g., if the market price of the common shares exceed a certain threshold)**: Liability. Under IFRS because the contingent settlement provision is based on an event outside the entity's control, and under ASPE it is a liability only where the contingency is highly likely to occur.
g. **Debt that will be settled by issuing a variable number of common shares** equal to the face value of the debt (or where the holder has the option to require settlement in cash or a variable number of shares): Liability.

h. **Perpetual debt** is debt that will never be repaid; therefore, it is similar to equity in that it represents permanent capital for the company. However, since it is perpetual, the interest gradually becomes equal to the value of the debt. Therefore, a perpetual bond's value is driven solely by the contractual obligation to pay interest. As such it is classified as a liability.

4. Offsetting of financial instruments is allowed if:
   a. The company has a legally enforceable right to net the amounts
   b. The company intends to settle the instruments on a net basis simultaneously.

Measurement

1. Measurement of hybrid financial instruments may also be made more complicated when the economic value is attributable to **both** the debt and equity components of the instrument. Two measurement tools are possible: the **residual method** and the **relative fair value method**. These tools may be used to allocate the value of an instrument between its debt and equity components.
   a. **Relative Fair Value Method:** Determine the fair values of similar straight debt (i.e., with no warrants) and tradable options or warrants. Measurement of the debt portion may also be done by a PV calculation, discounting at the market rate for similar debt. (Measurement of the option portion may be done using an options pricing model.) The components are then assigned these values; any difference is prorated based on respective market or fair values and allocated to the components.
   b. Residual Method: Value only one component (the one that is easier to value—often the debt component). The other component is valued at whatever is left.

   IFRS requires that the debt component be measured first (generally the PV of the cash flows) with any residual value being assigned to equity. ASPE allows the option to measure the equity component of compound instruments at $0, or measure the component most easily measured first and apply the residual value to the other component.

Convertible Debt

1. A **convertible bond** combines the benefits of a bond with the privilege of exchanging it for common shares at the holder's option. Corporations issue convertible debt for two main reasons: One is the desire to raise equity capital without giving up more ownership control than necessary; the other is to obtain debt financing at cheaper rates. The embedded option to convert to common shares is an equity instrument; therefore, that part of the instrument is presented as equity. The remaining component is presented as a liability.

2. When bonds are converted prior to maturity, the **book value method** of recording the bond conversion is the method most commonly used in practice, even though there is no GAAP that specifically deals with measurement of the transaction. The book value method indicates that the transaction should be measured in accordance with the agreement that was established at the date of the issuance, either to pay a stated amount of cash at maturity or to issue a stated number of shares of equity securities. Therefore, when the debt is converted to equity in accordance with the pre-existing contract terms, **no gain or loss would be recognized upon conversion**. Under the book value method, the unamortized portion of any discount or premium is reversed, bonds payable and contributed surplus—conversion rights are zeroed out, and any difference represents the value of the shares issued in the transaction.

3. An alternative approach that has some conceptual merit uses the **fair value** to record the conversion. Under this method, the common shares would be recorded at fair value (their fair value or the fair value of the bonds); the contributed surplus—stock options, bonds payable, and unamortized discount or premium amounts would be zeroed out; and a gain/credit or loss/debit would result.

4. Sometimes a company may wish to **induce conversion** of outstanding bonds in order to keep interest expense down, or to improve its debt-to-equity ratio. Investors receive a "sweetener," usually a cash inducement. This additional premium should be allocated between the debt and equity components based on their fair values at the time of the transaction.