AFM 391 Midterm #2 Care Package

Chapter 15 - Earnings Per Share

A. Introduction to Basic and Diluted Earnings per Share

- EPS: measure each ordinary share’s interest in a company's earnings
- Ordinary shares = common shares
- Two EPS statistics:
  - Basic
    - States the ownership of earnings based on the average number of shares actually outstanding during the period
  - Diluted
    - Conveys a hypothetical worst-case scenario that considers the effect of potentially dilutive securities (includes convertible securities or stock options where there may be more issuance of shares)
    - Without diluted EPS, management could mislead shareholders of profitability of company as they could just issue more convertible securities which doesn’t immediately increase shares, but may in the future
- Simple capital structure: A capital structure that does not include potentially dilutive securities
- Complex capital structures: a capital structure that has potentially dilutive securities

B. Calculating Basic EPS

- Basic EPS: an indicator of profitability that measure how much the company’s earnings are attributable (belong) to each ordinary share
  - Basic EPS = net income available to ordinary shareholders/ weighted average number of ordinary shares outstanding

Numerator: Net Income Available to ordinary shareholders

- Net income available to ordinary shareholders = net income - dividends on preferred shares
- Exclude OCI from numerator (net income) as it is considered not to be a part of the current period performance and EPS measures performance
- Dividends to preferred must be excluded because it is not taken from net income but its not available to common shareholders
○ Dividends to cumulative preferred shares
  ■ Remove only the current period’s dividend rate even if there’s dividends in arrears (matching concept). Deduct dividend rate even if they are not declared or paid
○ Dividends for non cumulative preferred shares
  ■ Deduct the dividends declared

Denominator: **weighted average number of ordinary shares outstanding**
  ● Use weighted average number of ordinary shares because the number of shares outstanding can change during the year
  ● weighted average shares outstanding = WASO
  ● Usually, in practise, the number of ordinary shares outstanding is based on daily balances
  ● When calculating the WASO, the computation multiplies each balance by the amount of time that the balance is valid (For example, from Jan- Feb is 2/12)

**Complicating Factors**

*Treasury Shares*
  ● Treasury shares are issued but not outstanding and so not included in WASO

*Stock Splits and Stock Dividends*
  ● Increase in number of shares but no additional resources are given to the company
  ● Share adjustment factor, we use a multiple in the months before the stock split/stock dividend. For example, if 2:1 stock split in March, we multiply the balance in Jan-Feb by 2
C. Calculated Diluted EPS

- Diluted EPS: measures the amount of the company's earnings attributable to each ordinary shareholders in a hypothetical scenario in which all dilutive securities are converted to ordinary shares.
- Reports the lowest possible EPS.
- Diluted EPS = (net income available to ordinary shareholders + the income effect of dilutive potential ordinary shares) / (weighted average number of ordinary shares outstanding + the share effect of dilutive potential ordinary shares).
- Potential ordinary shares (POS): a financial instrument or other contract that may entitle its holders to ordinary shares.
- Dilutive potential ordinary shares: potential ordinary shares whose conversion to ordinary shares would decrease EPS.
- Not all POS are dilutive some are anti-dilutive.
- 4 steps in the process of separating dilutive from anti-dilutive POS:
  - Identify all potential ordinary shares.
  - Compute incremental EPS for all potential ordinary share.
  - Rank order incremental EPS.
  - Sequentially compare incremental EPS to provisional EPS to determine diluted EPS.

1) Identify all potential ordinary shares.
Identify all financial instruments where stocks may be issued in the future:
  ○ Stock options, warrants, convertible bonds or convertible preferred shares
  ○ Once the securities are converted into ordinary shares, firm no longer required to pay interest or dividends.

2) Compute incremental EPS for all potential ordinary share
  ● Incremental EPS: Quantifies the relationship between the income effect and the share effect for each class of potential ordinary shares
    ○ Incremental EPS= the income effect of potential ordinary shares/ the share effect of potential ordinary shares
  ● The income effect: indicates the incremental after tax income available to ordinary shareholders if a category of potential ordinary shares had been converted into ordinary shares
  ● Share effect: indicates the incremental number of ordinary shares outstanding if a category of potential ordinary shares had been converted into ordinary shares

*Convertible bonds and Preferred Shares: The if-converted method*
  ● if-converted method assume that the security had been converted into ordinary shares at the beginning of the period and interest/ dividends were not paid on the security during the year
  ● When the Cumulative preferred shares do not have a par value, the dividend rate stated in dollar terms is the income effect
  ● For non-cumulative preferred shares, the income effect is the amount of dividends declared, if not declared, it’s $0
Options and warrants: The treasury stock Method

- Treasury stock method: the process used to determine the share effect for call options and warrants. Should be in the money options and warrants only since people would not exercise when out of the money
  - The difference between the number of shares needed for full exercise and the number of shares that could be repurchased from the proceeds given by the option/warrant holders would be added to WASO
  - The number of shares that could be purchased on the market with the proceeds from the option holders because the exercise price is less than the market price
- In the money: when the value of the underlying instrument is favourable to the holder exercising the option compared with letting the option expire. Use the average market price for the period to determine if it is in the money
- Out of the money: when the value of the underlying instrument is unfavourable to the holder exercising the option
- At the money: market price = strike price
3) **Rank order incremental EPS**
- Rank the incremental EPS from lowest to highest
- Stock options would have incremental EPS of zero and therefore usually the most dilutive
  - If more than one stock option/warrant, then rank in any order

4) **Sequentially compare incremental EPS to provisional EPS to determine diluted EPS**
- When the incremental EPS is lower than the basic EPS include the income and shares to the basic EPS to calculated a diluted EPS. repeat for each rank ordered item in step 3 until you have no POS left
- For anti dilutive securities, compare the incremental EPS to the provisional EPS and not the basic EPS

**Effect of discontinued operations**
• EPS for continuing operations should be separate from the EPS of discontinued operations
• EPS from continuing operations is used as a starting point for determining the dilutiveness of POS

**Diluted EPS when basic EPS is negative**
• If company has a loss or gave more dividends than income basic EPS is negative
• When basic EPS is negative, all POS are deemed to be anti dilutive
• It is income available to ordinary shares from continuing operations that determines the dilutiveness of POS

**Other Considerations**

*Convertible securities issued, redeemed or exchanged during the year*
• Issued during the year: prorate the income and shares effect to reflect the date of issuance (wouldn’t affect the overall incremental EPS)
• Redeemed or lapsed during the year: prorate the income/share effect by the portion of the year that the security was outstanding
• Converted during the year: the income effect is the after tax amount expensed during the period the security was outstanding. POS included until date of conversion

*Convertible securities with more than one conversion option*
• For securities with multiple conversion options, use the most dilutive alternative available
• i.e. get 5 shares if converted in Dec 2018 or 4 shares if converted in Dec 2019. The most dilutive alternative is 5 shares, but if 2019, it would be the 4 shares as the 5 shares has been expired

*Potential Ordinary shares that are not yet eligible to be converted/ exercised*
• When there is a period of time you must wait before you can convert the shares, we still include the POS in the computation of diluted EPS regardless of when the conversion option becomes effective

*Bonds sold at a discount or premium*
• When the effective interest rate is different than the coupon rate, we would use the effective interest rate to determine the income effect of the bond

*Purchased Options Versus written options*
• If the company is buying call options on its own share then its anti-dilutive
• Issuing call options is potentially dilutive

Presentation and Disclosure
• Include on income statement
  o Basic EPS
  o Diluted EPS if there’s POS
  o Basic and diluted EPS for operations and discontinued operations

<table>
<thead>
<tr>
<th>Issue</th>
<th>IFRS</th>
<th>ASPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement to present EPS information</td>
<td>IFRS requires publicly accountable enterprises or private entities in the process of going public to present EPS information in accordance with IAS 33.</td>
<td>ASPE does not require entities to present EPS information.</td>
</tr>
</tbody>
</table>

Chapter 16 - Accounting for Income Taxes
Introduction
• Tax rules tend to more closely follow cash flows than accrual accounting

Methods of Accounting for Income Taxes
Taxes Payable Method
• Taxes payable method: records an amount for income tax expense equal to the tax payments for the current period payable to the tax authorities
• Problem: poor matching of tax expense to the revenue recognized in the period
• If a company makes installment payments the tax expense recorded is the sum of the installments and the final payment or refund expected when the firm files the tax return
• Simplest and cheapest method of the 3
• Example:
  o tax payable = 32000
  o Paid installments = 30000
  o Need to pay 2000 at the end of the year (32000 - 30000)

<table>
<thead>
<tr>
<th>Date</th>
<th>Dr. Income tax installments (asset)</th>
<th>Cr. Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>During 2016</td>
<td>30,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Dec. 31, 2016</td>
<td>Dr. Income tax expense</td>
<td>32,000</td>
</tr>
<tr>
<td></td>
<td>Cr. Income tax installments</td>
<td>30,000</td>
</tr>
<tr>
<td></td>
<td>Cr. Income tax payable</td>
<td>2,000</td>
</tr>
</tbody>
</table>

Tax Allocation Methods
• Accounting income: amount of income (before subtracting income tax) recognized for financial reporting purposes
Taxable income: amount of income recognized for tax purposes used to compute taxes payable

The amount of income taxes payable derived from taxable income can be higher or lower than the amount of tax expense attributable to the amount of income reported on the income statement for a particular year.

**Income Statement Approach - Deferral Method**

- Deferral method: focuses on obtaining the income statement value for income tax expense that best matches that amount of income recognized for the year.
- Example:
  - Accounting Income = 100,000
  - Taxable Income = 80,000
  - Tax Rate = 40%
  - Income tax expense = 100,000 x 40% = 40,000 (best matches the tax expense to the accounting income)
  - Taxes payable due = 80,000 x 40% = 32,000
  - Deferred tax = difference between income tax expense and taxes payable due = 40,000 - 32,000 = 8,000
  - Dr. Income tax expense 40,000
    - Cr. Deferred Tax Liability 8,000
    - Cr. Income Tax payable 32,000
- The effective tax rate (income tax expense/income before tax) = tax rate (i.e. 40,000/100,000 = 40%)

**Balance Sheet Approach - Accrual Method**

- Accrual Method: focuses on obtaining the balance sheet value for the income tax liability (or asset) that best reflects the assets and liabilities recognized on the balance sheet.
- Example: Construction contract recognized using percentage of completion method
  - AR = 80,000
  - Construction in progress (inventory) = 20,000
  - Revenue = 100,000
  - Compute taxes on the construction in progress (20,000 x 40% = 8,000) and it is a liability because in the next year when the inventory is later recognized into income, tax payable = 8000
  - Then compute taxes on the AR (80,000 x 40% = 32,000)
  - Total effect on income tax expense = 8,000 + 32,000 = 40,000
- When there are no changes in tax rates, the accrual method and deferral method produce the same result. When there are changes in the tax rate:
Deferral method applies the new tax rate to the current year’s income only and ignores the effect on accumulated balances

Accrual method

Example:
- Revenue (accounting purposes) = 100,000
- Revenue (tax purposes) = 80,000
- Current tax rate = 40%
- Deferred tax liability for prior year = 15,000
- Last year’s tax rate = 35%
- Deferral Method: no change

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Income tax expense (40% × $100,000)</td>
<td>40,000</td>
</tr>
<tr>
<td>Cr. Deferred tax asset (balancing figure)</td>
<td>8,000</td>
</tr>
<tr>
<td>Cr. Income tax payable (40% × $80,000)</td>
<td>32,000</td>
</tr>
</tbody>
</table>

Accrual Method
- Must revalue the prior year deferred tax liability of 35,000 using the current tax rate of 40%. The 35,000 liability relates to 100,000 of revenue and 35% tax rate. So with the new tax rate the liability will change to 40,000 (100,000 × 40%). So the difference of 5000 (40,000 - 35,000) is the increased tax liability

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Income tax expense</td>
<td>40,000</td>
</tr>
<tr>
<td>Cr. Deferred tax liability (40% × $20,000)</td>
<td>8,000</td>
</tr>
<tr>
<td>Cr. Income tax payable (40% × $80,000)</td>
<td>32,000</td>
</tr>
<tr>
<td>Dr. Income tax expense</td>
<td>5,000</td>
</tr>
<tr>
<td>Cr. Deferred tax liability ($40,000 - $35,000)</td>
<td>5,000</td>
</tr>
</tbody>
</table>

Summary of Alternative Approaches

IFRS: accrual method accepted
ASPE: accrual method or tax payable method accepted

Applying the Accrual Method: Permanent and Temporary Differences
Permanent Differences
- Permanent difference: when a transaction/event affects accounting income but not taxable income or vice versa

<table>
<thead>
<tr>
<th>Item</th>
<th>Accounting treatment</th>
<th>Tax treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Dividends received by corporations</td>
<td>Include in income</td>
<td>Not taxable</td>
</tr>
<tr>
<td>b. Initiation fees for membership in clubs and associations</td>
<td>Expense</td>
<td>Not deductible</td>
</tr>
<tr>
<td>c. Life insurance premiums for employees</td>
<td>Expense</td>
<td>Not deductible</td>
</tr>
<tr>
<td>d. Capital gains</td>
<td>Include full gain in income</td>
<td>Include half of capital gain in taxable income</td>
</tr>
<tr>
<td>e. Meal and entertainment costs</td>
<td>Expense</td>
<td>Only half is deductible</td>
</tr>
</tbody>
</table>

- Accounting income and taxable income would never reconcile
- Income tax expense would equal tax payable if there’s only permanent differences

Temporary Differences
- Temporary differences: when a transaction/event affects both accounting income and taxable income but in different reporting periods
- Deferred tax liability: amount of income tax payable in future periods as a result of taxable temporary differences
- Taxable temporary difference: a difference that results in future taxable income being higher than accounting income
- Deductible temporary difference: results in future taxable income being less than accounting income
- Deferred tax asset: amount of income tax recoverable in future periods as a result of deductible temporary differences

Common Temporary Differences
Temporary Differences due to depreciation

- Capital cost allowance (CCA): depreciation for tax purposes that usually exceeds depreciation for accounting purposes (to encourage capital investments)
  - Less taxes are due in the early periods of the asset’s life. Causes taxable income to be less than accounting income

- CCA starts off higher than depreciation, then equals, then becomes lower than depreciation. Causes taxable income to increase over the years
• Originating difference: temporary difference that widens the gap between accounting and tax values of an asset or liability (e.g. the difference between the CCA and accounting depreciation in year 1)
• Reversing difference: temporary difference that narrows gap between accounting and tax values of an asset or liability (e.g. the difference between the CCA and accounting depreciation in year 3)

Disposals of Depreciable Assets
• Disposals of depreciable assets can cause a gain/loss on disposal
• Can generate regular income or capital

Disposal of an Asset in an Asset Pool
• Undepreciated capital cost: net carrying amount of an asset or asset class for tax purposes
• Disposals in an asset pool would reduce the UCC, causing future CCAs to be lower.
• Disposal from a UCC pool would cause a temporary difference equal to the gain/loss

Disposal of Specifically Identified Assets
• Some assets have to be separate classes
• Disposal of specifically identified assets can result in one of three cases:
  ○ Case 1: When disposals less than UCC, there is a terminal loss that is deductible against other income. This causes a temporary difference
  ○ Case 2: When proceeds are more than UCC, there is a recapture (or recaptured depreciation) that is added to income. This is a temporary difference
  ○ Case 3: When proceeds are more than the original cost, there is a recapture and a capital gain. There is a temporary difference because of the difference between the carrying amount and the UCC. There’s also a permanent difference because of the capital gains being half taxable

Schedule for Analyzing Permanent and Temporary Differences
In this schedule, temporary differences appear in one of the first two columns while permanent differences appear in both columns.

Using the above schedule, we can make journal entries.

Interest expense is either current taxes payable or deferred to future years.
Balance sheet → deferred tax asset/ liability accounts are always non-current in IFRS.

### Changes in Tax Rates
- Tax amount in deferred tax assets and liabilities carry forward from year to year so if the tax rates change, the value of the balances need to be adjusted
- Example:
  - Taxable temporary difference is $400, meaning $100 of deferred tax liability at 25%
  - Tax rate increases to 30% and there’s an additional $100 temporary difference during the year

### Exhibit 16-24 Illustration of change in tax rates, Delta Inc.

<table>
<thead>
<tr>
<th>($000’s)</th>
<th>Deductible (taxable) temporary differences</th>
<th>Tax rate</th>
<th>=</th>
<th>Deferred tax Dr. (Cr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning balance, Jan. 1</td>
<td>(400)</td>
<td>25%</td>
<td>(100)</td>
<td></td>
</tr>
<tr>
<td>Adjustment for change in tax rate</td>
<td>---</td>
<td>+5%</td>
<td>(20)</td>
<td></td>
</tr>
<tr>
<td>Adjusted balance</td>
<td>(400)</td>
<td>30%</td>
<td>(120)</td>
<td></td>
</tr>
<tr>
<td>Temporary differences during the year</td>
<td>(100)</td>
<td>30%</td>
<td>(30)</td>
<td></td>
</tr>
<tr>
<td>Ending balance, Dec. 31</td>
<td>(500)</td>
<td>30%</td>
<td>(150)</td>
<td></td>
</tr>
</tbody>
</table>

### Exhibit 16-26 Computing adjusted balance of deferred taxes after a tax rate change for Delta Inc.

Adjusted deferred tax balance = \( \frac{\text{Beginning deferred tax balance}}{\text{Old tax rate}} \times \text{New tax rate} \)

\[
= \frac{\$100,000 \text{ Cr.}}{25\%} \times 30\%
\]

\[
= \$120,000 \text{ Cr}
\]

### Exhibit 16-27 Journal entry to record change in tax rate for Delta Inc.

| Dr. Deferred income tax expense | 20,000 |
| Cr. Deferred tax liability     | 20,000 |

- To calculate the adjusted deferred tax balance:
- To record the journal entries of the adjustment:

- If it is a deferred tax asset, it is more valuable if the tax rate increases.
- If it's a deferred tax liability, it's more costly if the tax rate increases
Tax Losses
- Canadian corporations can carry operational losses back 3 years and forward 20 years. Capital losses back 3 years and forward indefinitely

Carryback of Tax Losses
- Usually the company carries back to the earliest of the 3 years
- The company then recalculates the tax payable using the revised taxable income (using tax rate of that prior tax year). The difference between the recalculated tax payable and the tax payable is refunded to the company
- Example:
  - In 2011, income is $10 mill with 30% tax.
  - $8 mill loss is carried back. The financial reporting loss is only $6 mill
    
    | Exhibit 16-29 | Effect of losses carried back for Esquimalt Company |
    | (millions)    | Taxable income | Tax rate | Taxes payable |
    | 2011 as previously filed | 10 | 30% | 3.0 |
    | Losses carried back from 2014 to 2011 | (8) | 30% | (2.4) |
    | 2011 after losses carried back | 2 | 30% | 0.6 |
    - The reduction of taxes by $2.4 mill is recorded

| Exhibit 16-30 | Journal entries to record tax recovery for Esquimalt Company |
| Dr. Income tax receivable ($8,000,000 loss × 30%) | 2,400,000 |
| Cr. Current income tax recovery | 2,400,000 |
| Dr. Deferred income tax expense ($2,000,000 × 35%) | 700,000 |
| Cr. Deferred income tax liability | 700,000 |
- The $2 mill is used because the financial reporting loss is only $6 mill

Carryforward of Tax Losses
- Carry forward results in uncertain cash flow as the benefit of the loss would only be applied if there is a taxable income in the future
- Only record the tax loss carryforward as an asset if it is probable that there’s future profit available to claim the tax loss carried forward
- Example:
  - If there’s $8 mill tax loss carryforward. Financial reporting loss only $6 mill. Probable that there would be future taxable income
● If management believes it’s not probable that there’s going to be taxable income in the future, they would not record a deferred tax asset. Causing there to be a full $6 mill loss that year.

● Probability assessment taken periodically. May have to write down/write off deferred tax assets or even recognize deferred tax assets for previously recognized tax losses.
  ○ Uses a valuation allowance account to adjust deferred tax asset.

**Measurement: No Discounting For Time Value of Money**

● We do not discount deferred tax assets/liability as it would require highly accurate/detailed scheduling of the timing of the reversal of each temporary difference.

**Chapter 18 – AFM 391 – Accounting for Leases**

A. Introduction

● **Lease**: an agreement where the owner of an asset allows others the use of that asset in return for monetary or non-monetary consideration.

● **Lessor**: the owner of the asset in the lease.

● **Lessee**: The renter in the lease contract.

● **Operating Lease**: a type of lease that is not a finance lease.
  ○ Renter expenses the costs of the lease in the period which the lessee receives the benefits. Debit expenses, credit cash.

● When leases are much longer, use a finance lease.

● **Finance Lease**: type of lease that transfers substantial all of an asset’s risk and rewards of ownership from the lessor to the lessee; for a lessor, a finance lease also has normal credit risk and no material unreimbursed costs (also “capital lease” for ASPE).
  ○ Records asset for property and liability for obligation of future lease payments.

---

**Exhibit 16-31: Entries to record taxes when there are probable future benefits of tax losses carried forward**

<table>
<thead>
<tr>
<th>Debit</th>
<th>Cr.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Deferred tax asset ($8,000,000 loss × 35%)</td>
<td>2,800,000</td>
<td></td>
</tr>
<tr>
<td>Cr. Deferred income tax recovery</td>
<td></td>
<td>2,800,000</td>
</tr>
<tr>
<td>Dr. Deferred income tax expense ($2,000,000 × 35%)</td>
<td>700,000</td>
<td></td>
</tr>
<tr>
<td>Cr. Deferred income tax liability</td>
<td></td>
<td>700,000</td>
</tr>
</tbody>
</table>
B. Economics of Leasing

- Advantages of leasing to attract customers (potential lessees)
  - 100% financing of asset’s purchase price (often more than loan amount)
  - Flexible payment schedules (than loans)
  - If transaction qualifies as operating lease treatment, enterprise obtains off-balance-sheet financing – obtaining financial funding without recognition of a liability on the balance sheet
  - After tax costs are lower due to differences in tax rates for lessor and lessee (tax arbitrage)

- Leases create an agency relationship, resulting in moral hazard. The lessee is not the owner of the asset. The lessor must bear a risk that the lessee would not take care of the property.
  - This reduced care is agency cost of leasing: the reduced level of care due to the separation of an asset’s ownership and its control

- Value of asset declines with usage/deterioration, but this rate of decline depends on whether its owned/leased, and the extent of the risk transferred and rewards of ownership

- If lessor doesn’t get asset back, then agency cost of leasing = 0; as lessee bears all consequences. But if the asset is transferred back, then the agency cost of leasing can be big, and it must factor into lessor’s pricing decision, and thus have to raise the rental payments accordingly
• Degree to which the agency cost matters depends on:
  o Inherent nature of asset that is leased (difficult to damage assets have lower costs)
  o Incentives of lessee to maintain condition of leased asset (E.G. airlines are more keen to maintain good conditions of airplanes, for the safety of customers)
  o Regulations that require high degree of care (E.G. stringent regulations for aircrafts)
  o Conditions negotiated between lessor and lessee (E.G. damage deposits deter harm from assets, some eases limit amount of mileages)
    ▪ **Bargain purchase option**: option given to lessee to purchase the leased asset at a price that is below expected fair value at a future date; the assessment of whether a bargain exists is made at time of entering the lease arrangement
    ▪ **Guaranteed Residual value**: minimum value for the leased asset that is guaranteed to the lessor – ensures it remains a certain value at lease end
  o The length of the lease contract (as duration of lease shortens, agency costs increase)
    ▪ E.G. duration of 100% of asset’s life is 400K. then two consecutive lease terms each for 50% of asset’s life must have PV > 400K, to compensate for increased agency cost
• **Implicit interest rate**: discount rate that is used, or implied to be used, by the lessor in the determination of the payments in a lease
• Sometimes, due to advantages of leasing, the lessee are willing to pay more than minimum amount the lessor is willing to accept. (E.G. if lessor requires rate of return lower than the lessee’s borrowing rate, or if the lessor has a higher tax rate than the lessee (lessee values tax shields more))

C. Classifying and Accounting for Operating and Finance Leases
1) Lease Classification
• IFRS: lease classified as finance lease if it transfers substantially all risks and rewards incidental to ownership
  o Lease classified as operating lease if it doesn’t transfer substantially all risks and rewards incidental to ownership.
• Risk and rewards include (not limited to)
  o Risk of breakage and award of longer than expected useful life
  o Risk of obsolesce and reward of high resale value
  o Risks and rewards of changes in rental prices
  o Risk and rewards of change sin demand for usage of property
• In a finance lease (where essentially all risks and rewards are transferred), would record purchase of asset, capitalizing it. Assuming they borrow to finance this purchase:
Lessee’s perspective
- Debit property plane and equipment; Credit obligation under finance lease

Lessor’s perspective
- Debit lease payment receivable net of unearned interest; credit cash (or A/P)
- It is common for lessor not to have asset in inventory. They order the product form manufacturer to directly deliver to lessee – so they don’t record inventory purchase or COGS

2) Supporting Individuals for Lease Classification
- Any ONE of the following indicators is enough to classify the lease as a finance lease:
  1. There is a transfer of ownership to the lessee or a bargain purchase option (BPO) at end of lease
  2. The lease term is a major part of economic life of asset
  3. The PV of the minimum lease payments comprises substantially all of the fair value of the leased asset
- Minimum leased payments (MLP): payments over the lease term that the lessee is or can be required to make.
- Second and third indicators identify cases where there are in substance transfers of economic risk/reward
- Important for payments to distinguish and exclude any executory costs (especially in third indicator)
- Executory costs: incidental costs in a lease that would be incurred by the lessee independent of whether the lessee had purchased or leased the asset. Usually expensed in period incurred. E.G. maintenance costs
- Accounting standard for land leases excludes the MLP criteria because including it requires the use of unreliable estimates of land values any years into the future
  - Only the first criteria is applicable for land leases

3) Accounting for Finance and Operating Leases
- For the lease asset, the lessee accounts for depreciation.
- For the lease liability, the lessee accounts for interest expense and the loan payments
- Treatment is often (not always) symmetric for both parties. May use different amounts if use different assumptions to classify/record the lease.
4) Preference for Finance or Operating Lease Treatment

- Lessee generally prefer operating lease treatment,
  - Don’t want to record asset and liability of finance lease, as it affects solvency ratios (D/E). Increases Debt-to-asset ratio towards one, and increases D/E.
  - Having operating lease provides off balance sheet financing and better leverage ratios
  - Better for income statement in short term—lease expense (operating) is lower than combined depreciation and interest expense (under finance) – but this effect reverse later in the lease, so the total expenses over the life is the same
  - Total expense would be even higher with declining balance, other than straight line
- Lessor prefer finance lease because:
  - Balance sheet: the non-monetary item (inventory/capital asset) is converted into monetary item (loan receivable) – appearing more liquid
  - Income statement: profit form asset sale is recognized immediately, and interest income is recorded over life of lease
  - But this effect later reverses. Interest amount decreases over time as loan balance is repaid annually, so the cumulative net income either both treatments is the same
  - But in operating lease, lessor shows a leased asset and must depreciate it; lease payments are recognized as revenue (usually when close to receipt); and interest income (in the early years of lease) will usually exceed lease revenue net depreciation

5) Rationale for supporting indicators relating to lease term and present value

- Length of time covered by lease is not arbitrary – it is part of the negotiated pricing
- Shorter leases mean higher lease payments, and this additional cost makes it likely that the lease term is chosen to meet lessee’s business needs rather than accounting reasons
There is subjectivity amount the estimation and application of management discretion for the estimated useful life of the leased asset. No subjectivity over length of lease term -> thus the second and third indicators exist.

Third option exists -> potential subjectivity in PV calculation and estimate of fair value. For the PV, the CF is set in the contract, but a range of interest rates. The Lessee wants the highest rates to minimize discounted PV.
- The FV can be overestimated if the list price is used rather than lower negotiated price
- The use of “substantially all” for the FV in the MLP anticipates this overestimation.

6) Basic Numerical Example (p. 861)
- Spy jet ease plane for 3.603M per year, paid in advance. Include 400K to maintain aircraft, uses straight-line, GE orders from Boeing to deliver directly to Spy jet.
- Lease Classification
  - Finance lease
    - Lease term is 100% of aircraft’s useful life of 20 years
    - PV of lease payments is = 30Mm or 100% of FV of aircraft
- Recording lease at inception

<table>
<thead>
<tr>
<th>Exhibit 18-10</th>
<th>Illustration of journal entries at the inception of a finance lease</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lessee—Spyjet</td>
</tr>
<tr>
<td>Jan. 1, 2011</td>
<td>Dr. PPE—leased aircraft*</td>
</tr>
<tr>
<td></td>
<td>Cr. Obligation for finance lease</td>
</tr>
</tbody>
</table>

- Recording lease during lease term
- Accounting at the end of the lease
  - No transfer of title, so return aircraft to GE at end of 20 years.
“memo” in this context reflects that there is nothing to record in GE’s general ledger as the amount is nil. But GE would record the airplane in the sub ledger for PP&E at 0 cost. IF GE sells aircraft later, then record a gain equal to proceeds.

D. complicating Factors in Leases

1) Residual values – guaranteed and unguaranteed
   - To mitigate moral hazard, use guaranteed residual value – so lessee assures the lessor that property is treated with care, since lessees bears risk of property failing below that value.
   - This value forms part of minimum lease payment, along with other payments form lessee.
   - Residual values that are not guaranteed are not part of minim lease payments, since lessee has no obligation for any additional payments regardless of eventually value of leased property.

2) Inclusion of bargain purchase options in minimum lease payments
   - BPO is almost certain to be exercised, so the cost of exercising the option is another CF the lessor expects to receive from lessee, so it’s part of the minimum lease payment.

3) Interest rate used in PV calculations
   - Both risk associated with asset being leased and risk of lessee should be considered.
   - Infer that appropriate risk adjusted interest rate from CF and FV of lease property is the implicit rate. Lessor must use this implicit rate, as they can always determine it.
   - Lessee may not have enough information to calculate the implicit rate, so they its incremental borrowing rate (interest rate that the lessee would have to pay on a similar lease or loan).
     - IFRS: use implicit rate if available, otherwise use incremental rate.
   - If lessee uses incremental rate, possible for Lessee’s PV of MLP to exceed FV of leased property, causing overvalued asset. So lease is recorded at FV of leased property, and lease must recomputed interest rate in the lease using FV.
   - E.G. in p. 865.

4) Cash Flows to be included in PV calculations
   - Different amounts and calculations used in each of three stages:
     - A) determining lease pricing.
During negotiations, lessor takes into account all expected CF from the property (from lessee and other sources) – E.G. hotel recovers cost from many different rentals/tourists

B) Classifying a lease as finance or operating
- Determine if there is a transfer of risks/rewards by calculating PV of MLP
- Only amounts included in MLP (amounts required by lessee or assured by lessor) are included in calculation; any unguaranteed residual value is excluded.

C) Determining amounts in lease amortization schedules
- If it’s a finance lease, amortization schedules are required to determine the amounts to record each period. Both parties’ tables are not necessarily the same, if use different interest rates, and due to unguaranteed residual values
- Lessee: amortizations schedules includes only MLP (and any guaranteed residual value or BPO)
- Lessor: amortization schedules includes MLP plus any unguaranteed residual value
- E.G. amortization table p. 867

5) Third Party Guarantees: example of rules avoidance
- Lessee prefer operating lease, but accounting standards attempt to curtail the use of leases as a method of off balance sheet financing, by requiring capitalization – but rules not tight
- Industry developed to provide third party guarantees of residual value of leased assets
  - Lessee does not directly guarantee the residual value, but pays a fee to third party guarantor. So the residual value is considered unguaranteed and not counted as part of lessee’s MKP
  - To the lessor, the residual value is guaranteed by the third party guarantor
  - IF the residual value is large enough, both the lessee and lessor obtain their preferred accounting method; lessee can using operating treatment, lessor can treat as finance

E. Presentation and Disclosure

1) Current/non current classification of lease liability or lease receivables
- Lessor needs to separate its lease receivable between current and non current portion
- Lease obligation/receivable reflects the financing component of lease (like a mortgage) – so the current amount is the amount of principle due within a year, plus any interest accrued up to year end (not interest to be incurred in future)
  - This will be same amount as lease payment only if lease payment date falls on first day of next fiscal year. E.G. p. 868
If next lease payment is at the end of the next fiscal year, then the current portion is the amount of principle portion of the payment in the next year (exclude the interest portion of that payment)

2) Disclosure
- Accounting standards require significant disclosure so users can understand how a company uses leases

F. Sale Leasebacks
- Company with cash shortage but lots of fixed assets can obtain financing through sale leasebacks, without affecting its operating capabilities
- Involves sale of asset and immediate leasing of that asset from new owners
- But sale leasebacks bundle the sale and lease transaction – same parties in both transactions, so sale price and gains/losses arbitrary as lessor/buyer can recover price through future payments.
To prevent manipulation of gains/losses, accounting defers any gains/losses over term of lease.

If lease is finance, seller-lessee amortizes any gain/loss in proportion to depreciation of leased asset.

If its operating, seller-lessee amortizes gain/loss in proportion to lease payments.

Finance leases defer gains/losses because this transaction is essentially where asset is a collateral for the loan. IFRS permits exception to operating leases, as they don’t have this characteristic. If company can demonstrate that sale is at FV< then the gain/loss can be recognized immediately because eth transaction involves a bona fide sale.

Example: sell building for 16, rent of 20 years of useful life for 1,508,922/year, interest rate 8% implicit. Before this sale, books showed cost of 5M and depreciation of 3M for building. Use straight line, this is a finance lease as its for its entire remaining useful life.

<table>
<thead>
<tr>
<th>Exhibit 18-22</th>
<th>Journal entries for a sale-leaseback transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1, 2016</td>
<td><strong>Buyer-lessee</strong></td>
</tr>
<tr>
<td>Dr. Cash</td>
<td>16,000</td>
</tr>
<tr>
<td>Dr. Accum. depreciation—building</td>
<td>3,000</td>
</tr>
<tr>
<td>Cr. Building</td>
<td>5,000</td>
</tr>
<tr>
<td>Cr. Deferred gain on sale-leaseback</td>
<td>14,000</td>
</tr>
<tr>
<td>Dr. Leased building</td>
<td>16,000</td>
</tr>
<tr>
<td>Cr. Obligation under finance lease</td>
<td>16,000</td>
</tr>
<tr>
<td>Dr. Obligation under finance lease</td>
<td>1,509</td>
</tr>
<tr>
<td>Cr. Cash</td>
<td>1,509</td>
</tr>
</tbody>
</table>

| Jan. 1, 2016  | **Seller-lessee—Graydon Hunnicutt**              |
| Dr. Cash      | 16,000                                           |
| Dr. Building  | 16,000                                           |
| Cr. Accum. depreciation—building | 3,000 |
| Cr. Building  | 5,000                                            |
| Cr. Deferred gain on sale-leaseback | 14,000 |
| Dr. Leased building | 16,000 |
| Cr. Obligation under finance lease | 16,000 |
| Dr. Obligation under finance lease | 1,509 |
| Cr. Cash      | 1,509                                            |

<table>
<thead>
<tr>
<th>Exhibit 18-22</th>
<th>Continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 31, 2016</td>
<td>Dr. Interest expense 1,159$</td>
</tr>
<tr>
<td>Cr. Obligation for finance lease</td>
<td>1,159</td>
</tr>
<tr>
<td>Dr. Depreciation expense 800$</td>
<td></td>
</tr>
<tr>
<td>Cr. Accumulated depreciation 800$</td>
<td></td>
</tr>
<tr>
<td>Dr. Deferred gain on sale-leaseback 700$</td>
<td></td>
</tr>
<tr>
<td>Cr. Depreciation expense 700$</td>
<td></td>
</tr>
</tbody>
</table>

*8% × ($1,600,000 − $1,308,922) = $1,159,285

†$16,000,000 / 20 years = $800,000/year

‡$14,000,000 / 20 years = $700,000/year
G. Differences between IFRS and ASPE

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>IFRS</th>
<th>ASPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lease capitalization criteria—lessee</td>
<td>Based on qualitative considerations of whether the lease transfers substantially all the risks and rewards of ownership.</td>
<td>Based on both qualitative and quantitative considerations of whether the lease transfers substantially all the risks and rewards of ownership.</td>
</tr>
<tr>
<td>Lease capitalization criteria—lessor</td>
<td>Use the same criteria as for lessee.</td>
<td>In addition to the criteria for the lessee, the lessor must also consider the credit risk of the lessee and whether unreimbursable costs are reasonably estimable.</td>
</tr>
<tr>
<td>Lessor's classification of finance (capital) leases</td>
<td>No sub-classification of finance leases.</td>
<td>Capital leases are further sub-classified into sales-type and direct-financing leases depending on whether there is a profit margin on the sale.</td>
</tr>
<tr>
<td>Lessee's discount rate for present value calculations</td>
<td>Use implicit rate if it is known to lessee. Otherwise, use the incremental borrowing rate.</td>
<td>If the implicit rate is known to lessee, use the lower of the implicit rate and the incremental borrowing rate. Otherwise, use the incremental borrowing rate.</td>
</tr>
</tbody>
</table>

1) Quantitative guidelines for lease classification

- IFRS and ASPE share most of same guidelines for lease classification
- ASPE provides specific guidance. If lease covers 75% + assets’ useful life or if PV of MLP covers 90%+ of its FV, then it’s a capital lease

2) Additional Considerations for lease classification on lessors’ books under ASPE

- ASPE has 2 additional indicators to determine if a lease is finance/operating
  - The lessee’s credit risk is normal—if the lessee has a risk of default much different from the lessor’s other customers. Suggests a higher than normal chance that the lessor will repossess the leased property and retention of significant risk of ownership
  - Any reimbursable costs arising from the lease are reasonable estimable – lessor needs to be able to estimate costs to fulfill the lease to record the lease as finance lease (Sale of asset)
- Both these indicators must be satisfied for a lease to be considered a finance lease
- They apply to lessors but not lessees because:
  - Nature of indicators is that they relate to risks faced by lessor
  - Lessors generally prefer finance lease, so these additional hurdles make it more difficult

3) Sub-Classification of finance leases

- ASPE further classifies a finance lease into 2 types
  - Sales type lease: type of finance lease in which lessor obtains a profit margin on the sale of the leased asset
  - Direct Financing lease: type of finance lease in which the sale price is equal to the cost of the asset to the lessor
• The IFRS classification is much simpler, only involving the first question on far left. So the classification criteria is same for lessor and lessee

4) Lessee’s discount rate for PV calculations
• ASPE takes a different approach. They also refer to implicit interest rate and incremental borrowing rate, but recommends that lessee use the lower of the two rates when both are known
• Because: of lessee’s preference for operating lease treatment – wants to use highest interest rate to minimize PV of MLP. ASPE recognizes this bias, so requires the lower rule to maximize the PV of MLP, making it harder for the lessee to escape finance lease treatment

H. Standards in Transition
• IASB issued exposure draft – different approach to account for leases based on concept of right to use
• Require the lessee to capitalize assets and liabilities for essentially all lease property, without considering characteristic of property involves (E.G. useful life)
• Capitalization causes negative effects on F/S in form of higher leverage and lower income
• Because of substantial feedback – ISABB re-issued a revised exposure draft, and is currently drafting final standard