R23 Income Taxes

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Version 1.0

1. Introduction

One of the key concepts we will discuss in this reading is deferred tax assets and liabilities. Deferred tax assets and liabilities are created because of differences between how and when transactions are recognized for financial reporting purposes relative to tax reporting.

2. Differences between Accounting Profit and Taxable Income

Some common terms related to financial reporting are defined below:

- Accounting profit: It is also known as pretax income or earnings before tax (EBT) and appears on the income statement. In simple terms, this is before taxes are calculated. Accounting profit is based on accounting standards.
- Income tax expense: Tax expense, or tax benefit, appears on a company's income statement, which is created using financial reporting standards. It is calculated based on the accounting profit (profit before tax) using a given tax rate.
- Carrying value: The net value of an asset or liability reported on the balance sheet according to accounting principles.

Some common terms related to tax reporting are defined below:

- Taxable income: It is the portion of income that is subject to income taxes under the tax laws where the company is operating.
- Income tax payable: Income tax payable is calculated on a company's taxable income using the applicable tax rate. This is the amount that is generally paid to the tax authorities and it appears on the balance sheet. Since it results in a cash outflow, firms minimize taxes payable by showing higher expenses and lower taxable income.
- Tax Base of an Asset: Tax base of an asset is the amount that will be deductible for tax purposes in future periods as economic benefits are realized. It is used to calculate tax payable and is analogous to the carrying amount (net book value) concept. Tax base is the amount allocated to asset for tax purposes whereas carrying amount is based on accounting principles.

3. Current and Deferred Tax Assets and Liabilities

Why are accounting profit and taxable income different?

Both report income before deducting tax expense, yet they are different because accounting profit is based on accrual method of accounting (revenues reported when earned and expenses when incurred). On the other hand, taxable income is usually based on cash-basis accounting (revenue recognized when cash is collected and expense reported when cash is paid).

Accounting profit and taxable income differ when:

- Revenues and expenses are recognized in one period for accounting purposes and a different period for tax purposes.

- The carrying amount and tax base of assets/liabilities differ.
- Gain/loss of assets/liabilities in the income statement is different than tax return.
- Some revenues/expenses recognized in the income statement are not considered for tax purposes.

The following table shows the distinction between accounting profit/ taxable income and income tax expense/taxes payable.

Income Statement for Everest Inc.			**Tax Return for Everest Inc.**		
$ million	**2011**	**2012**	$ million	**2011**	**2012**
Revenue	100	100	Revenue	100	100
Cash Expenses	50	50	Cash Expenses	50	50
Depreciation (SL)	25	25	Depreciation (Acc)	40	10
Accounting profit	25	25	**Taxable income**	10	40
Income tax expense (40%)	10	10	**Taxes payable (40%)**	4	16
Profit after tax	15	15	**Profit after tax**	6	24

Instructor's Note:

The following table summarizes the analogous financial and tax reporting terms:

Financial reporting	**Tax Reporting**
Accounting profit	Taxable income
Tax expense	Income tax payable
Carrying amount	Tax base

Deferred tax liabilities

Deferred tax liability (DTL) occurs when income tax expense (financial accounting) is greater than income tax payable. It is a liability because we pay less tax now, thereby creating a liability or an obligation to pay more in the future. Since the tax will be paid later, it is deferred.

Such a situation can happen when:

- Revenue is recognized on income statement before being included on tax return (accrued/unbilled revenue).
- Expenses are tax deductible before being recognized on income statement.

For example, in the sample income statement and tax return shown for Everest Inc, at the end of 2011, the income tax expense (10) is greater than the income tax payable (4), hence a DTL of 6 (10 - 4) will be recorded on the balance sheet. At the end of 2012, the DTL is reversed and it increases taxes payable by 6.

Deferred Tax Assets

Deferred tax assets (DTA) arise when income tax payable is temporarily greater than income tax expense. In other words, taxable income is higher than accounting profit. Since tax is paid in advance, it is considered an asset; it can be viewed as a prepaid expense.

Such a situation can happen when:

- Revenue is taxed before being recognized on income statement (unearned revenue).
- Expense is recognized on the income statement before being tax deductible.

Consider the following income statement and tax return for Atlas Inc.

Income Statement for Atlas Inc.			**Tax Return for Atlas Inc.**		
$ million	**2011**	**2012**	$ million	**2011**	**2012**
Revenue	100	100	Revenue	120	80
Cash Expenses	50	50	Cash Expenses	50	50
Accounting profit	50	50	**Taxable income**	70	30
Income tax expense (40%)	20	20	**Taxes payable (40%)**	28	12
Profit after tax	30	30	**Profit after tax**	42	18

At the end of 2011, since the income tax payable (28) is greater than the income tax expense (20), a DTA of 8 (28 - 20) will be recorded on the balance sheet. At the end of 2012, the DTA is reversed and it brings down taxes payable by 8.

Any deferred tax asset or liability is the result of a temporary difference that is expected to reverse in the future. Deferred tax liability reverses when taxes are paid in the future resulting in cash outflows. Similarly, deferred tax asset reverses when tax benefits are realized in the future resulting in lower cash outflows.

Under IFRS, deferred tax assets and liabilities are classified as non-current.

Under US GAAP, they are classified based on the classification of the respective asset or liability.

Tax Base of an Asset

Asset tax base is the value of an asset according to tax rules and is used to calculate tax payable. Asset tax base is analogous to carrying amount (net book value).

Example

An asset is purchased for 50 and is depreciated over two years. On the financial statements the depreciation is 25 and 25. According to tax rules the depreciation is 40 and 10. Show the carrying amount and tax base at T=0, T=1, and T=2.

Time period	Carrying Amount (Financial Reporting)	Tax Base (Tax reporting)
T = 0	50	50
T = 1	25	10
T = 2	0	0

Link between Tax Base and DTL

Deferred tax liability = (Carrying amount – Tax base) x Tax rate

Assuming a 40% tax rate for the above example,

At T = 1: DTL = (25 - 10) x 0.4 = 6

At T = 2: DTL = (0 - 0) x 0.4 = 0

Instructor's Note

If the carrying amount and tax base are the same then DTL is 0. If the carrying amount is greater than the tax base, then there will be a deferred tax liability. If carrying amount is less than the tax base, then there will be a deferred tax asset.

Both DTL and DTA should be measured at the tax rate which is expected to apply when the liability is settled (reversed).

Link between Income Tax Expense, Tax Payable, and DTL

Income tax expense = Income tax payable + Change in net DTL

where net DTL = DTL – DTA and change in net DTL is the ending value of net DTL – beginning value of net DTL.

Example

In 2015, the income tax payable for a certain company is 100. During the year, DTL increased from 20 to 25 and DTA increased from 0 to 10. What is the provision for income tax in 2015?

Solution:

ITE = ITP + ΔDTL – ΔDTA = 100 + 5 – 10 = 95

4. Determining the Tax Base of Assets and Liabilities

4.1 Determining the Tax Base of an Asset

Asset tax base is the amount that will be deductible for tax purposes in future periods as the economic benefits become realized.

Examples:

Item	Carrying Amount	Tax Base	Temporary Difference
An asset is purchased for 50; for year 1 depreciation = 25 on income statement and 40 for tax purposes.	25	10	15
Capitalized development cost = 100 at the start of the year. During the year 30 was amortized. For tax purposes only 25% amortization is allowed.	70	75	-5
Research cost for the year = 100; entire cost was expensed. Tax rules require cost to be spread over 4 years.	0	80	-80
Gross accounts receivable = 100 Provision for doubtful debt = 10%. Tax authorities allow 20%.	90	80	10

4.2 Determining the Tax Base of a Liability

The tax base of a liability is the carrying amount of the liability less any amounts that will be deductible for tax purposes in the future.

Example:

Item	Carrying Amount	Tax Base	Temporary Difference
Customer payments received in advance = 50 Amount is taxable.	50	0	50

Since the customer pays 50 in advance. A liability called unearned revenue is created on the accounting side making the carrying amount of the liability to 50. On the tax side, 50 is shown as revenue and taxes are paid for the same. So tax base is 0 and carrying amount is 50.

5. Changes in Income Tax Rates

The measurement of deferred tax assets/liabilities is based on current tax law. But, if there is any subsequent change in tax laws or new income tax rates, then existing deferred tax assets and liabilities must be adjusted to reflect those changes. When income tax rate changes, deferred tax assets and liabilities are calculated based on the new tax rate.

Let us take an example to see what happens to DTL. Assume the carrying amount of an asset is 25 and its tax base is 10. When the tax rate is decreased from 40% to 30%, the effect on DTL is:

DTL (old rate) = (carrying amount − tax base) x tax rate $= (25 - 10) \text{ x } 0.4 = 6$
DTL (new rate) $= (25 - 10) * 0.3 = 4.5$
DTL changes from 6 to 4.5.

Relationship between tax rate, DTL, and DTA

- Decrease in tax rate reduces both deferred tax liabilities and deferred tax assets.
- Increase in tax rate increases both deferred tax liabilities and deferred tax assets.

Example

Firm A has a net deferred tax liability. The government announces a decrease in the statutory tax rate. Will this change benefit the income statement and balance sheet?

Solution:

If the government announces a decrease in the statutory tax rate, it will cause the net DTL to decrease. A lower tax rate causes the tax expense to decrease and, consequently, the net income and equity to increase.

6. Temporary and Permanent Differences between Taxable and Accounting Profit

Permanent differences are differences between tax and financial reporting of revenue (expenses) that will **not** be reversed at some future date. These differences do not give rise to DTLs and DTAs. Examples include:

- Income or expense items not allowed by tax legislation. One example that leads to a permanent difference is when a company incurs a penalty or fine on breaking a civil or criminal law.
- Tax credits for some expenditures that directly reduce taxes.

As no deferred tax item is created for permanent differences, all permanent differences result in a difference between the company's effective tax rate and statutory tax rate.

$$\text{Reported effective tax rate } = \frac{\text{Income tax expense}}{\text{Pretax income}}$$

Example

In 2012, Acme's provision for income tax was 20 against an EBT of 100. In the same year, the tax payable was 25 and the taxable income was 110. What was Acme's effective tax rate for 2012?

Solution:

Effective tax rate = 20/100 = 20%

Temporary differences between taxable and accounting profit arise from a difference between the tax base and the carrying amount of assets and liabilities. DTLs and DTAs are only created if there is temporary difference which is expected to reverse in the future.

Some examples of situations that lead to temporary differences in carrying amount and tax base are listed below:

Temporary differences between carrying amount and tax base			
Balance Sheet Item	**Carrying amount vs. Tax Base**	**DTL or DTA**	**Example**
Asset	Carrying amount > Tax Base	DTL	Straight-line depreciation for accounting profit. Accelerated depreciation for taxable profit.
Asset	Carrying amount < Tax Base	DTA	Research cost expensed for accounting profit. Amortized for tax.
Liability	Carrying amount > Tax Base	DTA	Cash from customers before revenue recognition. Cash from customers is taxed.
Liability	Carrying amount < Tax Base	DTL	

Instructor's Note

Remember the first relation for how a DTL is created for an asset. Everything else follows.

Section 7 'Exceptions to the Usual Rules for Temporary Differences' is not testable and hence not covered.

8. Unused Tax Losses and Tax Credits

Tax loss carry forward occurs when a company experiences a loss in the current period that may be used to reduce future taxable income. Tax loss carry forward reduces the taxes paid in future.

Let us take an example. Assume, in 2011 Acme Inc. records revenue of $500,000 and operating expenses of $750,000. It pays taxes at the rate of 25%. The company's net operating income for 2011 was -$250,000. Since the net operating income was negative, Acme would not pay any taxes for 2011. Now, assume in 2012, the company turns profitable and records $500,000 of taxable income. Instead of paying a tax of 0.25 * 500,000 = $125,000, the company may choose to use the tax loss carry forward of -250,000 this year. This reduces the taxable income to 250,000 * 0.25 = $62,500.

Tax credit is the amount that a taxpayer can deduct from the tax owed. Governments may grant a tax credit to promote a specific behavior. For example, to promote growth in the rural areas the government may give tax credits encouraging companies to set up factories. Deferred tax assets may arise from unused tax losses and tax credits.

Often, the tax loss carry forward and tax credits can be used only up to a certain time period in the future. If the company expects to be profitable in the future periods like we saw for Acme Inc. in 2012, it would be prudent to recognize tax loss carry forward. Instead, if it anticipates losses in the future periods, recognizing tax loss carry forward would be rendered useless.

IFRS allows recognition of unused tax losses and tax credits only to the extent that it is probable that in the future there will be taxable income against which unused tax losses and credits can be applied. Under US GAAP, a deferred tax asset is recognized in full but is reduced by a valuation allowance if it is unlikely that the benefit will be realized.

A few guidelines to assess the probability a firm will be sufficiently profitable in the future are listed below:

- If there is uncertainty as to the probability of future taxable benefits, a deferred tax asset as a result of unused tax losses or credits is only recognized to the extent of the available taxable temporary difference.
- Assess the probability that the entity will in fact generate future taxable profits before the unused tax losses and/or credits expire pursuant to tax rules regarding the carry forward of the unused tax losses.
- Determine whether the past tax losses were a result of specific circumstances that are unlikely to be repeated.
- Discover if tax planning opportunities are available to the entity that will result in future profits. These might include change in tax legislation that is phased in over more than one financial period to the benefit of the entity.

Instructor's Note

If a tax credit *directly* reduces taxes, a permanent difference is created between tax expense and tax payable. A permanent difference does not lead to a deferred tax asset or liability. If a tax credit reduces taxes presumably in *future* periods, then a deferred tax asset would have been created. This is again assuming there is a probability for the company to be profitable in the future.

9. Recognition and Measurement of Current and Deferred Tax

The amount of current tax payable or refundable from tax authorities is based on the applicable tax rates at the balance sheet date. Deferred taxes should be measured at the tax rate applicable when the asset is realized or the liability is settled. In short, the tax rate at the time when the reversal in temporary difference (taxable income and profit before tax) occurs.

Let's illustrate the current tax and deferred tax concepts with the help of a simple example. The tax applicable for Period 1 is 30% and the government has announced the tax for Period 2 will be reduced to 25%. Current tax will use 30% while deferred tax will be calculated using 25%.

All unrecognized deferred tax assets and liabilities must be reassessed on the appropriate balance sheet date and should be measured against their probable future economic benefit. In the example above, at the end of period 1 the profitability in future, and beyond period 2, must be assessed to see if DTA/DTL can be recognized.

Measurement of DTL

The treatment of deferred tax liability is discussed below:

- DTL should be classified as debt if the liability is expected to reverse in the future when taxes are paid.
- If it is determined that a DTL will not be reversed, then DTL should be reduced and the amount by which it is reduced should be treated as equity. There is no cash outflow expected in the future. Assume for Period 1 in the example above there is a DTL because of the different depreciation methods used for accounting and tax reporting purposes. Also assume the company is expected to grow at a rate of 30% in the foreseeable future, making the depreciation amounts higher with no reversal in sight. In such cases, the liability will be treated as equity.
- If there is uncertainty about the timing and amount of tax payments, analysts should treat DTLs as neither liabilities nor equity.

Measurement of DTA and Valuation Allowance

If it is determined that the DTA will not be realized because of insufficient future taxable income to recover the tax asset, then the DTA must be reduced.

Under US GAAP, a DTA is reduced by creating a valuation allowance (a contra account). DTA and net income decrease in the period in which a valuation allowance is established. DTA can be revalued upward by decreasing the valuation allowance which would increase earnings.

Instructor's Note

For the exam, you may think of valuation allowance in terms of depreciation. When depreciation expense goes up, net income comes down. Similarly, if valuation allowance goes up, net income comes down. Depreciation is shown as an expense on the income statement. Similarly, an increase in valuation allowance is shown as a loss on the income statement.

Example

Rocky Inc. a US-based company, reports the following information:

	2014	2015
Deferred tax asset	100	100
Valuation allowance	25	20
Deferred tax asset, net of valuation allowance	75	80
Deferred tax liability	70	70
Net deferred tax asset	5	10
Tax rate	40%	40%

1. What does the decrease in valuation allowance imply about future profitability?
2. How does the reduction in valuation allowance impact income tax expense and net income?
3. What is the impact on deferred taxes if the tax rate is reduced to 35%?

Solution to 1:

The decrease in valuation allowance implies that the company is more likely to benefit from the deferred tax asset. This is probably because the company expects higher profitability in the future.

Solution to 2:

The reduction in valuation allowance causes the tax expense to be lower and the net income to be higher.

Solution to 3:

If the tax rate is reduced from 40% to 35% that reduces both the deferred tax asset and deferred tax liability. Since the company has a net deferred tax asset, a reduction in the tax rate will cause the net deferred tax asset to be lower. Consequently, the equity value will also decrease.

Instructor's Note

If the valuation allowance is equal to the deferred tax asset, this implies that a company expects no taxable income prior to the expiration of the deferred tax asset.

When a company decreases the valuation allowance, it implies a higher probability that the deferred tax asset will benefit the company.

10. Presentation and Disclosure

Key points of this section are listed below:

- Deferred tax assets and liabilities must be disclosed.
- Under IFRS, deferred tax assets or liabilities are classified as non-current.

- Under US GAAP, the classification (current versus non-current) is based on the underlying asset or liability.
- The deferred tax asset and deferred tax liability amount should be shown on the balance sheet. But, details of how we arrive at the number should be disclosed in the footnotes.

Here is an example of what might be disclosed in the footnotes:

Deferred tax assets:	
Accrued Expenses	10
Tax loss carry forward	11
Deferred tax assets	21
Valuation allowance	-1
Net deferred tax asset	20
Deferred tax liabilities:	
Depreciation	30
Retirement plans	15
Deferred tax liabilities	45

11. Comparison of US GAAP and IFRS

Note: This section is not very testable.

Please see Exhibit 5 from the curriculum. It summarizes the key similarities and differences between IFRS and US GAAP.

Some differences include:
- Deferred tax recognition for goodwill
- Deferred tax recognition with respect to investments in subsidiaries (both foreign and domestic)
- Tax rate to be used for preparing numerical reconciliation
- Use of a valuation allowance

Summary

LO.a: Describe the differences between accounting profit and taxable income, and define key terms, including deferred tax assets, deferred tax liabilities, valuation allowance, taxes payable, and income tax expense.
Accounting profit: This is the pretax income from the income statement. It is based on accounting standards.

Taxable income: This is income subject to tax. It is based on the tax return.

Deferred tax assets: They are created when income tax payable is greater than income tax expense, provided the difference is temporary and expected to reverse in future periods.

Deferred tax liabilities: They are created when income tax expense is greater than income tax payable, provided the difference is temporary and expected to reverse in future periods.

Valuation allowance: It is a contra account to the DTA account. It is used to reduce DTA based on the probability that future tax benefits will not be realized.

Taxes payable: It is a liability on the balance sheet calculated using taxable income.

Income tax expense: It is an expense recognized in the income statement, which includes taxes payable and changes in deferred tax assets and liabilities.

Income Tax Expense = Income Tax Payable + ΔDTL - ΔDTA

LO.b: Explain how deferred tax liabilities and assets are created and the factors that determine how a company's deferred tax liabilities and assets should be treated for the purposes of financial analysis.

Deferred tax liabilities are created when:

- Income tax expense is greater than taxes payable.
- This can occur if revenues are recognized on the income statement before being included on the tax return (e.g. credit sales).
- Or expenses are tax deductible before they are recognized on the income statement.

Deferred tax assets are created when:

- Taxes payable are greater than income tax.
- This can occur if revenues are taxable before they are recognized in the income statement (unearned revenue).
- Or when expenses are recognized in the income statement before they are tax deductible.

If deferred tax liabilities are expected to reverse in the future they can be classified as liabilities. If they are not expected to reverse in future, they can be classified as equity.

LO.c: Calculate the tax base of a company's assets and liabilities.

Tax base of assets is the amount that will be deductible for tax purposes in future periods as the economic benefits become realized. Suppose the capitalized development cost = 100 at the start of the year. During the year, 30 was amortized. For tax purposes, only 25% amortization is allowed. At the end of year, the carrying amount will be 70 (100-30) but tax base will be 75 (100-25).

Tax base of a liability is the carrying amount of the liability less any amounts that will be deducted for tax purposes in the future. Suppose the customer pays 50 in advance. A liability called unearned revenue is created on the accounting side making the carrying amount of the liability to 50. On the tax side, 50 is shown as revenue and taxes are paid for the same. So tax base is 0 and carrying amount is 50.

LO.d: Calculate income tax expense, income taxes payable, deferred tax assets, and deferred tax liabilities, and calculate and interpret the adjustment to the financial statements related to a change in the income tax rate.

In the table below, what you see on the right is the actual tax paid and to the left is the income tax expense. Tax paid at the end of 2011 is $4 which is less than the obligation to pay, i.e., $10. Extra $6 in taxes which is not paid becomes the deferred tax liability; so, at the end of 2011 DTL is 6. At the end of 2012, the total tax paid is 16 and the DTL of 6 from 2011 reverses to 0. (If tax paid is more than the obligation to pay, deferred tax asset is created.)

Accounting profit (Financial Reporting)			**Taxable Income (Tax Reporting)**		
	2011	2012		2011	2012
Revenue	100	100	Revenue	100	100
Cash expenses	50	50	Cash expenses	50	50
Depreciation (SL)	25	25	Depreciation (Acc. Dep.)	40	10
Profit before tax	25	25	Taxable Income	10	40
Tax expense	***10***	***10***	Tax payable	***4***	***16***
Profit after tax	15	15	Profit after tax	6	24

LO.e: Evaluate the impact of tax rate changes on a company's financial statements and ratios.

If there is any change in tax laws or new income tax rates, then existing deferred tax assets and liabilities must be adjusted to reflect those changes.

Decrease in tax rate reduces both deferred tax liabilities and deferred tax assets.

Increase in tax rate increases both deferred tax liabilities and deferred tax assets.

LO.f: Identify and contrast temporary versus permanent differences in pretax accounting income and taxable income.

Permanent differences => Effective tax rate ≠ Statutory Tax rate

Reported effective tax rate = Income tax expense/ Pretax Income

Temporary differences between carrying amount and tax base			
Item	**Carrying amount vs. Tax Base**	**DTL/DTA**	**Example**
Asset	Carrying amount > Tax Base	DTL	Straight-line depreciation for accounting profit. Accelerated depreciation for taxable profit.
Asset	Carrying amount < Tax Base	DTA	Research cost expensed for accounting profit. Amortized for tax.
Liability	Carrying amount > Tax Base	DTA	Cash from customers before revenue recognition. Cash from customers is taxed.
Liability	Carrying amount < Tax Base	DTL	

LO.g: Describe the valuation allowance for deferred tax assets—when it is required and what impact it has on financial statements.

If DTA will not be realized because of insufficient future taxable income to recover the tax asset, then the DTA must be reduced. Under U.S. GAAP, a DTA is reduced by creating a valuation allowance (a contra account). DTA and net income decrease in the period in which a valuation allowance is established. DTA can be revalued upward by decreasing the valuation allowance, which would increase earnings.

LO.h: Explain recognition and measurement of current and deferred tax items.

Deferred tax is created when there is a temporary difference between the earnings before tax of a company and the taxable income. Deferred tax can take the form of an asset or a liability. For instance, a different depreciation method can result in a deferred tax item.

LO.i: Analyze disclosures relating to deferred tax items and the effective tax rate reconciliation, and explain how information included in these disclosures affects a company's financial statements and financial ratios.

Key points of presentation and disclosure are listed below:

- Deferred tax assets and liabilities must be disclosed.
- Under IFRS, deferred tax assets or liabilities are classified as non-current.
- Under U.S. GAAP, the classification (current versus non-current) is based on the underlying asset or liability.

- The deferred tax asset and deferred tax liability amount should be shown on the balance sheet. But, details of how we arrive at the number should be disclosed in the footnotes.

LO.j: Identify the key provisions of and differences between income tax accounting under IFRS and U.S. GAAP.

Note: This section is not very testable.

Please see Exhibit 5 from the curriculum. It summarizes the key similarities and differences between IFRS and US GAAP.
Some differences include:

- Deferred tax recognition for goodwill
- Deferred tax recognition with respect to investments in subsidiaries (both foreign and domestic)
- Tax rate to be used for preparing numerical reconciliation
- Use of a valuation allowance

Practice Questions

1. A company receives an advance payment from a customer that is immediately taxable. This advance will not be recognized for accounting purposes until the company fulfils its obligation. The company will *most likely* record:
   A. a deferred tax asset.
   B. a deferred tax liability.
   C. neither a deferred tax asset nor a deferred tax liability.

2. The following information is available about a company:

(all figures in $ thousands)	**2015**	**2014**
Deferred tax assets	500	400
Deferred tax liabilities	350	300
Taxes payable	2000	1800

   The company's 2015 income tax expense (in thousands) is *closest* to:
   A. $1,800.
   B. $1,950.
   C. $2,050.

3. Deferred tax asset is reported when:
   A. taxable income is lower than accounting profit.
   B. income tax expense is temporarily greater than income tax payable.
   C. income taxes payable is temporarily greater than income tax expense.

4. Income tax payable:
   A. is reported on the income statement.
   B. is tax expense + change in deferred tax assets and liabilities.
   C. is reported on the balance sheet.

5. In the current year, a company increased its deferred tax liability by $10,000. During the year, the company *most likely*:
   A. became entitled to a $10,000 tax refund.
   B. had permanent differences between accounting profit and taxable income.
   C. reported a higher accounting profit than taxable income.

6. During its first year of operations, a company generated a taxable income of -$20,000. The current tax rate is 30%. Which of the following would be *most likely* reported on the company's balance sheet?
   A. DTA of $6,000.
   B. DTL of $6,000.
   C. DTA of $20,000.

7. If the carrying value of an asset is lower than its tax base and a reversal is expected in future:
   A. a deferred tax asset is created.
   B. a deferred tax liability is created.
   C. neither a deferred tax asset nor a deferred tax liability is created.

8. A company incurs a capital expenditure that can be amortized over four years for accounting purposes, but over three years for tax purposes. The company will *most likely* record:
   A. a deferred tax asset.
   B. a deferred tax liability.
   C. neither a deferred tax asset nor a deferred tax liability.

9. A decrease in the tax rate causes the balance sheet value of a deferred tax asset to:
   A. increase.
   B. decrease.
   C. remain unchanged.

10. A company incurred an accounting expense of $100,000 that cannot be deducted for income tax purposes. This will *most likely* result in:
    A. an increase in deferred tax assets.
    B. an increase in deferred tax liabilities.
    C. no change to deferred tax assets and liabilities.

11. Analysts should treat deferred tax liabilities that are not expected to reverse as:
    A. equity.
    B. liabilities.
    C. neither equity nor liabilities.

12. Company ABC presents its financial statements in accordance with US GAAP. In 2015, ABC reported a valuation allowance of $1,000 against total deferred tax assets of $20,000. In 2014, ABC reported a valuation allowance of $1,200 against total deferred tax assets of $18,000. Which of the following statements *best* describes the expected earnings of the firm? Earnings are expected to:
    A. increase.
    B. decrease.
    C. remain relatively stable.

13. A valuation allowance for doubtful deferred taxes is *least likely* required under:
    A. IFRS.
    B. U.S. GAAP.
    C. both IFRS and U.S. GAAP.

Solutions

1. A is correct. The advances represent a liability for the company. The tax base is equal to the carrying value minus any amounts that will not be taxed in future. Since the advance has already been taxed, the tax base of the advance is 0. The carrying value of the liability exceeds the tax base. A deferred tax asset arises when the carrying value of a liability exceeds its tax base.

2. B is correct.
   Income tax expense = Taxes payable + Δ DTL – Δ DTA
   Income tax expense = 2,000 + (350 - 300) – (500 - 400) = 1,950

3. C is correct. Deferred tax assets (DTA) arise when income taxes payable is temporarily greater than income tax expense. In other words, taxable income is higher than accounting profit. Since tax is paid in advance, it is considered an asset; it can be viewed as a prepaid expense. Deferred tax liability (DTL) occurs when income tax expense (financial accounting) is greater than income tax payable. It is a liability because we pay less tax now, thereby creating a liability or an obligation to pay more in the future.

4. C is correct. Income tax payable is reported on the balance sheet. A is incorrect because income tax expense appears on the income statement. B is incorrect because following relationship exists between income tax expense and income tax payable.

   Income tax expense = Income tax payable + Change in net DTL.
   where net DTL = DTL – DTA and change in net DTL is the ending value of net DTL – beginning value of net DTL.

5. C is correct. Deferred tax liabilities represent taxes that have not yet been paid (because of the lower taxable income) but have been recognized on the income statement (because of the higher accounting profit).

6. A is correct. The tax loss carry-forward will result in a DTA, which is equal to loss multiplied by the tax rate. DTA = $20,000 x 30% = $6,000.

7. A is correct. If the carrying value of an asset is lower than its tax base a deferred tax asset is created. Taxable income will be lower in future when the reversal happens. Taxable income is the portion of income that is subject to income taxes under the tax laws where the company is operating. Deferred tax assets (DTA) arise when income tax payable is temporarily greater than income tax expense. In other words, taxable income is higher than accounting profit. Since tax is paid in advance, it is considered an asset; it can be viewed as a prepaid expense.

8. B is correct. Because of more rapid amortization for tax purposes, the tax base will be lower than the carrying value of the asset. The result will be a deferred tax liability.

9. B is correct. When a firm's tax rate decreases, DTA and DTL both decrease to reflect the new rate.

10. C is correct. Accounting expenses that are not deductible for tax purposes result in a permanent difference, and thus do not give rise to deferred taxes.

11. A is correct. If the DTL will not reverse, there will be no required tax payment in the future and the "liability" should be treated as equity. If the DTL is expected to reverse it is treated as a liability. When both the amount and the timings of tax payments resulting from a reversal of DTL are uncertain, it is excluded from both debt and equity.

12. A is correct. The valuation allowance is taken against deferred tax assets to represent uncertainty that future taxable income will be sufficient to fully utilize the assets. By decreasing the allowance, ABC is signaling greater likelihood that future earnings will be offset by the deferred tax asset, i.e., the future earnings are expected to increase.

13. A is correct. A valuation allowance is required under U.S. GAAP if there is doubt about whether a deferred tax asset (DTA) will be recovered. Under IFRS, the deferred tax asset is written down directly.

