CN-241-E
May 2016

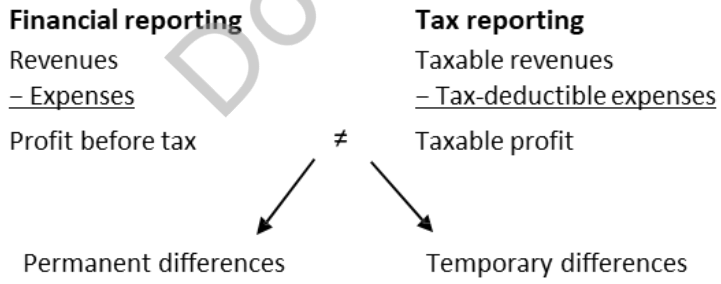
Tax Accounting

Fernando Peñalva
Marc Badia

Firms pay multiple types of taxes: property taxes, value added taxes, municipal taxes, etc. Note CN-235-E explained how to account for value added taxes. Other taxes, such as property taxes, are just an expense that firms recognize when they are due. However, corporate income taxes are not so straightforward and deserve a specific note. The goal of this note is to explain how to account for corporate income taxes and provide enough intuition to understand firms' tax disclosures.

1. Introduction

Firms have to prepare financial accounts (financial reporting) following accounting standards and also have to file an income tax return (tax reporting) with the tax authorities. If the tax rules were the same as the accounting rules, then taxable profit in the tax return would be the same as accounting profit before taxes in the income statement and, consequently, the tax payable to the tax authorities would be the same as the tax expense recognized in the financial statements. End of story. Unfortunately, this is hardly ever the case:



Note in the above diagram that *profit before tax* is an accounting amount derived using accounting rules, and *taxable profit* is an amount derived in the tax return using tax rules. Taxable profit multiplied by the statutory tax rate obtains the amount of taxes that the firm must pay.

This technical note was prepared by Professors Fernando Peñalva and Marc Badia. May 2016.

Last edited: 11/12/19

Profit before tax is not the same as taxable profit because of permanent and temporary differences between accounting rules and tax rules. *Permanent differences* refer to revenues that will never be taxable (e.g., certain government subsidies and investment income from government bonds) or expenses that will never be tax-deductible (e.g., penalties and fines). *Temporary differences* exist because of the *different timing* between accounting recognition and tax recognition of revenues and expenses. For example, managers might estimate that the useful life of a new piece of machinery is five years. However, for tax purposes, tax authorities might allow an accelerated depreciation in three years for new machinery as a way to incentivize investment. On the one hand, the goal of financial reporting is to present a *true and fair view* of the firm's financial condition and so managers will use the five-year period to estimate the accounting depreciation expense. On the other hand, the goal of tax management is to minimize and delay the amount of taxes to be paid as much as possible using legal means. Therefore, managers will estimate tax depreciation using the three-year period. Obviously, at the end of the five years, the accumulated accounting depreciation will be equal to the accumulated tax depreciation but in the meantime there is a mismatch. Specifically, in the first three years, tax depreciation will be higher than accounting depreciation. Hence, taxable profit will be lower than accounting profit, which means that the taxes to be paid in the first three years will be lower than accounting tax expenses. The firm is paying less tax now thanks to the tax rules but it knows it will pay the postponed taxes in the future, once accounting depreciation is higher than tax depreciation. This is why the firm recognizes a liability called *deferred tax liability*. In the next section, a simple example will help us clarify this issue.

2. An Example of Deferred Taxation

A firm purchases a piece of equipment for 120 at the beginning of year x1 (amounts in thousands of euros). The company uses different depreciation rates for book and tax purposes. The equipment has a three-year useful life and zero salvage value. In addition, the company has government bonds that yield interest income of 5% annually. The interest income from the bonds is not taxable. The firm expects to generate income before depreciation, interest and tax of 90 during the following three years. The statutory tax rate is 40%.

The book (i.e., accounting) and tax depreciation over the next three years is as follows:

	yr x1	yr x2	yr x3
Book depr.	40	40	40

	yr x1	yr x2	yr x3
Tax depr.	55	45	20

Income Statement Approach

Before explaining the proper way to estimate the accounting tax expense according to IFRS and U.S. GAAP, we will use the income statement approach, a method that is highly intuitive and works in simple cases. For simplicity, let us start by considering only the first year. The financial income statement and the tax income statement are as follows:

Financial reporting I/S	yr x1
Income before deprec., interest & tax	90
Book depreciation expense	−40
Interest income	5
Income before tax	55
Tax expense	−20
Net income	35

Tax reporting I/S	yr x1
Income before deprec., interest & tax	90
Tax depreciation expense	−55
Interest income	–
Taxable income	35
Tax payable (35 × 40%)	**−14**

The tax income statement is the one used for tax filing. Taxable income only includes the taxable revenues and tax-deductible expenses. In the example above, taxable income in year x1 includes the tax depreciation expense of 55 and excludes interest income from government bonds as this will never be taxable. Firms multiply taxable income by the statutory tax rate to obtain the amount of taxes to be paid (i.e., *tax payable*), a total of 14 in year x1. This tax payable is also called *current tax expense* and it is only one part of the total accounting tax expense.

The financial reporting income statement is the one reported to shareholders. It reports an accounting depreciation of 40 and an interest income of 5, regardless of whether this is taxable or not. The income before taxes is 55. However, the tax expense is *not* the result of multiplying the income before taxes by the statutory tax rate (55 × 40% = 22). How much is the total tax expense?

- A first approach would be to recognize the tax payable determined in the firm's tax filing (14) as the accounting tax expense.
- A second approach would be to recognize the tax payable of 14 but adding the income taxes the firm expects to pay in future periods when temporary differences between accounting income and taxable income are reversed. In other words, in year x1 the firm is paying less in taxes because the tax depreciation is high (55) but in year x3 the tax depreciation will be very low (20) and the firm will pay more in taxes. This second approach recognizes now the consequences of the postponement of taxes.

The first approach would be much simpler. However, U.S. GAAP and IFRS require the second approach because it is more informative. In the balance sheet, deferred taxation shows the firm's future tax obligations or benefits. One easy way of estimating the total tax expense is to use an income statement approach. The basic idea is to take the income before taxes and adjust it for the permanent differences. In our example, the only permanent difference is the interest income. The firm will never pay taxes for this interest income. So we subtract the interest income of 5 from the income before tax of 55. Then we apply the statutory tax rate of 40% to the adjusted income before taxes of 50 to get the total tax expense of 20. This total tax expense has two components:

Current tax expense (from tax return)	14
Deferred tax expense	6
Total tax expense	20

Although now the firm only has the obligation to pay 14 to the tax authorities, in the future the firm will also have to pay 6 for the postponed taxes. Therefore, the firm recognizes a *deferred tax liability* now. The journal entries at the end of year x1 are:

Dr. Tax expense, current (OE−)	14	
Cr. Tax payable (L+)		14 (or, if the firm pays now, Cr. Cash)
Dr. Tax expense, deferred (OE−)	6	
Cr. Deferred tax liability (L+)		6

Note that we distinguish two liabilities: *tax payable*, which is the amount the firm already owes the tax authorities after filing taxes in year x1, and *deferred tax liability*, which reflects the postponed taxes that will be paid in the future. Because of the accelerated tax depreciation, the firm is able to postpone the payment of a portion of its taxes. It does not avoid them completely because the firm will have to pay them in the future. However, the situation is different for the interest income. Because it is tax-free permanently, the firm will never have to pay tax for this income and therefore