

Deferred Tax: The Only Way to Learn It

Deferred tax is neither deferred, nor tax: it is an accounting measure, more specifically an accrual for tax.

Note to accountants, auditors, bank examiners and supervisors

Failure to accrue for tax falsely inflates profits, equity and (for banks) prudential capital by including pre-tax profits, instead of post-tax profits.

This can inflate earnings per share in a public company.

Earnings per share ('EPS') is a key stock market indicator which feeds into the Price Earnings ratio. The Price Earnings ('PE') ratio directly impacts stocks market valuations.

Where this arises, the Earnings for the EPS and PE could be dramatically misleading, leading to unjustifiable stock market valuations and/or unearned executive bonuses being paid.

Basics of Accrual Accounting (some may surprise you)

1. Accrual accounting is an economic presentation of financial statements.

The **accrual presentation** normally **differs from a presentation based on cash accounting**, to reflect **timing differences** between cash flows and economic events.

2. Standards (IFRS, National Standards, Central Bank Regulations) can only do two things:

- They can move profit (or loss) from period to period.

This is what happens when cash accounts are transformed to accrual accounts, in transformations from national accounts to IFRS and in consolidations. **Standards can neither create, nor destroy, profit, as the ultimate profit (or loss) will be measured in a cash increase, or decrease.**

- Standards provide rules on format of presentation.
- 3. If income, or expense, is accrued (or reduced by prepayments) in the period, more (or less) profit (or loss) will be generated. If the additional profit (or loss) will be taxed immediately, the tax charge for the period will reflect this by increasing, or decreasing.

If the additional tax (or tax credit – the benefit of paying less tax) will be generated in a later period, an accrual for that tax is required ***in this current period*** to match the period of the economic activity.

- 4. Revaluations are accruals of profits/gains and losses that have yet to be realized.

The result may appear in the income statement, or reserves (via the Other Comprehensive Income statement). An impairment is an accrual for loss.

Such accruals for profits and losses will be matched with an accrual for tax, unless the profit (or loss) will never be subject to tax.

- 5. Accruals are created, sometimes changed and reversed. Invoices and charges are paid, not accruals.

Deferred tax – timing differences

If an income or expense (which creates a profit or loss) is taxed in the same period that it appears in the income statement, or equity (such as share issue costs) the tax charge for the year will reflect this and no further action is required.

If the income, or expense, is taxed wholly or partially in another period, an accrual for tax is needed in this period to reflect this.

This is ***a timing difference***, between the economic event and the taxation.

Deferred Tax arises from the analysis of the differences between the taxable profit and the accounting profit. These differences arise from the treatment of a transaction differing within the financial and taxation accounts.

- The differences can be classed as permanent, or temporary timing differences.
 - An example of **a permanent difference** is the receipt of a tax free government grant, or similar incentive. This is clearly part of the accounting profit, but it will never be part of the taxable profit. **No further accounting** is necessary in future periods for permanent differences.
 - An example of **a temporary timing difference** occurs when the tax and accounting depreciation of an asset differ. They can arise from differing useful lives, or differing depreciation methods, for example reducing balance and straight line.
- In order to normalize the earnings, we need to normalize the tax charge. This is done by adding a deferred tax charge to the mainstream tax charge. The deferred tax charge is the value of the temporary timing differences at the current rate of tax enacted for the future periods.

Permanent differences are no longer referred to in [IAS 12](#), but have been included here to clarify when not to make an accrual for tax (as no further tax is payable, nor receivable).

Temporary timing difference – revenue/revaluation

(Debits are shown as +, credits shown as -, tax is 20%)

Example: Revaluation Gain

Description	2XX3	2XX4
Revaluation gain	-100	0
Tax	0	20
Net effect on P/L	-100	20

In this example, our revaluation may be for any asset: IAS 40, [IFRS 9](#) in the Income Statement, [IAS 16](#) or IAS 38 in Other Comprehensive Income (logic identical).

The gain is booked in 2XX3, but no tax is levied until the following period, when the asset is sold for its revalued carrying value.

Is there a problem with this presentation? Yes, as at the end of 2XX3, shareholders will be presented with the following financial statement:

Description	2XX3
Revaluation gain	-100
Tax	0
Net effect on P/L	-100

Shareholders will want a dividend of 100. If paid, then there will be no cash to pay the tax bill of 20 the following year.

In practice, our apparent gain of 100 is **only 80 after tax**. Our presentation has overstated the profit.

An accrual for tax is needed in 2XX3, which will be reversed in 2XX4 when the tax is levied:

Description	2XX3	2XX4
Revaluation gain	-100	0
Tax	0	20
Net effect on P/L before tax accrual	-100	20
Tax accrual	20	-20

Net effect on P/L	80	0
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This is the full accrual presentation. The revaluation is an accrual for profit/gain, which is matched by an accrual for tax.

(The accrual for tax is wrongly called 'deferred tax'. It is not: the tax is next to the line labeled tax and nothing is deferred. It is not tax: it is an accrual for tax.)

Example: Revaluation Loss

A revaluation loss and accrued tax credit would be shown as:

Description	2XX3	2XX4
Revaluation loss	200	0
Tax credit	0	-40
Net effect on P/L before tax accrual	200	-40
Tax accrual	-40	40
Net effect on P/L	160	0

Timing difference – expense including depreciation

Expenses generally follow a similar treatment to the revaluation loss above, if the timing difference is between two consecutive years.

In the case of non-current assets (IAS 16, 38, 40), if the economic life used in the financial books is the same as the life used for tax purposes, depreciation/amortization is charged each year and fully allowed for tax: there is no timing difference and no accrual for tax.

Correct application of IAS 16, 38, 40 (and 17) requires the economic life to be used, even if it differs from the life used by tax authorities.

Where it differs, accruals for tax (debits or credits) are required. They are required for presentation purposes (that is what accrual accounting is) but do not change any tax benefit, as they are not tax components, only accruals.

After being created, they may change from period to period. On disposal or expiry of the asset, any remaining accrual will be reversed.

Example: Non-Current Asset 1

Balance Sheet	Year 0	Year 1	Year 2	Year 3	Year 4
Cost	3 000				
Depreciation		-1 000	-1 000	-1 000	

We buy an Automatic Teller Machine ('ATM', 'bankomat') for our bank.

The cost is 3 000. It is expected to last only 3 years as it will be used in a busy city center. We depreciate the cost over 3 years.

The tax benefit ('tax depreciation') will only be given over 4 years in this example, as there is one 'tax life' for all of the country's ATM's.

This creates a timing difference between the commercial depreciation (3 years) and the tax depreciation (4 years).

We record the tax depreciation off-balance sheet:

Off-Balance Sheet	Year 0	Year 1	Year 2	Year 3	Year 4
Tax	-3 000				

Tax depreciation		-750	-750	-750	-750
Tax base	-3 000	-2 250	-1 500	-750	0

(This identifies '[tax base](#)' as some people use this in such calculations. We do not use it here.)

The tax rate is 20% in our examples, so the tax benefit will be a total of $3\,000 \times 20\% = 600$.

This will be spread over years 1-4: a benefit of 150 each year.

Our income statements (extract) will appear as:

Income Statement	Year 0	Year 1	Year 2	Year 3	Year 4
Depreciation		1 000	1 000	1 000	
Tax at 20%		-150	-150	-150	-150
Net effect on P/L		850	850	850	-150

Is there a problem?

Yes: not only does year 4 show a tax credit without a depreciation expense, but years 1-3 show an effective tax rate of 15% ($150/1000$) rather than 20%.

To improve the economic presentation (the purpose of accrual accounting), we need to **create a tax accrual** in year 1, change it in years 2 and 3 and reverse it in year 4:

Income Statement	Year 0	Year 1	Year 2	Year 3	Year 4
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Depreciation		1 000	1 000	1 000	
Tax at 20%		-150	-150	-150	-150
Net effect on P/L before tax accrual		850	850	850	-150
Tax accrual		-50	-50	-50	150
Net effect on P/L		800	800	800	0

You calculate the expected result (800) first, then calculate the difference for the tax accrual (-50). ***The sign must be correct for the tax accrual.***

The tax accrual improves the economic presentation, but has no impact whatsoever on when the tax is credited.

The bookkeeping of the tax accrual in the balance sheet is the same amount, but opposite sign:

Balance Sheet	Year 0	Year 1	Year 2	Year 3	Year 4
Tax accrual		50	50	50	-150

The cumulative numbers in the balance sheet (as this year's number is added to the amount from last year) are:

Balance Sheet	Year 0	Year 1	Year 2	Year 3	Year 4
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Tax accrual		50	50	50	-150
Tax accrual cumulative		50	100	150	0

The final question is whether the tax accrual (cumulative) is a **deferred tax asset or a deferred tax liability**. We have used debits and credits accurately. We have a debit value. A debit value in the balance sheet is an asset.

Control number to eliminate error

If the cumulative figure in the final year (year 4 in this example) is zero (0), then the calculations are correct, if the sign of the tax accrual in the income statement is correct.

Changes in tax rates

If the national tax rate changes, the tax figures and the tax accrual figures for the relevant future periods will be updated.

Example: Non-Current Asset 2

We buy an Automatic Teller Machine ('ATM', bankomat) for our bank. The cost is 1 000. It is expected to last 5 years as it will be used in a quiet village. We depreciate the cost over 5 years.

Balance Sheet	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Cost	1 000					
Depreciation		-200	-200	-200	-200	-200

The tax benefit ('tax depreciation') will be given over 4 years in this example, as there is one 'tax life' for all of the country's ATM's.

This creates a timing difference between the financial depreciation (5 years) and the tax depreciation (4 years).

We record the tax depreciation off-balance sheet:

Off-Balance Sheet	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Tax	-1 000					
Tax depreciation		-250	-250	-250	-250	0
Tax base	-1 000	-750	-500	-250	0	0

The tax rate is 20% in our examples, so the tax benefit will be a total of $1\,000 \times 20\% = 200$. This will be spread over years 1-4: a benefit of 50 each year.

Our income statements (extract) will appear as:

Income Statement	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Depreciation		200	200	200	200	200
Tax at 20%		-50	-50	-50	-50	0
Net effect on P/L		150	150	150	150	200

Is there a problem?

Yes: not only does year 5 show no tax credit, but years 1-4 show an effective tax rate of 25% ($50/200$) rather than 20%.

To improve the economic presentation (the purpose of accrual accounting), we need to create a tax accrual in year 1, change it in years 2, 3 and 4, then reverse it in year 5:

Income Statement	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Depreciation		200	200	200	200	200
Tax at 20%		-50	-50	-50	-50	0
Net effect on P/L before tax accrual		150	150	150	150	200
Tax accrual		10	10	10	-40	
Net effect on P/L		160	160	160	160	160

You calculate the expected result (160) first, then calculate the difference for the tax accrual (10). ***The sign must be correct for the tax accrual.***

The tax accrual improves the economic presentation, but has no impact whatsoever on when the tax is credited.

The bookkeeping of the tax accrual in the balance sheet is the same amount, but opposite sign:

Balance Sheet	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Tax accrual		-10	-10	-10	-10	40

The cumulative numbers in the balance sheet (as this year's number is added to the amount from last year) are:

Balance Sheet	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Tax accrual		-10	-10	-10	-10	40
Tax accrual cumulative		-10	-20	-30	-40	0

The final question is whether the tax accrual (cumulative) is a deferred tax asset, or a deferred tax liability.

We have used debits and credits accurately. We have a credit value. A credit value in the balance sheet is a **liability**.

The model has the past, present and future income statement and balance sheet numbers and a control number to ensure accuracy. It is a perfect record to use and audit.

The model can be used for revenue and costs, if the debits and credits are accurate. The model can be reduced in size for any accrual used for only 2 years to one similar to that used above for revenue.

Tax losses and tax credits

In the bucket marked 'deferred tax' are timing differences, tax losses and tax credits.

In most countries, if you made a loss last year, you can pay less tax this year on your profits. Similarly, a tax credit (to pay less tax) may be given by the government as an incentive, rather than a cash grant.

Both tax losses and tax credits are components of tax. They will reduce your tax bill.

Timing differences are accruals for tax. In contrast, they will not have any impact on your tax bill whatsoever. They are not tax. They are accruals for tax. By throwing them in the same bucket as tax losses and tax credits and calling them 'deferred tax', confusion is allowed to reign.

Tax knowledge required

If there is an accrual, or revaluation, which increases (or decreases) profit, but has no impact on the current period's tax bill, you need to assess whether there will be a tax charge (or credit) when the profit (or loss) is realized. If so, an accrual for tax is needed.

If in doubt, accrue the tax.

You need to identify if there are timing differences for non-current assets.

If you move profit from one period to another, accrue the tax so that a movement of profit of 100 has a net impact of 80, after the accrual for tax at 20%. (Adjust the number to your tax rate, if different.)

Conclusion

Timing differences are the most common part of what is called 'deferred tax'. If you can accrue for tax, in the same way that you make other accruals, the job will be done.

You do not need to use 'tax base', or worry whether it is based on the 'balance sheet' or 'income statement' methods. Just make the tax accruals.

Deferred tax is neither deferred, nor tax: it is an accrual for tax.