

# Study Notes

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## Paper F1 Financial Operations

**Most candidates have found consolidations hard to deal with, but this relatively new topic should pose few problems if you remember the key points and take a logical, step-by-step approach**

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Consolidated accounts were introduced to the F1 syllabus early last year. So far they have been examined as a 25-mark question in section C of the May 2010 paper; two five-mark questions in section B of the November 2010 paper; and three two-mark questions in May 2011. As with all examinations, there is always room to improve the quality of answers each time. This topic is straightforward, as long you do enough revision.

Before you attempt a consolidation, the first issue you must consider is how the group is structured. It's important to identify whether the parent has invested in a subsidiary or in an associate. An investment in a subsidiary is made when the parent has "control" over the company. F1 examines students only on wholly owned subsidiaries. This is quite straightforward, so you will be looking for a situation where the parent has purchased 100 per cent of another company's share capital. (The F2 paper will feature more complicated scenarios concerning the definition of control.)

An investment in an associate is made when the parent doesn't have control over the company but has "significant influence" – ie, it has a holding of at least 20 per cent. Any investment of less than 20 per cent is treated as a normal investment in the "Non-current assets" section of the statement of financial position (SFP).

It's important to identify the group structure because when you're consolidating the income statement or SFP, you consolidate only the parent and subsidiary, not the associate. You do need to calculate the group's share of profit from the associate to be included in the income statement and the investment in the associate for the SFP, but the associate must *not* be consolidated with the parent and the subsidiary. This is the most common error that candidates make when answering such questions. So the consolidation should be: parent + subsidiary +/- any adjustments.

Let's consider the steps to take with any consolidation process, starting with the SFP.

**Step 1. Identify the group structure** – ie, which company is the subsidiary? Which company is the associate? How much influence does the parent have in the associate? How many years ago was the subsidiary/associate purchased?

**Step 2. Identify the net assets of the subsidiary/associate at the date of acquisition and reporting date.** See the table below, which will need to be prepared separately for both subsidiary and associate. The share capital and

	Date of acquisition	Reporting date
	\$000	\$000
Share capital	X	X
Retained earnings	X	X
Fair-value adjustment	X	X
Depreciation adjustment		(X)
Unrealised profit (subsidiary sells)		(X)
	X	X

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retained earnings can be found in the question. The other adjustments will be covered later in this article.

**Step 3. Calculate the goodwill for the subsidiary.** See the table below. The cost of investment in the subsidiary can be found in the question and the net assets at acquisition will be the total already calculated for the subsidiary in step 2. Check the question to see whether you have any impairment on the goodwill since acquisition.

Calculation of goodwill for subsidiary	\$000
Cost of investment	X
Net assets of subsidiary at acquisition (step 2)	(X)
Goodwill at acquisition	X
Impairment	(X)
Goodwill at reporting date	X

**Step 4. Calculate the reserves for the parent company at the reporting date.** See the table below. The parent's retained earnings can be found in the question and the post-acquisition reserves can be obtained by looking at the movement in step 2. This represents the difference between the net assets at the time of acquisition and on the reporting date. Don't forget that you can take only your "share" of the associate's reserves. The impairment can be found in step 3. The adjustment for unrealised profit will be covered later in the article.

Calculation of parent's reserves	\$000
Parent's retained earnings	X
Subsidiary's post-acquisition reserves (movement in step 2)	X
Associate's post-acquisition reserves (movement in step 2 x % owned)	X
Impairment of subsidiary (step 3)	(X)
Unrealised profit (parent sells)	(X)
	X

**Step 5. Calculate the investment in the associate.** See the table below.

Calculation of investment in associate	\$000
Cost of investment	X
Share of post-acquisition profits (step 4)	X
Unrealised profit (parent sells)	(X)
	X

**'When you're consolidating the income statement or SOFP, you consolidate only the parent and subsidiary, not the associate'**

**6 Calculate any other group adjustments.** Before considering these adjustments, let's go through a basic group consolidation by applying the step-by-step approach I have recommended to the following example.

A company called TT acquired 800,000 shares of a business called RW on 1 January 2009 for \$2,000,000 and 240,000 shares of a business called MO on the same date for \$1,000,000. At the date of acquisition, RW's retained earnings were \$1,000,000 and MO's were \$300,000. The goodwill on RW was impaired by 10 per cent as at 31 December 2010.

The companies' statements of financial position at 31 December 2010 are as follows:

SOFPs at 31 December 2010	TT	RW	MO
	\$000	\$000	\$000
<b>Non-current assets</b>			
Property, plant and equipment	2,960	1,720	810
Investments	3,000	0	0
<b>Current assets</b>	830	530	460
	6,790	2,250	1,270
<b>Equity</b>			
Share capital (\$1 ordinary shares)	2,000	800	800
Reserves	3,890	1,200	400
<b>Non-current liabilities</b>			
Loans	500	200	0
<b>Current liabilities</b>	400	50	70
	6,790	2,250	1,270

Step 1 of the consolidation is to work out that TT owns 100 per cent of RW, which means that RW is the subsidiary. TT owns 30 per cent of MO (240,000 shares ÷ 800,000 shares), so MO is the associate.

Step 2 is to work out the net assets of RW and MO. See the tables below for the calculations.

RW's net assets	Date of acquisition	Reporting date
	\$000	\$000
Share capital	800	800
Retained earnings	1,000	1,200
	1,800	2,000
<b>MO's net assets</b>		
Share capital	800	800
Retained earnings	300	400
	1,100	1,200

Step 3 is to work out the goodwill for RW. See the table below for the calculation.

Calculation of goodwill for RW	\$000
Cost of investment	2,000
Net assets of RW at acquisition	(1,800)
Goodwill at acquisition	200
Impairment at 10%	(20)
Goodwill at reporting date	180

Step 4 is to work out the group reserves. See the table below for the calculation.

Calculation of group reserves	\$000
Parent's retained earnings	3,890
RW's post-acquisition reserves: 2,000 - 1,800	200
MO's post-acquisition reserves: 30% x (1,200 - 1,100)	30
RW's impairment	(20)
	4,100

Step 5 is to work out the investment in MO. See the table below for the calculation.

Calculation of investment in MO	\$000
Cost of investment	1,000
Share of post-acquisition profits (step 4)	30
	1,030

Using the series of workings in the previous five steps, you can now consolidate by adding together the parent and subsidiary as follows:

Consolidated SOFP for the TT group at 31 December 2010	\$000
<b>Non-current assets</b>	
Property, plant and equipment (2,960 + 1,720)	4,680
Goodwill (step 3)	180
Investment in associate (step 5)	1,030
<b>Current assets</b> (830 + 530)	1,360
	7,250
<b>Equity</b>	
Share capital (\$1 ordinary shares)	2,000
Retained earnings (step 4)	4,100
<b>Non-current liabilities</b>	
Loans (500 + 200)	700
<b>Current liabilities</b> (400 + 50)	450
	7,250

Remember that the "Investments" line is replaced with the "Goodwill" and "Investment in

associate" workings (steps 3 and 5). "Retained earnings" are found in step 4 and you must show only the parent's share capital on the consolidation.

### Further group adjustments

You may be required to make other group adjustments upon consolidation. You'll come across various adjustments, but the key ones are as follows.

- Fair-value adjustment. IFRS3 requires goodwill to be calculated on the fair value of the net assets at acquisition, hence a fair-value adjustment may be required on consolidation. This will have the following effects:

- ↑ Non-current assets (SOFP).

- ↑ Net assets (step 2, both columns).

- Depreciation adjustment. Often the fair-value adjustment will be made on a depreciating asset. This will result in an extra depreciation charge. The greater the asset value, the greater the depreciation expense. The adjustment will have the following effects:

- ↓ Non-current assets (SOFP).

- ↓ Net assets (step 2, "Reporting date" column only).

Group accounting is an application of the principle of substance over form. This means that, while the parent and subsidiary are both separate legal entities (legal form), they are in fact a single entity (commercial substance) owing to the control the parent has over the subsidiary. As you are presenting them as a single entity, you have some extra adjustments to make. They are as follows:

- Unrealised profit in inventory. When group companies sell to one another, you must eliminate any profit from closing inventory upon consolidation. The profit will be calculated using either mark-up (profit based on cost) or margin (profit based on selling price). The adjustment will depend upon which company is selling. If the parent sells to the subsidiary, the adjustment will do the following:

- ↓ Group reserves (step 4).

- ↓ Inventory (SOFP).

If the subsidiary sells to the parent:

- ↓ Net assets (step 2, "Reporting date" column only).

- ↓ Inventory (SOFP).

If the parent sells to the associate:

- ↓ Group reserves (step 4).

- ↓ Investment in associate (step 5).

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If the associate sells to the parent, the adjustment will have the following effect:

↓ Group reserves (step 4).

↓ Inventory (SOFP).

• Intra-group balances. These need to be eliminated for the parent and subsidiary only. The balances may not agree, owing to cash or inventory in transit. The adjustments should be made as follows:

↓ Receivables (the amount in the parent/subsidiary accounts).

↓ Payables (the amount in the parent/subsidiary accounts).

↑ Cash/inventory (the amount in transit).

Let's consider these adjustments by returning to the case of the TT group, where new information has become available. At the date of acquisition RW's non-current assets were valued at \$100,000 greater than carrying value. This was owing to a building that had a remaining useful life of 10 years at that date. During the year RW sold \$10,000-worth of goods to TT at a profit margin of 20 per cent. TT had half of these goods in inventory on 31 December 2010. TT had a payables balance of \$5,000 due to RW. RW had a receivables balance of \$6,000 due from TT. TT had sent RW a cheque for \$1,000 on 30 December 2010 which RW hadn't yet received.

A further four steps of workings are now needed.

Step 6 is to consider the fair-value adjustment:

↑ Non-current assets by \$100,000.

↑ Net assets (step 2, both columns) by \$100,000.

Step 7 is to consider the depreciation adjustment. You must adjust for two years of depreciation because on 31 December 2010 two years have elapsed since RW's acquisition:

↓ Non-current assets by  $\$100,000 \div (10 \times 2 \text{ years}) = \$20,000$ .

↓ Net assets (step 2, "Reporting date" column only) by \$20,000.

Step 8 is to eliminate the unrealised profit in inventory. RW sells to TT, so in this case the subsidiary sells to the parent. The unrealised profit is calculated only on the closing inventory of \$5,000, since half of the goods have been sold:

↓ Net assets (step 2, "Reporting date" column only) by  $\$5,000 \times 20\% = \$1,000$ .

↓ Inventory by \$1,000.

Step 9 is to eliminate the intra-group balances:

↓ Receivables by \$6,000.

↓ Payables by \$5,000.

↑ Cash by \$1,000.

Lastly, let's consider how the above extra workings have altered the first five steps. There is no change to step 1, but step 2 changes as follows:

Calculation of RW's net assets	Date of acquisition	Reporting date
	\$000	\$000
Share capital	800	800
Retained earnings	1,000	1,200
Fair-value adjustment	100	100
Depreciation adjustment	0	(20)
Unrealised profit (subsidiary sells)		(1)
	1,900	2,079

Step 3 changes as follows:

Calculation of goodwill for RW	\$000
Cost of investment	2,000
Net assets of RW at acquisition (step 2)	(1,900)
Goodwill at acquisition	100
Impairment at 10%	(10)
Goodwill at reporting date	90

Step 4 changes as follows:

Calculation of group reserves	\$000
Parent's retained earnings	3,890
RW's post-acquisition reserves: $2,079 - 1,900$	179
MO's post-acquisition reserves:	
$30\% \times (1,200 - 1,100)$	30
RW's impairment	(10)
	4,089

Step 5 is unchanged, so the new group SOFP is:

Consolidated SOFP for the TT group at 31 December 2010	\$000
<b>Non-current assets</b>	
Property, plant and equipment $(2,960 + 1,720 + 100 - 20)$	4,760
Goodwill (step 3)	90
Investment in associate (step 5)	1,030
<b>Current assets</b> $(830 + 530 - 6 - 1 + 1)$	1,354
	7,234
<b>Equity</b>	
Share capital (\$1 ordinary shares)	2,000
Retained earnings (step 4)	4,089
<b>Non-current liabilities</b>	
Loans $(500 + 200)$	700
<b>Current liabilities</b> $(400 + 50 - 5)$	445
	7,234

So the exam approach to consolidating an SOFP is as follows: set out your proforma as per the question, replacing the "Investments" line with "Goodwill" and "Investment in associate"; add all assets and liabilities, except investments, for the parent and subsidiary; do the standard workings (steps 1 to 5); consider any extra adjustments that may be required; and consolidate.

This article is the first in a two-part series. To access the second, visit the "Students" section of [www.cimaglobal.com](http://www.cimaglobal.com) and choose the "Useful articles" section within the F1 study resources.