Improving your Consolidation Technique

By: Brendan Doyle, BA (Hons) in Accounting, MBS Accounting, MA, H. Dip. Ed.

Acting Head of Department of Accounting & Business Computing in Athlone Institute of Technology, Examiner CPA: Professional 1 Corporate Reporting

Date: January 2015

Abbreviations used throughout this article:

SOFP = Statement of Financial Position

SPLOCI = Statement of Profit or Loss and Other Comprehensive Income

One of the key skills any student of accounting must master is the ability to answer exam questions on consolidated financial statements quickly and accurately. As most financial accounting exams in P1 and P2 will have a consolidation element, usually compulsory, it is not an overstatement to suggest that one's skill in answering these questions can often be the determinant of success or failure.

Examiners' reports often complain that students exhibit poor time management when it comes to these questions. Indeed students often counter-complain that the questions are too time-pressured. The answer to both of these complaints is the development of an efficient technique that maximises the marks gained in the time available. Exam questions are carefully designed to be capable of completion by a well-prepared student in the allotted time whilst ensuring that effective grading of performance is achieved.

Having marked several thousand consolidation questions in his career, this author is well placed to point out some of the inefficiencies exhibited by many students, and offer an approach that may help students perform better in this topic. One valuable observation is that many students waste time rewriting parts of the question. Another is the use of a draft solution (as a working) which is then rewritten to a final version. A third point is the students' use of poor technique. All of these practices are unnecessarily wasteful of time.

There are several methodologies in common use, and all are theoretically sound and, if followed correctly, will lead the student to the correct answer. However not all methodologies are quick and efficient. It is important to note that a methodology that makes the topic easy to learn at the beginning may not be the best one to use in an exam. It is also important to get used to a methodology that is scalable, meaning that as questions get progressively more difficult the methodology can handle the increasing complexity.

The essential features of a good methodology are as follows:

1. It is applicable to many question types;
2. It saves time;
3. It automates the repetitive elements of the question, leaving more time for the elements requiring thought;
4. It allows the question to be handled in manageable chunks, each chunk once dealt with being completed;
5. It allows marks to be progressively gained, so that if time does run out any work done is capable of being awarded maximum possible credit to the student;
6. It is easy for the examiner to follow the student's progress in order to award appropriate marks;
7. It deals with the mark-winning tasks early, with cosmetic elements (earning less marks) being left until the end;
8. It facilitates understanding of the topic, not rote learning.

Suggested methodology for consolidation questions:

When teaching consolidation topics I recommend students to use the method below. The same principles will work for published financial statements and also for statements of cash flow. However I will demonstrate its use for consolidation questions.

Step 1: Read the question and determine the core requirement.

This may be done during the reading time allotted at the beginning of the exam if desired. If done then, it leaves more time for answering the question in the exam. The main objectives of this step include ascertaining the requirement, getting a feel for the issues in the question, and coming up with a plan to approach the question.

Step 2: Determine the initial consolidation plan.

This involves figuring out the group structure. You need to know facts such as percentage holdings, dates of acquisition and disposal, and level of control or influence. Some people draw a group structure diagram to illustrate these clearly. Without this step, it is impossible to make certain consolidation decisions such as which companies to include, and (in the case of mid-year acquisitions or disposals in the SPLOCI) the portion of each company's figures to include.

Step 3: Draw up an initial solution.

One of the key points to understand in any of these questions is that the basis of your answer will always be the figures in the financial statements given. These are already recorded in the accounting system, so you are just reordering them as required by your solution. Any additional information will usually necessitate adjustments to these figures. Each figure in the given statements will be used once and once only in your solution statements. Each adjustment as a result of notes will require a double entry to give it effect. Of course, if your solution statement is a statement of profit or loss and other comprehensive income only, you will only be using part of the double entry in most cases.

Hence it makes sense to go through the question statement and put every figure somewhere. Then forget about the original statement(s) and move on to the notes.

To illustrate this by example, let us assume a question gives you three statements of financial position and asks you to prepare a consolidated SOFP. You determine in step 2 that company A is the parent, company B is a subsidiary, and company C is an associate. Hence you conclude that your consolidated statement of financial position will contain the line items of company A and B added together.

You then proceed in Step 3 to draw up the solution statement, adding the line items of the chosen entities in brackets. You will not close the brackets and total each line as there may be adjustments coming later. Some numbers will go into workings, so open these as you go. Leave space in your solution for line items that may be introduced by the additional information.

Core workings for the SOFP are as follows:

(a) Goodwill: Cost of investment in subsidiaries will go into a goodwill working, as will initial non-controlling interest figure and net assets at acquisition. The goodwill working is essentially a vertical account with a debit balance. The initial entry is transferred from the financial statements of the parent (hence cancelled from the consolidation). To this is added the non-controlling interest figure (calculated as per the policy adopted by the group).
(b) Non-Controlling Interest: The creation of this figure in the goodwill working necessitates an offsetting entry, so we create a working for Non-controlling Interests, or NCI (which is essentially an account with a credit balance).
(c) Investment in Associates: If there are any, associates are dealt with through this working. The cost of investment is transferred initially.
(d) Reserves: Individual entity reserves will usually be consolidated through a reserves working (or workings).
(e) Other figures: Parent share capital will become the consolidated group share capital, and subsidiary's share capital will be entered into the goodwill working to be cancelled against the cost of investment (together with pre-acquisition reserves to calculate identifiable net assets at acquisition).

Step 4: Deal with the notes to the question

Once each figure in the given statements has been placed somewhere, we can forget about these. One chunk of the question has been dealt with and can be put aside mentally. Each note will now most likely cause some adjustment. These should be dealt with through workings. Each working should be numbered, and should reference the question note to which it relates. A well-structured question should have its notes capable of being answered in any order. However it is usually logical to answer them in the order given. If one seems too difficult, it is good technique to skip it, do the others, and return to it later.

Each working should present calculations and indicate clearly what action is required as a result. This action may be written in the form of a journal or a brief narrative (unless the question specifically requires a particular format).

Then the required action should be taken immediately. The action may involve an adjustment to a figure on the SOFP or to one of the workings (goodwill, reserves). Each entry should be annotated with the working number from which the entry came. The core workings should be completed as follows:

(a) Goodwill: We have already entered the cost of investment and the equity capital of the parent. Other issues to be dealt with here may include non-controlling interest, unrecorded consideration on acquisition, reserves at acquisition, fair value adjustments to net assets acquired. Remember, every figure not taken from the given statements will need two entries somewhere. Also, every figure in the goodwill working is derived from data based on the situation at the acquisition date.

(b) Non-controlling Interest: We open this working with the initial balance at acquisition, which is the same figure as we used in the goodwill working. The figure is updated with any movements noted since acquisition. A good approach is to update individual entity reserves in the reserves working, then transfer to the NCI their share of those reserves in one figure. It is acceptable to split every adjustment between group reserves and NCI, but it takes much longer. This is a place where some students can save several minutes during an exam.

(c) Investment in Associates: Initially the cost figure is transferred from the parent's SOFP. This is adjusted by any changes to the reserves of the associate since acquisition (parent's share only!) less any impairment. The parent's share of any adjustments on consolidation is also taken into account here. Any adjustments to this figure are also adjusted to group reserves, thus preserving double entry integrity. Please note, since IFRS 3 was introduced goodwill is not recognised when dealing with an associate. Hence it is inappropriate (as well as a waste of time) to split out the initial cost into the amount represented by net assets and any notional excess. The entire purchase price is treated as the cost.

(d) Reserves: Initially we show the balances transferred from the individual entity SOFPs. It makes sense to adopt a columnar approach, showing each entity's reserves and its adjustments separately. Group reserves are calculated as the parent's reserves plus the parent's share of any growth in its subsidiaries' and associates' reserves since acquisition. Any adjustments are also taken into account. The deduction of the balance at acquisition of subsidiaries is double-entry balanced by the recognition of the same figure as part of the net assets at acquisition in the goodwill working. Once the reserves are populated with all adjustments each company's reserves should be totalled. At this point, the total represents the adjusted reserves earned by that company since its acquisition by the parent. This amount belongs to the parent and the NCI in proportion to their equity shareholdings. Therefore the amount should be so split, and the parents reserve column increased by its share, and the NCI working increased by its share. This one-entry method of dealing with NCI is an important time-saving technique.

It is equally correct to present these core workings as T-accounts rather than vertical workings. The marking scheme allows for any correct method to be used to gain full marks. Unfortunately it seems that students who use the T-account method are much more prone to error. I am not sure why this is the case. The errors come from many sources, including the effect of any adjustments on NCI being incorrectly dealt with. The vertical presentation is simpler to follow, and looks neater on the page. This may aid students under stress in an exam. In any case, the vertical presentation is much faster to process.

If preparing a SPLOCI, the core workings needed are fewer. The NCI calculation is likely to be necessary. In this case the NCI is calculated in the profit and total comprehensive income for the year. For the SOFP NCI is calculated in the net assets at the period end. When making adjustments, often only one side of the adjustment required by the notes may need to be recorded. It is good practice to note within each working whether or not the NCI is affected. This gives us a list of items to adjust for when calculating the profit or total comprehensive income attributable to the NCI for the period.

Once all the notes are dealt with, the question is ready to be drawn to a conclusion.

Step 5: close off the core workings, transfer figures to final statement, and add.

Illustration:

We can illustrate the above points by reference to the August 2012 question 1 part (a)

SAMPLE QUESTION:

Inca plc (Inca) is a large public limited company based in Ireland. It has shareholdings in two other companies. These are called Java plc (Java) and Lava plc (Lava). Statements of financial position are shown below for all three companies as at 31 March 2012.

Statements of Financial Position as at 31 March 2012

	Inca plc	**Java plc**	**Lava plc**
	€ million	**€ million**	**€ million**
Non-current assets:			
Property, plant & equipment	180	43	37
Investments	83	27	---
	263	70	37
Current assets:			
Inventories	46	23	16
Receivables	32	14	12
Cash & bank	8	2	---
	86	39	28
Total assets	**349**	**109**	**65**
Equity:			
Equity share capital of €1 each	100	50	25
Share premium	75	20	8
Retained earnings	132	16	12
	307	86	45
Current liabilities:			
Payables	29	18	13
Bank overdraft	---	---	7
Dividends proposed	13	5	---
	42	23	20
Total equity & liabilities	**349**	**109**	**65**

The following additional information is to be taken into account in so far as it is relevant:

(i) Inca bought 45m ordinary shares in Java on 1 April 2011. The consideration consisted of an immediate cash payment of €58 million together with a deferred payment of €30 million due on 1 April 2013. The €58 million has been accounted for, but no record has been made of the deferred payment. Inca's cost of capital can be taken to be 10%.

(ii) Inca also bought 10m ordinary shares in Lava on 1 July 2011, paying an amount of €25m cash for these shares. This investment has been correctly recorded at cost.

(iii) The share capital and share premium of Java and Lava have not changed since their respective dates of acquisition. The retained earnings reserves were as follows on the respective acquisition dates: Java €10.6m, Lava €9m.

(iv) Group accounting policy is to value non-controlling interests at fair value at the date of acquisition, and goodwill should be calculated accordingly. On 1 April 2011 the non-controlling interest in Java was fair-valued at €9.2 million. No impairment losses are considered necessary at 31 March 2012.

(v) On the acquisition date, the fair values of the assets of Java were equivalent to their book values with two exceptions. Certain plant was worth €4m in excess of its book value on the date Inca acquired its holding. Also, Inca's investments, carried at €27 million, had a fair value of €28 million at the acquisition date. The plant was estimated to have had a five-year useful life from the date of acquisition. The value of the investments has not changed since the acquisition date.

(vi) During the financial year ended 31 March 2012 Java had sold goods to Inca amounting to €6m. These goods were sold inclusive of a mark-up of 50% on cost. 30% of these goods remained in the stock of Inca at the reporting date.

(vii) Since acquiring its holding in Lava, Inca purchased €3 million of goods from Lava which had cost Lava €2 million. All of these remained in inventory at the reporting date.

(viii) There was an intra-group balance of €2.2m owed by Inca to Java at year end. An amount of €1.5 million was owed by Inca to Lava at the reporting date.

(ix) Inca has not accounted for any dividend receivable from its group companies. Both Inca and Java have proposed dividends as shown in current liabilities. Java's proposed dividend relates to the post-acquisition period only.

(x) Inca exercises significant influence over its investment in Lava.

(xi) The present value interest factors for 10% may be taken as follows: 1 year = 0.91, year 2 = 0.83

REQUIREMENT:

Prepare the consolidated statement of financial position for the Inca group as at 31 March 2012 in accordance with International Financial Reporting Standards.

SOLUTION:

In the following solution, each step is colour coded as follows:

Step 1: read the question

Step 2: represented by working 1 immediately following.

Step 3: The figures entered in this step all come from the given SOFPs, and are in black type.

Step 4: The figures entered in this step are from the notes, and are in red type.

Step 5: The figures entered during this step are in green type.

W1 - Group structure:

Inca plc – Parent

Java plc – 90% subsidiary at reporting date therefore include 100% of assets & liabilities.

Lava – 40% associate, significant influence exerted, include under equity accounting method.

Inca plc: Consolidated statement of financial position as at 31 March 2012

	(100% Inca + 100% Java)	**€ million**
Non-current assets:		
Property, plant & equipment	(180 + 43 + 3.2(W6))	226.2
Investments	(83 + 27 – 58 (note i) – 25 (note ii) +1(W6))	28
Investment in associate	W5	25.8
Goodwill	W2	6.5
		286.5
Current assets:		
Inventories	(46 + 23 – 0.6 (W7))	68.4
Receivables	(32 + 14 – 2.2 (W9))	43.8
Cash & bank	(8 + 2)	10.0
		122.2
Total assets		**408.7**
Equity:		
Equity capital		100
Share premium		75
Retained earnings	W3	138.4
		313.4
Non-controlling interest	W4	9.6
		323.0
Non-current liabilities:		
Deferred consideration	(24.9 (W11) + 2.5 (W11))	27.4
Current liabilities:		
Payables	(29 + 18 – 2.2 (W9)	44.8
Dividends proposed	(13 + 5 – 4.5 (W10)	13.5
		58.3
Total equity & liabilities		**408.7**

W2 – Goodwill	**€m**	**€m**
Cost of investment:		
Immediate cash (note (i))		58
Deferred cash (note (i))(W11)		24.9
		82.9
Value of non-controlling interest at acquisition (note iv)		9.2
Fair value of net assets at acquisition:		
Equity share capital	50	
Share premium	20	
Retained earnings (note (iii))	10.6	
Fair value adjustments (W6)	5	(85.6)
Goodwill		6.5

W3 – Group Retained earnings at 31 December 2011	**Inca €m**	**Java €m**	**Lava €m**
Balance per SOFP	132	16	12
Less: balance at acquisition (note (iii))		(10.6)	(9)
Interest on deferred consideration (W11)	(2.5)		
Depreciation on fair value adjustment (W6)		(0.8)	
URP Inventory (W7)		(0.6)	

URP on trade with associate (W8)	(0.4)		
Dividend receivable (W10)	4.5		
Adjusted balances		4	3
Consolidate Java 4 * 90%	3.6		
Consolidate Lava 3 * 40%	1.2		
Total	138.4		

W4 – Non-controlling interest

	Java €m
Balance at acquisition	9.2
Add: share of post-acquisition results W3 (4* 10%)	0.4
	9.6

W5 – Investment in associate

	Lava €m
Balance at acquisition (note (ii))	25
Less URP adjustment (W8)	(0.4)
Add: share of post-acquisition results W3 (3 * 40%)	1.2
	25.8

W6 – Fair value adjustments

	At acq €m	Movement €m	At y/e €m
Plant	4	(0.8)	3.2
Investments	1	-	1
Total	5	(0.8)	4.2

W7 – Intra group trading (note (vi))

Unrealised profit is eliminated from inventory and reserves of selling company.
Amount: €6m *50/150 * 30% = €0.6m

W8 – Unrealised profit on trading with associate (note (vii))

Eliminate 40% of Lava's gain on goods remaining in group inventory
Amount: €1m * 40% = €0.4m (reduce investment in associate and group reserves – would also accept reduction to inventory instead of investment in associate)

W9 – intra-group balances at y/e (note (viii))

Eliminate €2.2m from receivables and payables

W10 – intra-group dividend (note (ix))

Dividend receivable by Inca from Java not recorded: €5m * 90% = €4.5m
Increase Inca's reserves, reduce Java's dividend payable.

W11 –deferred consideration and interest thereon (note (i))

As the deferred consideration was measured at the acquisition date at its fair value, it was discounted for 2 years at the given 10% discount rate. This gave a present value of €24.9m (30 * 0.83).
This should be recognised as part of the cost of acquisition and as a non-current liability (due after more than 1 year).

As the reporting date is one year later, the discount is partially unwound. The unwinding is treated as an interest expense and an additional liability. The amount is €24.9 * 10%.