Paper C01
Fundamentals of Management Accounting
(also relevant to F1 Financial Operations)

Contract costing can prove as complex as some of the situations it records, but this complexity becomes far more manageable once you have grasped the main principles

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Illustration: Martin Nicolaussen/Dutch Uncle

Contract costing is a specific order costing system that's applied to high-value jobs that will not be completed in a single accounting period – civil engineering projects, for example. An account is kept for each contract, and applicable direct costs and overheads – eg, labour, materials, plant hire, depreciation of machinery, share of head-office expenses etc – are, with appropriate year-end adjustments, charged to each account.

Financial accounting normally recognises costs and revenues when goods or services have been provided, but this approach isn't appropriate for contracts that cover more than one accounting year, since this would distort the financial results of the company concerned. Its profits would be overstated when it completes a large number of long-term contracts in a single year and understated when it completes few long-term contracts (or even none). As a result, profits or losses attributable to a contract must be determined for each year to give a fair view of the firm's performance.

Accounting practices for long-term contracts are set out in international accounting standard IAS11. Item 22 states the principles of revenue and cost recognition as follows: "When the outcome of a construction contract can be estimated reliably, contract revenue and contract costs associated with the construction contract shall be recognised as revenue and expenses respectively by reference to the stage of completion of the contract activity at the end of the reporting period."

Let's consider a fictitious firm called Renaissance Renovations to look at some of the key aspects of contract costing. The company won a contract last year to repair a manor house on an island off the west coast of Scotland. The price of the contract is £5m and the work will take three years to complete. The estimated cost of the contract is £4.2m. Renaissance Renovations recognises revenue and profit on a completion basis – ie, the sales value of completed work as a percentage of the total sales value of the contract.

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Customers generally make progress payments as the project goes on. These are normally based on the sales value of the work completed. This assessment is normally conducted by an independent architect or surveyor, who issues a certificate to certify the sales value of the work done. Contracts also often have a retention clause that entitles a customer to withhold an agreed percentage of the value of certified work. This money is retained to ensure that the contractor (or another contractor) attends to any defective work. The money retained by the customer is paid after an agreed period or once the defect has been resolved.

Renaissance Renovations has agreed a retention figure of 10 per cent with its customer. The customer has also agreed to pay 90 per cent of the value of invoiced work (based on a certificate issued by an independent architect) by bank transfer on receipt of an invoice. Each invoice is sent electronically to the customer before the end of the accounting year. The retention money will be paid once the contract is completed to the customer's satisfaction.

The starting point of the accounting process for this contract is to determine what costs can be charged to this contract. Item 16 of IAS11 states that costs shall comprise:
- "Costs that relate directly to the contract."
- "Costs that are attributable to contract activity in general and can be allocated to the contract."
- "Such other costs as are specifically chargeable to the customer under the terms of the contract."

The following costs (all allowable under IAS11) were charged to the first year of the island contract that began at the start of that year:
- Materials supplied to site: £340,000.
- Wages: £820,000.
- Value of the firm's own plant transferred to site at the start of the year: £150,000.
- Equipment hired for one year at the start of the second quarter: £80,000.
- Supervisor salaries: £220,000.
- Costs incurred at head office in support of the contract: £70,000.

The next step is to determine the cost of the work undertaken in the first year. The following extra information was obtained for the contract:
- Estimated value of materials on site at the end of the year: £50,000.
- Unpaid wages for the current year: £10,000.
- Depreciation: 20 per cent (reducing balance).
- Time requirement for pre-paid equipment hire in the second year: three months.

The costs incurred on the contract for the first year are as follows:

	Costs charged	Year-end adjustment	Costs incurred
Materials	£340,000	– £50,000	£290,000
Wages	£820,000	+ £10,000	£830,000
Own plant	£150,000	x 20%	£30,000
Equipment hire	£80,000	– £20,000	£60,000
Salaries	£220,000		£220,000
Head office	£70,000		£70,000

Materials are reduced by the value of the closing inventory; wages include an accrual of £10,000 for unpaid wages; depreciation is 20 per cent of the opening value of the firm's plant (£150,000); and an adjustment is made to reflect the fact that the hired equipment will also be used in the second year: £80,000 x (3 ÷ 12). As a result, the total cost incurred for the first year is £1,500,000.

The next step is to estimate how much it will cost Renaissance Renovations to complete the project. This figure is determined by a team of experts – surveyors, civil engineers, project managers, accountants etc – and it must be based on a thorough evaluation. The cost of the work required to complete the island contract is estimated at £2,600,000.

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The profit that the company expects to earn from the contract is £900,000 – ie, £5,000,000 minus £1,500,000 (the actual cost in year one) minus £2,600,000 (the estimated cost of the remaining work). A profit needs to be calculated for the first year, since the figure of £900,000 is the expected profit for the whole contract. This is done by ascertaining the project's stage of completion. Item 30 of IAS11 allows companies to use a number of methods to determine this:
- "The proportion that the contract costs incurred for work performed to date bear to the estimated total contract costs."
- "Surveys of work performed so far."
- "Completion of a physical proportion of the contract work."

Whichever method is chosen, it must reliably measure the work that has been undertaken in relation to a contract. The architect's certificate for the island renovation states that its sales value at the end of the first year is £1,750,000. The contract is therefore assessed as 35 per cent complete – ie, £1,750,000 ÷ £5,000,000.

The figure for the cost of sales is calculated in relation to the completion percentage based on the total costs (£4,100,000) expected to be incurred on the contract.

Renaissance Renovations' income statement will therefore include the following figures for the first year of the contract:

Income statment for year 1 (£)		*Calculation*
Sales	1,750,000	*per architect's certificate*
Cost of sales	1,435,000	*4,100,000 x 35%*
Profit	315,000	

The balance sheet will contain a number of items relating to contracts. The key ones are "Trade receivables" and "Gross amounts due from/to customers". The first covers unpaid invoices and unpaid retentions. The second reflects work performed in relation to a contract that has not yet been invoiced – ie, costs incurred minus costs included in the income statement. This will usually produce a debit balance. A credit balance will normally occur if a contract is expected to make a loss or a customer has been invoiced for work that is still to be completed by the contractor.

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The following figures will therefore be included in Renaissance Renovations' balance sheet at the end of the first year of the contract:

Balance sheet for year 1 (£)		Calculation
Trade receivables	175,000	*1,750,000 x 10%*
Due from customer	65,000	*1,500,000 - 1,435,000*

At the end of the second year the cumulative sales value of the work done was assessed as £3,750,000. The actual costs after year-end adjustments for that period were £1,680,000. The projected costs of completing the contract were £950,000. Renaissance Renovations' year-two financial statements will include the following figures for the contract:

Income statement for year 2 (£)		Calculation
Sales	2,000,000	*3,750,000 - 1,750,000*
COS	1,662,500	*(1,500,000 + 1,680,000 + 950,000) x 75% - 1,435,000*
Profit	337,500	

Balance sheet for year 2 (£)		Calculation
Trade receivables	375,000	*3,750,000 x 10%*
Due from customer	82,500	*1,500,000 + 1,680,000 - 1,435,000 - 1,662,500*

The contract was completed at the end of the third year. The actual costs (after year-end adjustments) for year three were £970,000. Renaissance Renovations' financial statements would include the following figures for the contract:

Income statement for year 3 (£)		Calculation
Sales	1,250,000	*5,000,000 - 3,750,000*
COS	1,052,500	*1,500,000 + 1,680,000 + 970,000-1,435,000-1,662,500*
Profit	197,500	

Balance sheet for year 3 (£)		Calculation
Trade receivables	500,000	*5,000,000 x 10%*
Due from customer	0	*1,500,000 + 1,680,000 + 970,000 - 1,435,000 - 1,662,500 - 1,052,500*

Despite their best efforts, companies don't always make profits from their projects. When a contract is expected to make a loss, IAS11 (item 36) requires that loss to "be recognised as an expense immediately". The exam practice question at the end of this article covers just such a situation.

'When a contract is expected to make a loss, IAS11 requires that loss to "be recognised as an expense immediately"'

Sometimes it's impossible to make a reliable estimate of the outcome of a construction contract. IAS11 (item 32) addresses such situations by stating that:

- "Revenue shall be recognised only to the extent of contract costs incurred that it is probable will be recoverable."
- "Contract costs shall be recognised as an expense in the period in which they are incurred."

Companies must therefore adopt a prudent approach to the treatment of costs incurred in the early stages of a project.

Always remember that, although contract costing is not an art, neither is it a precise science.

Exam practice

Try the following question to test your knowledge. A model answer will appear in the next edition of *Velocity* (www.cimaglobal.com/velocity).

Renaissance Renovations has recently signed a three-year reconstruction contract with one of its customers, which it expects to cost £4m. The price of the contract is £4.2m, the retention is 10 per cent and stage payments are to be made at the end of every year. The following information was obtained at the end of each year of the project.

Year 1	£
Costs incurred in year	1,700,000
Estimated costs to complete contract	2,450,000
Total value of work certified at year end	1,680,000
Cash received from customer	1,512,000

Year 2	£
Costs incurred in year	1,430,000
Estimated costs to complete contract	1,100,000
Total value of work certified at year end	3,150,000
Cash received from customer	1,323,000

Year 3	£
Costs incurred in year	1,090,000
Estimated costs to complete contract	0
Total value of work certified at year end	4,200,000
Cash received from customer	945,000

You are required to determine from the above data which figures will be included in Renaissance Renovation's income statements and balance sheets for the three years of the contract.

Further reading J Watkins, *Financial Operations – CIMA Official Learning System*, CIMA Publishing, 2009.