

When budgets go wrong

Was Dickens right?

Annual income twenty pounds, annual expenditure nineteen nineteen six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery. (Mr Micawber in *David Copperfield* by Charles Dickens).

Kesa, Europe's third largest electrical retailer was presumably reasonably happy because its actual sales for the year to 30 April 2009 fell by 6.2 per cent – only slightly above the budgeted loss of between 5 and 6 per cent. By contrast WPP, the world's largest marketing and communications group was perhaps feeling miserable because its actual adjusted margins (a measure of profitability) were expected to be 12.5

per cent against a budget of 14.3 per cent. The shortfall arose largely because the company had failed to reduce its staff costs in line with the expected fall in sales.

But it's not only in the private sector that there can be differences between the actual and the budgeted results. For example, the National Audit Office qualified the 2008/2009 results of five government departments – including the Treasury! The Treasury had apparently incurred £24bn more expenditure than had been authorised by Parliament.

Budgets also go wrong in other countries in both the private and public sectors. A somewhat extreme case arose in the United States. It involved a company called KV

Pharmaceutical Company. Its audit committee found problems not only with the company's budgetary control procedures but it also uncovered deficiencies in managerial conduct, human resource functions, and compliance with the Food and Drug Administration. Some very severe measures had to be taken including strengthening and enhancing the internal audit, budgeting and forecasting processes.

As a result of all these events there may have been some misery among the staff at KV Pharmaceutical. The Chairman would certainly have felt miserable because he was fired. In such circumstances even Dickens might have struggled hard to find a much more explicit way of describing it.

Sources: Based on www.ft.com, 24 June 2009; www.ft.com, 27 June 2009; *The Financial Times*, 27 August 2009; www.AccountancyAge.com, 21 July 2009; *St Louis Business Journal*, 23 June 2009.

Questions relating to this news story can be found on page 342 ➡

About this chapter

This chapter explores the nature and purpose of a budget. It outlines the various types of budgets, how they all fit together and how they may be used to keep a tight control of an entity's operations. It also explains that budgets and budgetary control are not neutral techniques. They have an impact on human behaviour and this has to be taken into account when using them.

Learning objectives

By the end of this chapter, you should be able to:

- describe the nature and purpose of budgeting and budgetary control;
- list the steps involved in operating a budgetary control system;
- describe the difference between fixed and flexible budgets;
- outline the behavioural consequences of a budgetary control system.

! Why this chapter is important

The more knowledge that you have as a manager, the more influence you will be able to exert. This applies particularly to budgeting. So this chapter is important for the following reasons.

- Your job will probably involve you in supplying information for budgetary purposes. It is easier to supply what is needed if you know what it is for and how it will be used.
- You are likely to have to prepare a budget for your department. Obviously, it is easier to do this if you have had some training in how to do it.
- You may be supplied with various reports that show your budgeted results against actual results. You may then be asked what you are going to do to correct any variance. The impact that this will have on you will depend on a number of factors, such as how familiar you are with the way that the information has been compiled, what inherent deficiencies it may have and what reliability you can place on it.

Budgeting is not a process that is of interest only to accountants. It should involve the whole entity. As a manager you will find that if you throw yourself wholeheartedly into the process it will help you to do your job more effectively.

Budgeting and budgetary control

News clip

Line by line

When asked how costs could be cut dramatically, Dave Barger, Chief Executive Officer of JetBlue said that his team regularly went through the company's budget

'line by line' in order to find whether cost savings could be made that had the least impact on customers and crew members.

Source: Adapted from *Fortune*, 8 December 2008, p. 16.

We start our analysis by explaining what we mean by a 'budget' and 'budgetary control'.

Budget

The term *budget* is probably well understood by the layman. Many people, for example, 'budget' for their own household expenses even if it is only by making a rough comparison between next month's salary and the next month's expenditure. Such a budget may not be very detailed but it contains all the main features of what accountants mean by a budget. There are as follows:

- *Policies*: a budget is based on the policies needed to fulfil the objectives of the entity.
- *Data*: it is usually expressed in monetary terms.
- *Documentation*: it is usually written down.
- *Period*: it relates to a future period of time.

Most entities will usually prepare a considerable number of what might be called sub-budgets. A manufacturing entity, for example, might prepare sales, production and administration budgets. These budgets would then be combined into an overall budget known as a *master budget*. A master budget is made up of a budgeted profit and loss account, a budgeted balance sheet and a budgeted cash flow statement.

Once a master budget has been prepared, it will be examined closely to see whether the overall plan can be accommodated. It might be the case, for example, that the sales budget indicates a large increase in sales. This will have required the production budgets to be prepared on the basis of this extra sales demand. The cash budget, however, might show that the entity could not finance the extra sales and production activity out of its budgeted cash resources, so additional financing arrangements will have to be made because obviously no entity would normally turn down the opportunity of increasing its sales.

Budgets are useful because they encourage managers to examine what they have done in relation to what they *could* do. However, the full benefits of a budgeting system only became apparent when it is used for *control* purposes. This involves making a constant comparison between the actual results and the budgeted results, and then taking any necessary corrective action. This procedure is called 'budgetary control'.

Activity 15.1

Write down three reasons why a manufacturing company might prepare budgets.

Budgetary control

When the actual results for a period are compared with the budgeted results and it is seen that there are material (or significant) differences (called variances) then corrective action must be taken to ensure that future results will conform to the budget. This is the essence of budgetary control, as can be seen in Figure 15.1. It has several important features.

- *Responsibilities*: managerial responsibilities are clearly defined.
- *Action plan*: individual budgets lay down a detailed plan of action for a particular sphere of responsibility.
- *Adherence*: managers have a responsibility to adhere to their budgets once the budgets have been approved.
- *Monitoring*: the actual performance is monitored constantly and compared with the budgeted results.
- *Correction*: corrective action is taken if the actual results differ significantly from the budget.

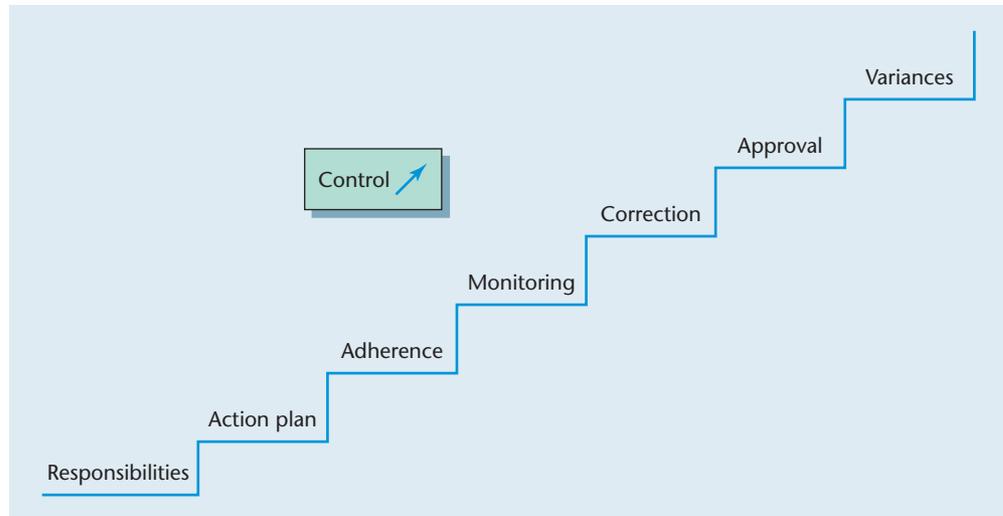


Figure 15.1 Budgetary control: features

- *Approval*: departures from the budget are only permitted if they have been approved by senior management.
- *Variances*: those that are unaccounted for are subject to individual investigation.

Any variance that occurs should be investigated carefully. The current actual performance will then be immediately brought back into line with the budget if this is considered necessary. Sometimes the budget itself will be changed, e.g. if there is an unexpected increase in sales. Such changes may, of course, have an effect on the other budgets and so cannot be done in isolation.

Now that we have outlined the nature and purpose of budgeting and budgetary control, we are in a position to investigate how the system works.

Procedure

News clip

Sandwiches and sausage rolls

The bakery chain Greggs is budgeting for 'marginally positive' 'like-for-like sales growth' this year. Apparently the recession has helped the company's results because more people are seeking value by purchasing its 99p sandwiches and 55p sausage rolls.

Source: Adapted from www.ft.com/cms, 11 March 2009.

In order to make it easier for you to follow the budget procedure we will break it down into four main stages: (1) who administers it; (2) what they aim to do; (3) the length of the budget period; and (4) how the master budget is made up. These four stages are shown in pictorial form in Figure 15.2. We start by first examining the administration of the budget process.

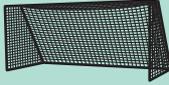
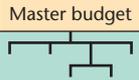
	Administration	Who looks after the budgetary process?
	Objectives	Where do we want to be at the end of the period?
31.12.50?	Period	How long should the budgetary period be?
	Composition	What individual budgets should make up the master budget?

Figure 15.2 Budget procedure

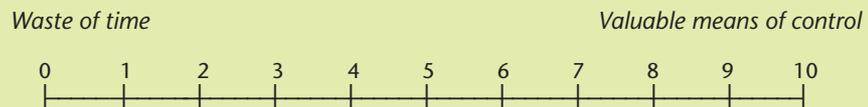
Administration

The budget procedure may be administered by a special budget committee or it may be supervised by the accounting function. It will be necessary for the budget committee to lay down general guidelines in accordance with the company's objectives and to ensure that individual departments do not operate completely independently. The production department, for example, will need to know what the company is budgeting to sell so that it can prepare its own budget on the basis of those sales. However, the detailed production budget must still remain the entire responsibility of the production manager.

This procedure is in line with the concept of responsibility accounting (see Chapter 13). If the control procedure is to work properly, managers must be given responsibility for clearly defined areas of activity, such as their particular cost centre. They are then fully answerable for all that goes on there. Unless managers are given complete authority to act within clearly defined guidelines, they cannot be expected to account for something for which they are not responsible. This means that if the budgeting control system is to work, managers must help prepare, amend and approve their own cost centre's budget.

Activity 15.2

A budget can act as a measure against which actual performance can be matched. However, some experts argue that when a measure becomes a target ('you must meet your budget') it becomes meaningless. To what extent do you think that budgeting is a waste of time? Mark your response on a scale like the one below.



Objectives

The budget procedure starts with an examination of the entity's objectives. These may be very simple. They may include, for example, an overall wish to maximize profits, to foster better relations with customers, or to improve the working conditions of employees. Once an entity has decided on its overall objectives, it is in a position to formulate some detailed plans.

These will probably start with a *forecast*. There is a technical difference between a forecast and a budget. A forecast is a prediction of what is *likely* to happen, whereas a budget is a carefully prepared plan of what *should* happen.

Period

The main budget period is usually based on a calendar year. It could be shorter or longer depending on the nature of the product cycle. The fashion industry, for example, may adopt a short budget period of less than a year, while the construction industry may opt for a five-year period. Irrespective of the industry, however, a calendar year is usually a convenient period to choose as the base period because it fits in with financial accounting requirements.

Besides determining the main budget period, it is also necessary to prepare budgets for much shorter periods. These are required for budgetary control purposes in order to compare the actual results with the budgeted results on a frequent basis. The sub-budget periods for some activities may need to be very short if very tight control is to be exercised over them, e.g. the cash budget may need to be broken down into weeks, while the administration budget only into quarters.

Composition

In order to give you as wide a picture of the budgeting process as possible we will assume that we are dealing with a manufacturing company in the private sector. In practice the structure and content is likely to be extremely complex but we have stripped it down to its bare minimum. Even so, if you look at Figure 15.3 you will see that it still looks very involved. But don't worry. Later on in the chapter we will be using a quantitative example to illustrate the process and then it should all click into place.

In commercial organizations, the first budget to be prepared is usually the sales budget. Once the sales for the budget period (and for each sub-budget period) have been determined the next stage is to calculate the effect on production. This will then enable an agreed level of activity to be determined. The *level of activity* may be expressed in so many units or as a percentage of the theoretical productive capacity of the entity. Once the level of activity has been established then departmental managers can be instructed to prepare their budgets on that basis.

Let us assume, for example, that 1000 units can be sold for a particular budget period. The production department manager will need this information in order to prepare his budget. This does not necessarily mean that he will budget for a production level of 1000 units because he will also have to allow for the budgeted level of opening and closing stocks.

The budgeted production level will then be translated into how much material and labour will be required to meet that particular level. Similarly, it will be necessary to prepare overhead budgets. Much of the general overhead expenditure of the company (such as factory administrative costs, head office costs and research and development expenditure) will be fixed and it will not be affected by the activity level. One type of overhead, however, that may be affected by the activity level is the sales and distribution overhead budget because, for example, an increase in the number of units sold may involve additional delivery costs.

Not all entities start the budget process with sales. Local authorities are a good example. They usually prepare a budget on the basis of what they are likely to spend. The total budgeted expenditure is then compared with the total amount of council tax (after allowing for grants and other income) needed to cover it. If the political cost of an

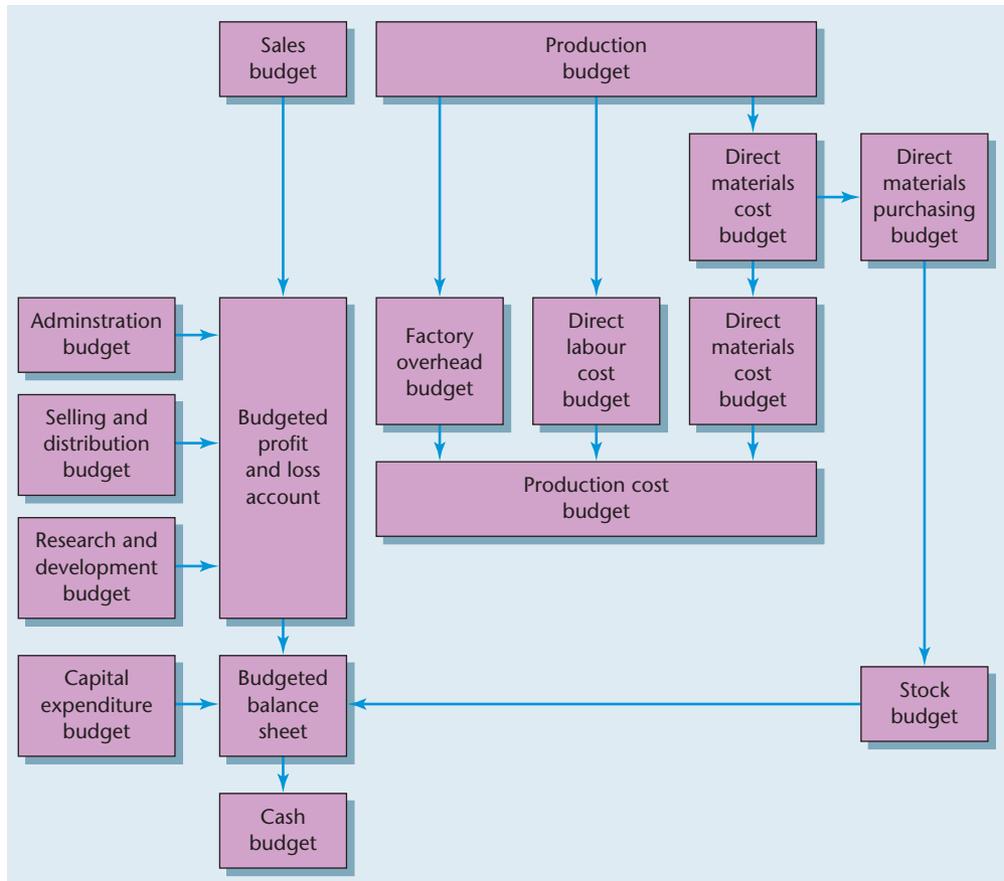


Figure 15.3 Functional budgets

Source: Adapted from Chartered Institute of Management Accountants (2005). CIMA Official Terminology, Oxford: CIMA Publishers.

increase in council tax appears to be too high then the council will require a reduction in the budgeted expenditure. Once the budget has been set, and the council tax has been levied on that basis, departments have to work within the budgets laid down. However, since the budget will have been prepared on an estimate of the actual expenditure for the last two or three months of the old financial year, account has to be taken of any a surplus or shortfall brought forward into the current year. If the estimate eventually proves excessive, the local authority will have overtaxed for that year. This means that it has got some additional funds available to cushion the current year's expenditure. Of course, if it has undertaxed for any balance brought forward, departments might have to start cutting back in the current year.

This process is quite different in the private sector because the budgeted sales effectively determine all the other budgets. In a local authority it is the expenditure budgets

Activity 15.3

- Assuming that a company has overestimated the budgeted level of activity, suggest ways in which it can bring its actual results back into line with the budget.
- If a local authority has underestimated its expenditure for the last two months of the old financial year (February and March) what can it do to cover the deficit in the new financial year (April to the next March)?

that determine what the council tax should be and it is only the control exercised by central government and by the local authority itself that places a ceiling on what is spent. A budget prepared for a particular department, cost centre or any other responsibility centre is known as a *functional budget*. Once all the functional budgets have been prepared, they are combined into the *master budget*. The master budget is, in effect, a consolidated budgeted profit and loss account, a budgeted balance sheet and a budgeted cash flow statement.

An initial draft of the master budget may not be acceptable to the senior management of the company. This may be because it cannot cope with that particular budgeted level of activity, e.g. as a result of production or cash constraints. Indeed, one of the most important budgets is the *cash budget*. The cash budget translates all the other functional budgets (including that for capital expenditure) into cash terms. It will show in detail the pattern of cash inputs and outputs for the main budget period, as well as for each sub-budget period. If it shows that the company will have difficulty in financing a particular budgeted level of activity (or if there is going to be a period when cash is exceptionally tight), the management will have an opportunity to seek out alternative sources of finance.

This latter point illustrates the importance of being aware of future commitments, so that something can be done in advance if there are likely to be constraints (irrespective of their nature). The master budget usually takes so long to prepare, however, that by the time it has been completed it will be almost impossible to make major alterations (although IT developments are now making this less of a difficulty). It is then tempting for senior management to make changes to the functional budgets without referring them back to individual cost-centre managers. It is most unwise to make changes in this way because it is then difficult to use such budgets for control purposes. If managers have not agreed to the changes, they will argue with considerable force that they can hardly take responsibility for budgets that have been imposed on them.

Activity 15.4

XYZ Limited is a manufacturing company. It prepares an annual master budget. Suggest the length of the sub-budget period for each of the following functions: (a) cash; (b) purchasing; and (c) research.

In the next section we use a comprehensive example to illustrate how all the functional budgets fit together.

A comprehensive example

Activity 15.5

List three benefits that you think the preparation of a master budget provides.

It would be very difficult to follow the basic procedures involved in the preparation of functional budgets if we used an extremely detailed example. The example that we are going to work through cuts out much of the detail and only illustrates the main procedures. Nevertheless, there are still 14 steps to take!

**Example
15.1**
Preparation of functional budgets

Sefton Limited manufactures one product known as EC2. The following information relates to the preparation of the budget for the year to 31 March 2012:

- 1 Sales budget details for product EC2:
Expected selling price per unit: £100.
Expected sales in units: 10,000.
All sales are on credit terms.
- 2 EC2 requires 5 units of raw material E and 10 units of raw material C. E is expected to cost £3 per unit, and C £4 per unit. All goods are purchased on credit terms.
- 3 Two departments are involved in producing EC2: machining and assembly. The following information is relevant:

	Direct labour per unit of product (hours)	Direct labour rate per hour £
Machining	1.00	6
Assembling	0.50	8

- 4 The finished production overhead costs are expected to amount to £100,000.
- 5 At 1 April 2011, 800 units of EC2 are expected to be in stock at a value of £52,000, 4500 units of raw material E at a value of £13,500, and 12,000 units of raw materials at a value of £48,000. Stocks of both finished goods and raw materials are planned to be 10 per cent above the expected opening stock levels as at 1 April 2011.
- 6 Administration, selling and distribution overhead is expected to amount to £150,000.
- 7 Other relevant information:
 - (a) Opening trade debtors are expected to be £80,000. Closing trade debtors are expected to amount to 15 per cent of the total sales for the year.
 - (b) Opening trade creditors are expected to be £28,000. Closing trade creditors are expected to amount to 10 per cent of the purchases for the year.
 - (c) All other expenses will be paid in cash during the year.
 - (d) Other balances at 1 April 2011 are expected to be as follows:

	£	£
Share capital: ordinary shares		225 000
Retained profits		17 500
Proposed dividend		75 000
Fixed assets at cost	250 000	
Less: Accumulated depreciation	100 000	
		150 000
Cash at bank and in hand		2 000

- 8 Capital expenditure will amount to £50,000, payable in cash on 1 April 2011.
- 9 Fixed assets are depreciated on a straight-line basis at a rate of 20 per cent per annum on cost.

Required:

As far as the information permits, prepare all the relevant budgets for Sefton Limited for the year to 31 March 2012.

Answer to Example 15.1

In order to make it easier for you to become familiar with the budgeting procedure we will take you through it step by step.

Step 1: Prepare the sales budget

<i>Units of EC2</i>		<i>Selling price per unit</i>		<i>Total sales value</i>
		<i>£</i>		<i>£</i>
10 000	×	100	=	<u><u>1 000 000</u></u>

Step 2: Prepare the production budget

	<i>Units</i>
Sales of EC2	10 000
Less: Opening stock	<u>800</u>
	9 200
<i>Add: Desired closing stock (opening stock + 10%)</i>	<u>880</u>
Production required	= <u><u>10 080</u></u>

Step 3: Prepare the direct materials usage budget

Direct materials:		
E: 5 units × 10 080	=	50 400 units
C: 10 units × 10 080	=	100 800 units

Step 4: Prepare the direct materials purchases budget

Direct materials:	=	<i>E</i>	<i>C</i>
		<i>(units)</i>	<i>(units)</i>
Usage (as per Step 3)		50 400	100 800
Less: Opening stock		<u>4 500</u>	<u>12 000</u>
		45 900	88 800
<i>Add: Desired closing stock (opening stock + 10%)</i>		<u>4 950</u>	<u>13 200</u>
		50 850	102 000
		× £3	× £4
Direct material purchases	=	<u><u>£152 550</u></u>	= <u><u>£408 000</u></u>

Step 5: Prepare the direct labour budget

	<i>Machining</i>	<i>Assembling</i>
Production units (as per Step 2)	10 080	10 080
× direct labour hours required	× 1 DLH	× 0.50 DLH
	10 080 DLH	5 040 DLH
× direct labour rate per hour	× £6	× £8
Direct labour cost	= <u><u>£60 480</u></u>	= <u><u>£40 320</u></u>

Step 6: Prepare the fixed production overhead budget

Given:	£100 000
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**Answer to
Example 15.1
continued**

Step 7: Calculate the value of the closing raw material stock

<i>Raw material</i>	<i>Closing stock*</i> <i>(units)</i>	<i>Cost per unit</i> <i>£</i>	<i>Total value</i> <i>£</i>
E	4 950	× 3	= 14 850
C	13 200	× 4	= 52 800
			<u>67 650</u>

*Derived from Step 4.

Step 8: Calculate the value of the closing finished stock

Unit cost:	£	£
Direct material E: 5 units × £3 per unit	15	
Direct material C: 10 units × £4 per unit	<u>40</u>	55
Direct labour for machining: 1 hour × £6 per DLH	<u>6</u>	
Direct labour for assembling: 0.50 hours × £8 per DLH	<u>4</u>	10
Total direct cost		= 65
× units in stock		× 880
Closing stock value		= <u>57 200</u>

Step 9: Prepare the administration, selling and distribution budget

Given: £150 000

Step 10: Prepare the capital expenditure budget

Given: £50 000

Step 11: Calculate the cost of goods sold

Opening stock (given)	£	52 000
Manufacturing cost:		
Production units (Step 2) × total direct cost (Step 3) = 10 080 × £65	655 200	
	<u>707 200</u>	
Less: Closing stock (Step 8: 880 units × £65)	<u>57 200</u>	
Cost of goods sold (10 000 units)	= <u>650 000</u>	
(or 10 000 units × total direct costs of £65 per unit)		

Step 12: Prepare the cash budget

Receipts	£	£
<i>Cash from debtors:</i>		
Opening debtors	80 000	
Sales	<u>1 000 000</u>	
	<u>1 080 000</u>	
Less: Closing debtors (15% × £1 000 000)	<u>150 000</u>	
		c/f <u>930 000</u>

	b/f	£	£
			<u>930 000</u>
<i>Payments</i>			
<i>Cash payments to creditors:</i>			
Opening creditors		28 000	
Purchases [Step 4: (£152 550 + 408 000)]		<u>560 550</u>	
		588 550	
Less: Closing creditors (£560 550 × 10%)		<u>56 055</u>	532 495
Wages (Step 5: £60 480 + 40 320)			100 800
Fixed production overhead			100 000
Administration, selling and distribution overhead			150 000
Capital expenditure			50 000
Dividend paid for 2011			<u>75 000</u>
			<u>1 008 295</u>
			£
Net receipts			(78 295)
Add: Opening cash			<u>2 000</u>
Budgeted closing cash balance (overdrawn)			<u>(76 295)</u>

Step 13: Prepare the budgeted profit and loss account

	£	£
Sales (Step 1)		1 000 000
Less: Variable cost of sales (Step 8: 10 000 × £65)		<u>650 000</u>
Gross margin		350 000
Less: Fixed production overhead (Step 6)	100 000	
Depreciation [(£250 000 + 50 000) × 20%]	<u>60 000</u>	160 000
Production margin		190 000
Less: Administration, selling and distribution Overhead (Step 9)		<u>150 000</u>
Budgeted net profit		<u>40 000</u>

Step 14: Prepare the budgeted balance sheet

	£	£	£
<i>Fixed assets (at cost)</i>			300 000
Less: Accumulated depreciation			<u>160 000</u>
			140 000
<i>Current assets</i>			
Raw materials (Step 7)		67 650	
Finished stock (Step 8)		57 200	
Trade debtors (15% × £1 000 000)		<u>150 000</u>	
		274 850	
<i>Less: Current liabilities</i>			
Trade creditors			
[Step 4: 10% × (£152 550 + 408 000)]	56 055		
Bank overdraft (Step 12)	<u>76 295</u>	<u>132 350</u>	142 500
			<u>282 500</u>
<i>Financed by:</i>			
<i>Share capital</i>			
Ordinary shares			225 000
Retained profits (£17 500 + 40 000)			<u>57 500</u>
			<u>282 500</u>

Fixed and flexible budgets

News clip

Budgeting for typewriters

The New York Police Department are still using old-fashioned typewriters because vouchers and property forms are still recorded on carbon paper. The outdated equipment is so cumbersome that officers are less likely to make arrests for minor offences. During the last two years the NYPD has spent more than £612,000 on buying and upkeeping new typewriters. And that means that they still have to budget for them!

Source: Adapted from www.guardian.co.uk/world/2009, 17 July 2009.

The master budget becomes the detailed plan for future action that everyone is expected to work towards. However, some entities only use the budgeting process as a *planning* exercise. Once the master budget has been agreed, there may be no attempt to use it as a control technique. So the budget may be virtually ignored and it may not be compared with the actual results. If this is the case, then the company is not getting the best out of the budgeting system.

As was suggested earlier, budgets are particularly useful if they are also used as a means of control. The control is achieved if the actual performance is compared with the budgeted performance. Significant variances should then be investigated and any necessary corrective action taken.

The constant comparison of the actual results with the budgeted results may be done either on a *fixed* or a *flexible* budget basis. A fixed budget basis means that the actual results for a particular period are compared with the original budgets. This is as you would expect because the budget is a measure and a measure has to be rigid: you would get some very misleading results if you used an elastic ruler to measure distances! Similarly, an elastic-type budget might also give some highly unreliable results. In some cases, however, a variable measure is used in budgeting in order to allow for certain circumstances that might have taken place *since* the budgets were prepared. Accountants call this *flexing* the budget. A flexible budget is an original budget that has been amended to take account of the *actual* level of activity.

This procedure might appear somewhat contradictory. Surely changing a budget once it has been agreed is similar to using an elastic ruler to measure distances? This is not necessarily the case in budgeting.

As we explained earlier, in order to prepare their budgets, some managers (especially production managers) will need to be given the budgeted level of activity. This means that such budgets will be based on a given level of activity. If the *actual* level of activity is greater (or less) than the budgeted level, however, managers will have to allow for more (or less) expenditure on materials, labour and other expenses.

Suppose, for example, that a manager has prepared his budget on the basis of an anticipated level of activity of 70 per cent of the plant capacity. The company turns out to be much busier than expected and it achieves an actual level of activity of 80 per cent. The production manager is likely to have spent more on materials, labour and other

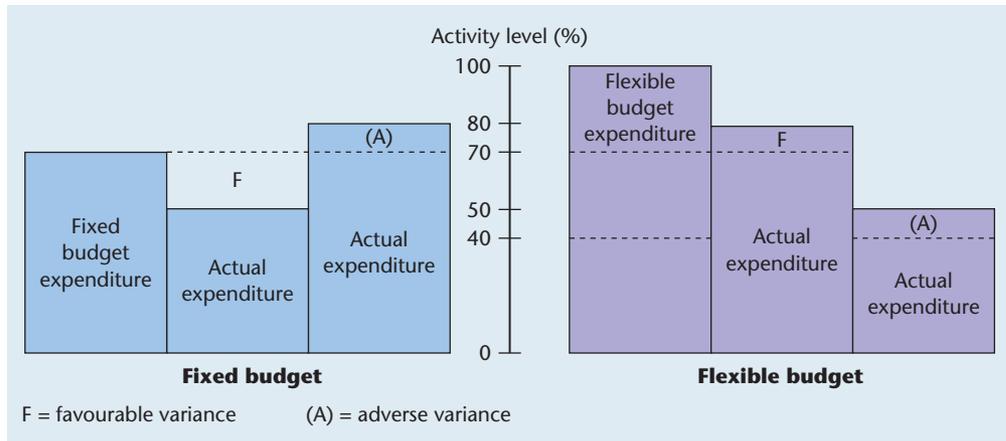


Figure 15.4 Flexing the budget

expenses than he originally thought. If the actual performance is then compared with the budget, i.e. on a fixed budget basis, it will look as though he had spent a great deal more than he had anticipated. And, of course, he has, although *some* of it, at least, must have been beyond his control because of the increased activity. It is considered only fair, therefore, to allow for those costs for which he is not responsible. So there is a need to flex the budget, i.e. revise it on the basis of what it would have been if the manager had budgeted for an activity of 80 per cent instead of 70 per cent. The other assumptions and calculations made at the time the budget was prepared (such as material prices and wage rates) would not be amended. Figure 15.4 portrays this argument in pictorial form, which perhaps makes it easier for you to understand.

If a company operates a flexible budget system, the budgets may be prepared on the basis of a wide range of possible activity levels. This is a time-consuming method, and managers would be very lucky if they prepared one that happened to be identical to the *actual* level of activity. The best method is to wait until the actual level of activity is known before the budget is flexed.

The operation of a flexible budgetary system is shown in Example 15.2.

Example 15.2

Flexible budget procedure

The following information had been prepared for Carp Limited for the year to 30 June 2012.

Level of activity	Budget	Actual
	50%	60%
	£	£
Costs:		
Direct materials	50 000	61 000
Direct labour	100 000	118 000
Variable overhead	10 000	14 000
Total variable cost	160 000	193 000
Fixed overhead	40 000	42 000
Total costs	200 000	235 000

Required:

Prepare a flexed budget operating statement for Carp Limited for the year to 30 June 2012.

**Answer to
Example 15.2**

Carp Ltd				
Flexed budget operating statement for the year 30 June 2012				
<i>Activity level</i>	<i>Fixed budget</i>	<i>Flexed budget</i>	<i>Actual costs</i>	<i>Variance (col. 2 less col. 3) favourable/ (adverse)</i>
	50%	60%	60%	
	£	£	£	£
Direct materials	50 000	60 000	61 000	(1 000)
Direct labour	100 000	120 000	118 000	2 000
Variable overhead	10 000	12 000	14 000	(2 000)
Total variable costs	<u>160 000</u>	<u>192 000</u>	<u>193 000</u>	<u>(1 000)</u>
Fixed overhead	40 000	40 000	42 000	(2 000)
Total costs	<u><u>200 000</u></u>	<u><u>232 000</u></u>	<u><u>235 000</u></u>	<u><u>(3 000)</u></u>

Tutorial notes

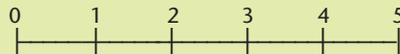
- 1 All the budgeted *variable* costs have been flexed by 20% because the actual activity was 60% compared with a budgeted level of 50%, i.e. a 20% increase

$$\left(\frac{60\% - 50\%}{50\%} \times 100 \right)$$

- 2 The budgeted fixed costs are not flexed because, by definition, they should not change with activity.
- 3 Instead of using the total fixed budget cost of £200,000, the total flexed budget costs of £232,000 can be compared more fairly with the total actual cost of £235,000.
- 4 Note that the terms 'favourable' and 'adverse' (as applied to variances) mean favourable or adverse to profit. In other words, profit will be either greater (if a variance is favourable) or less (if it is adverse) than the budgeted profit.
- 5 The reasons for the variances between the actual costs and the flexed budget will need to be investigated. The flexed budget shows that even allowing for the increased activity, the actual costs were in excess of the budget allowance.
- 6 Similarly, it will be necessary to investigate why the actual activity was higher than the budgeted activity. It could have been caused by inefficient budgeting or by quite an unexpected increase in sales activity. While this would normally be welcome, it might place a strain on the productive and financial resources of the company. If the increase is likely to be permanent, management will need to make immediate arrangements to accommodate the new level of activity.

Activity 15.6

On a scale of 0 to 5 how far do you think that a flexible budgeting system leads to a loss of managerial control (0 being total loss and 5 being no loss whatsoever)?



Behavioural consequences

Budgeting and budgetary control systems are not neutral. They have an impact on people causing them to react favourably, unfavourably or with indifference. If managers react favourably then their budgets are likely to be accurate and relevant. Similarly, any information provided for them will be welcomed and it will be taken seriously. As a result, any necessary corrective action required will be pursued with some vigour.

News clip

Working together

Finance and marketing professionals have sometimes had a disjointed working relationship. Now the Chartered Institute of Management Accountants has got together with the Chartered Institute of Marketing and the Direct Marketing Association. It is felt that there is a need for a closer working relationship at a time when businesses may be tempted to slash marketing budgets in order to cut costs.

Source: Adapted from *Financial Management*, June 2009, p. 7.

Managers who react unfavourably or with indifference may prepare budgets that are inaccurate or irrelevant and under considerable protest. Obviously such managers are not likely to take seriously any notice or any action based on suspect data.

It follows from the above that for a budgeting and budgetary control systems to work effectively, a number of important elements must be present, as seen in Figure 15.5 and summarized below.

- *Consultation.* Managers must be consulted about any proposal to install a budgeting or a budgetary control system.
- *Education and training.* Managers must undergo some education and training so that they are fully aware of the relevance and importance of budgeting and budgetary control systems and the part that they are expected to play.
- *Involvement.* Managers must be directly involved in the installation of the system and especially so in their own responsibility centre.
- *Independence.* Managers should prepare their own budgets (subject to some general guidelines) instead of having them imposed on them. Imposed budgets (as they are called) usually mean that managers do not take them seriously and they will then disclaim responsibility for any variances that may have occurred.
- *Non-disciplinary.* Managers should not be disciplined for any variances (especially if a budget has been imposed) unless they are obviously guilty of negligence. Budgetary control is a means of finding out *why* a variance occurred. It is not supposed to be a vehicle for disciplining managers.

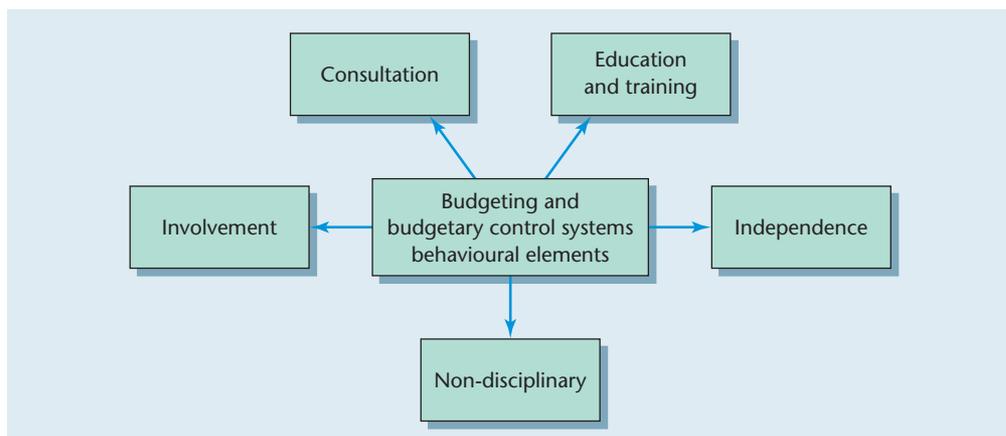


Figure 15.5 Budgeting: behavioural elements

With regards to the last point, if managers believe that the budgeting or budgetary control system operates against them rather than for them, they are likely to undermine it. This may take the form of *dysfunctional behaviour*, i.e. behaviour that may be in their own interest but not in the best interests of the company. They may, for example, act aggressively, become uncooperative, blame other managers, build a great deal of slack (i.e. tolerance) into their budgets, make decisions on a short-term basis or avoid making them altogether, and spend money unnecessarily up to the budget level that they have been given.

All of these points emphasize the importance of consulting managers and involving them fully in both the installation and operation of budgeting and budgetary control systems. If this is not the case, experience suggests that such systems will not work.

Activity 15.7

As a departmental manager you budgeted to spend £10,000 in 2013. You spent £9000. You budgeted to spend £12,000 in 2014 but you were told you could only spend £11,000 as you had 'over-budgeted in 2013'. What are you likely to do when you come to prepare your budget for 2015?



Questions you should ask

This is a most important chapter for non-accountants because you are likely to be involved in the budgetary process no matter what junior or senior position you hold. If your employer uses an imposed budgetary control system you may not have as much freedom to ask questions but you might want to point out as diplomatically as you can that there are problems with such systems. You might also like to put the following questions to the accountants and senior managers.

- How far is the time spent on preparing budgets cost effective?
- Do you think that budgets prepared for a calendar year is too long a period?
- Should those costs (and revenues) that relate to a longer timescale be apportioned to sub-budget periods?
- Is it appropriate to compare actual events with fixed budgets or should we use flexible budgets?
- Why can't I be responsible for preparing my own department's budget?
- Why do you alter my budget after I have prepared it?
- Do you expect me to be responsible for any variances that are outside my control?
- Why punish me and my staff when we were not responsible either for the budget or for what went wrong with it?

Conclusion

The full benefits of budgeting can only be gained if it is combined with a budgetary control system. The preparation of budgets is a valuable exercise in itself because it forces management to look ahead to what *might* happen rather than to look back at what *did* happen. However, it is even more valuable if it is also used as a form of control.

Budgetary control enables actual results to be measured frequently against an agreed budget (or plan). Departures from that budget can then be quickly spotted and steps taken to correct any unwelcome trends. There is a strong case for arguing that the comparison of actual results with a fixed budget may not be particularly helpful if the actual level of activity is different from that budgeted. It is recommended, therefore, that actual results should be compared with a flexed budget.

As so many functional budgets are based on the budgeted level of activity, it is vital that it is determined as accurately as possible, since an error in estimating the level of activity could affect the whole of the company's operational and financial activities. So it is important that any difference between the actual and the budgeted level of activity is investigated carefully.

Budgeting and budgetary control systems may be resented by managers and they might then react to the systems in such a way to protect their own position. This may not be of benefit to the entity as a whole.

Key points

- 1 A budget is a short-term plan.
- 2 Budgetary control is a cost control method that enables actual results to be compared with the budget, thereby enabling any necessary corrective action to be taken.
- 3 The preparation of budgets will be undertaken by a budget team.
- 4 Managers must be responsible for producing their own functional budgets.
- 5 Functional budgets are combined to form a master budget.
- 6 A fixed budget system compares actual results with the original budgets.
- 7 In a flexed budget system the budget may be flexed (or amended) to bring it into line with the actual level of activity.
- 8 A budgeting and budgetary control system is not neutral. It may cause managers to act in a way that is not in the best interests of the entity.

Check your learning

- 1 What is a budget?
- 2 List its essential features.
- 3 What is meant by 'budgetary control'?
- 4 List its essential features.
- 5 What is a variance?
- 6 What is a forecast?
- 7 How long is a normal budgeting period?
- 8 What is a sub-budget period?
- 9 What administration procedures does a budgeting system require?

- 10 In a commercial organization, which budget is normally the first to be prepared?
- 11 What initial criterion is given to production managers before they begin to prepare their budgets?
- 12 What is meant by a functional budget?
- 13 List six common functional budgets.
- 14 What is meant by a fixed budget?
- 15 What is meant by a flexible budget?
- 16 Why is it desirable to prepare one?
- 17 List five desirable behavioural elements necessary to ensure a budgeting system is effective.

News story quiz

Remember the news story at the beginning of this chapter? Go back to that story and reread it before answering the following questions.

This news story relates to a number of examples of budgets being over-spent, i.e. the actual result being unfavourable to profit. But the actual results may sometimes be favourable to profit.

Questions

- 1 From a budgetary control point of view can a budget under-spend be regarded as 'happiness' and budget over-spend be described as 'misery'?
- 2 Is a small percentage difference between the actual and the budgeted results of an entity something to get worried about?
- 3 Why do you think that the UK government's budgetary control system appears to be so deficient?

Tutorial questions

The answers to questions marked with an asterisk can be found in Appendix 4.

- 15.1 The Head of Department of Business and Management at Birch College has been told by the Vice Principal (Resources) that his departmental budget for the next academic year is £150,000. What comment would you make about the system of budgeting used at Birch College?
- 15.2 Suppose that when all the individual budgets at Sparks plc are put together there is a shortfall of resources needed to support them. The Board suggests that all departmental budgets should be reduced by 15 per cent. As the company's Chief Accountant, how would you respond to the Board's suggestion?
- 15.3 Does a fixed budget serve any useful purpose?

- 15.4** 'It is impossible to introduce a budgetary control system into a hospital because if someone's life needs saving it has to be saved irrespective of the cost.' How far do you agree with this statement?
- 15.5*** The following information has been prepared for Tom Limited for the six months to 30 September 2011:

Budgeted production levels for product X

	<i>Units</i>
April	140
May	280
June	700
July	380
August	300
September	240

Product X uses two units of component A6 and three units of component B9. At 1 April 2011 there were expected to be 100 units of A6 in stock, and 200 units of B9. The desired closing stock levels of each component were as follows:

<i>Month end 2011</i>	<i>A6 (units)</i>	<i>B9 (units)</i>
30 April	110	250
31 May	220	630
30 June	560	340
31 July	300	300
31 August	240	200
30 September	200	180

During the six months to 30 September 2011, component A6 was expected to be purchased at a cost of £5 per unit, and component B9 at a cost of £10 per unit.

Required:

Prepare the following budgets for each of the six months to 30 September 2011:

- (a) direct materials usage budget;
 (b) direct materials purchase budget.

- 15.6*** Don Limited has one major product that requires two types of direct labour to produce it. The following data refer to certain budget proposals for the three months to 31 August 2012:

<i>Month</i>	<i>Production units</i>
June	600
July	700
August	650

Direct labour hours required per unit:

	<i>Hours</i>	<i>Budgeted rate per hour</i>
		£
Production	3	4
Finishing	2	8

Required:

Prepare the direct labour cost budget for each of the three months to 31 August 2012.

15.7 Gorse Limited manufactures one product. The budgeted sales for period 6 are for 10,000 units at a selling price of £100 per unit. Other details are as follows:

1 Two components are used in the manufacture of each unit:

<i>Component</i>	<i>Number</i>	<i>Unit cost of each component</i>
		£
XY	5	1
WZ	3	0.50

2 Stocks at the beginning of the period are expected to be as follows:

4000 units of finished goods at a unit cost of £52.50.

Component XY: 16,000 units at a unit cost of £1.

Component WZ: 9,600 units at a unit cost of £0.50.

3 Two grades of employees are used in the manufacture of each unit:

<i>Employee</i>	<i>Hours per unit</i>	<i>Labour rate per hour</i>
		£
Production	4	5
Finishing	2	7

4 Factory overhead is absorbed into unit costs on the basis of direct labour hours. The budgeted factory overhead for the period is estimated to be £96 000.

5 The administration, selling and distribution overhead for the period has been budgeted at £275 000.

6 The company plans a reduction of 50 per cent in the quantity of finished stock at the end of period 6, and an increase of 25 per cent in the quantity of each component.

Required:

Prepare the following budgets for period 6:

- sales
- production quantity
- materials usage
- materials purchase
- direct labour
- the budgeted profit and loss account.

15.8 Avsar Limited has extracted the following budgeting details for the year to 30 September 2013:

1 Sales: 4000 units of V at £500 per unit

7000 units of R at £300 per unit

2 Materials usage (units):

	<i>Raw material</i>		
	<i>O1</i>	<i>I2</i>	<i>L3</i>
V	11	9	12
R	15	1	10

3 Raw material costs (per unit):

	£
O1	8
I2	6
L3	3

4 Raw material stocks:

	<i>Units</i>		
	<i>O1</i>	<i>I2</i>	<i>L3</i>
Opening stock	1300	1400	400
Closing stock	1400	1000	200

5 Finished stocks:

	<i>Units</i>	
	<i>V</i>	<i>R</i>
Opening stock	110	90
Closing stock	120	150

6 Direct labour:

	<i>Product</i>	
	<i>V</i>	<i>R</i>
Budgeted hours per unit	10	8
Budgeted hourly rate (£)	12	6

7 Variable overhead:

	<i>Product</i>	
	<i>V</i>	<i>R</i>
Budgeted hourly rate (£)	10	5

8 Fixed overhead: £193,160 (to be absorbed on the basis of direct labour hours).

Required:

- (a) Prepare the following budgets:
- (i) sales;
 - (ii) production units;
 - (iii) materials usage;
 - (iv) materials purchase; and
 - (v) production cost.
- (b) Calculate the total budgeted profit for the year to 30 September 2013.

15.9 The following budget information relates to Flossy Limited for the three months to 31 March 2013:

1 **Budgeted profit and loss accounts:**

<i>Month</i>	<i>January</i>	<i>February</i>	<i>March</i>
	£000	£000	£000
Sales (all on credit)	2 000	3 000	2 500
Cost of sales	1 200	1 800	1 500
<i>Gross profit</i>	<u>800</u>	<u>1 200</u>	<u>1 000</u>
Depreciation	(100)	(100)	(100)
Other expenses	(450)	(500)	(600)
	<u>(550)</u>	<u>(600)</u>	<u>(700)</u>
Net profit	<u><u>250</u></u>	<u><u>600</u></u>	<u><u>300</u></u>

2

Budgeted balance sheets:

<i>Budgeted balances</i>	<i>December</i>	<i>January</i>	<i>February</i>	<i>March</i>
	£000	£000	£000	£000
<i>Current assets:</i>				
Stocks	100	120	150	150
Debtors	200	300	350	400
Short-term investments	60	–	40	30
<i>Current liabilities:</i>				
Trade creditors	110	180	160	150
Other creditors	50	50	50	50
Taxation	150	–	–	–
Dividends	200	–	–	–

- Capital expenditure to be incurred on 20 February 2013 is expected to amount to £470,000.
- Sales of plant and equipment on 15 March 2013 is expected to raise £30,000 in cash.
- The cash at bank and in hand on 1 January 2013 is expected to be £15,000.

Required:

Prepare Flossy Limited's cash budget for each of the three months during the quarter ending 31 March 2013.

- 15.10** Chimes Limited has prepared a flexible budget for one of its factories for the year to 30 June 2012. The details are as follows:

<i>% of production capacity</i>	<i>30%</i>	<i>40%</i>	<i>50%</i>	<i>60%</i>
	£000	£000	£000	£000
Direct materials	42	56	70	84
Direct labour	18	24	30	36
Factory overhead	22	26	30	34
Administration overhead	17	20	23	26
Selling and distribution overhead	12	14	16	18
	<u>111</u>	<u>140</u>	<u>169</u>	<u>198</u>

Additional information:

- The company only expects to operate at a capacity of 45%. At that capacity, the sales revenue has been budgeted at a level of £135,500.
- Variable costs per unit are not expected to change, irrespective of the level of activity.
- Fixed costs are also not likely to change, irrespective of the level of activity.

Required:

Prepare a flexible budget for the year to 30 June 2012 based on an activity level of 45%.

Further practice questions, study material and links to relevant sites on the World Wide Web can be found on the website that accompanies this book. The site can be found at www.pearsoned.co.uk/dyson