CHAPTER 13

Budgetary planning and control

Chapter contents

13.1	Introduction	317
13.2	Budgets and Budgetary Control	317
13.3	Implementing Budgetary Control	320
13.4	Cash Budgets	324
13.5	Advantages of Operating Budgetary Control Systems	327
13.6	Problems of Budgetary Control in Practice	328
13.7	Zero-based Budgeting (ZBB)	332
13.8	Planning, Programming Budgeting Systems (PPBS)	333

LEARNING OBJECTIVES

After studying this chapter you should be able to:

- ✓ Define budgets and budgetary control and explain how they operate
- ✓ Explain and illustrate the use of budgets and control information
- ✓ Understand and demonstrate the use of flexible budgets
- ✓ Explain the role of cash budgets and produce and interpret practical examples
- ✓ Describe the main advantages of operating budgetary control
- ✓ Critically assess the operation of budgetary control in practice
- ✓ Understand the role and limitations of ZBB and of PPBS

13.1 Introduction

We all start off with some sort of plans in mind, however vague, and hope that they will come to fruition and that we fulfil our dreams (or some of them). Then, on a regular basis, we will compare what is actually happening in our lives with what we hoped for. Perhaps we find that all is as we had hoped; or we change our plans; or we decide what we need to do in order to fulfil our dreams, or attain our objectives. Some small businesses may operate in this way. But a well-managed business defines and quantifies its objectives, prepares detailed plans, and systematically compares the results that are actually achieved with those that were planned. Budgetary control does this in a systematic way and this chapter outlines how this is done in practice. Some of the difficulties in practice are discussed and two alternative approaches (ZBB and PPBS) are introduced.

13.2 Budgets and Budgetary Control

A starting point for preparing plans or budgets for next year is to look at the actual financial statements for this year, and estimate what is going to happen next year, probably adding a bit for inflation, and a bit for growth.

In Illustration 13.1 the directors of Daniel Dhoon are forecasting a 12 per cent increase in sales, and an increase in profits. This is to be achieved by instituting a delivery service. Unfortunately, this will lead to a substantial increase in distribution costs; it will also require the purchase of additional non-current assets (such as vans); and current assets (inventories and receivables) are likely to increase. Although a modest increase in net profit is expected, the increase in assets and equity is much greater. The end result is that return on equity will fall from 3 per cent to 2.5 per cent. This may be a reasonable estimate of what could happen, but it is not a satisfactory plan or budget.

A budget may be defined as:

> A plan, quantified in monetary terms, prepared and approved prior to a defined period of time, usually showing planned income to be generated and/or expenditure to be incurred during that period, and the capital to be employed to attaining a given objective.

Illustration 13.1 does not really show a budget. It looks as if someone has been asked to prepare financial statements on the basis that sales will increase by 12 per cent as a result of buying a vehicle for around £50,000, and spending £40,000 or so on employing a driver, petrol and other delivery costs. As a plan it is not satisfactory because it does not attain a particular objective: return on equity will fall instead of increase. It may be seen as a *draft* budget, providing a basis for revision. It can be changed again and again until it is more like a plan that can be implemented and which will succeed in increasing the return on equity.

Key words in the definition of a budget are that it is prepared and *approved* before the period to which it relates and that it is a plan intended to achieve *a given objective*.[1] There

[1] If a budget is to be prepared and approved prior to (e.g.) Year 8 (probably in November or December Year 7), there is a problem in that the actual results for the whole of Year 7 will not be available until after the end of the year. This is usually overcome by using *actual* results for January to October, and estimated results for November and December of Year 7.

ILLUSTRATION 13.1

Preparing budgeted income statement and balance sheet

The directors of the Daniel Dhoon Company were not satisfied with results in recent years: growth had been sluggish, and return on equity was unsatisfactory. They planned to expand sales by starting a delivery service in Year 8 in order to increase the return on equity. The draft budget for Year 8, together with the actual results for Year 7, are shown below.

	Income statement for the year	Actual results Year 7	Forecast results Year 8	
		£	£	
1	Sales	400,000	448,000	12% increase
2	Cost of sales	300,000	318,000	
3	Gross profit	100,000	130,000	25% gross profit ratio, increasing to 29%
4	Distribution costs	(30,000)	(58,300)	
5	Administrative expenses	(53,000)	(54,000)	
6	Operating profit	17,000	17,700	
7	Finance expense	(8,000)	(8,000)	
8	Profit before taxation	9,000	9,700	
9	Taxation	(3,000)	(3,100)	
10	Profit for year	6,000	6,600	
	Balance sheet as at year end			
11	Non-current assets, net book value	270,000	315,000	
12	Current assets	60,000	85,000	
	Total assets	330,000	400,000	
13	Current liabilities	30,000	36,000	
14	8% debentures	100,000	100,000	
15	Equity	200,000	264,000	
	Total liabilities and equity	330,000	400,000	
	Return on equity	3%	2.5%	Line 10 as a % of line 15

could even be several objectives, such as achieving a particular amount of earnings per share, reduction in borrowings, or increase in sales. The point is that management must have approved of and be committed to the plan to ensure that it is implemented.

In revising the draft, consideration could[2] be given to the following:

1. Could the vehicle be hired instead of buying it? That would reduce the amount of capital employed, and, in turn, the return achieved.
2. Could the delivery function be outsourced?

[2] It might be useful to start by applying and interpreting most of the set of ratios given in Chapter 4.

3 Is an appropriate charge being made for delivery?

4 Could the increase in current assets be held down[3] by restricting the amount customers are allowed to owe, or by reducing inventory levels?

5 Are there other ways of increasing sales that would require less (capital and revenue) expenditure?

There is also a need to check if the draft budget is realistic, particularly in relation to sales and cash. It is likely that starting a delivery service will increase sales, but it is not clear why the gross profit ratio is expected to increase and this would need to be explained. Perhaps they expect lower buying prices because of bulk buying, but their estimates suggest a very optimistic increase in the gross profit ratio for a modest 5 per cent increase in sales. Perhaps they expect to be able to charge higher prices (but they need to be careful in view of their sluggish growth). Or perhaps their delivery service will concentrate on products with a higher margin. A detailed sales budget – showing planned sales for all the different product lines – would help to produce more realistic plans.

It is also necessary to know when and how the cash would become available, particularly for the purchase of the van. A detailed cash budget is required showing the receipts and payments expected for each month, and the balances available, or the overdraft (or other additional funding) that would be required.

After doing all the detailed work, it is possible that management would adopt the 'forecast' shown in Illustration 13.1 on the basis that it is worth accepting a short-term reduction in return on equity as a step towards improving sales and profitability in future years once the delivery service has been fully established. It is more likely, however, that management would require some modifications to the estimates before accepting it as the plan designed to achieve their objectives for the following year.

A full budgetary control system requires a whole set of different budgets, as shown in Section 13.3.

After the budget has been adopted as the plan that the organization intends to implement, it is necessary to monitor the actual results achieved each month.[4] This is the idea of 'control'. Usually the actual results achieved will be different from what was planned – that's life! Perhaps some sales and costs will be higher than planned, others will be lower, and overall the changes do not matter very much. But some results may be seriously out of line. In Illustration 13.1 the new delivery service may be a huge success – more than one van can cope with – and they will have to reconsider their options.[5] Or the service may be a failure with nowhere near enough additional sales to justify the costs. They may consider additional marketing initiatives that will help them to achieve their plans; or they could abandon their delivery service, or find other ways of doing it.[6] Control information provides information about *actual* results;

---

[3] Management of working capital is dealt with in Chapter 10.

[4] Or more frequently.

[5] Perhaps a second van; or making a delivery charge to reduce demand.

[6] Such as outsourcing.

these are compared with the plan; and where there are significant differences, action must be taken: either the budgets are changed, or additional effort has to be put in to achieve them.

Budgetary control may be defined as:

> The establishment of budgets relating the responsibilities of executives to the requirements of a policy, and the continuous comparison of actual with budgeted results, either to secure by individual action the objective of that policy, or to provide a basis for its revision.

A key part of the definition is that specified managers should be responsible for implementing particular parts of the budget. There is not much point in establishing plans and just hoping they will come to fruition. Someone must be responsible. In Illustration 13.1, someone would be responsible for implementing the delivery service – and would be 'given a budget' – an allocation of what they were authorized to spend. There would also be someone responsible for monitoring the sales and costs of the delivery service.[7]

It is important that the results that are actually achieved are compared with the original plan or budget to see if the business is on course. Where actual results are different from what was planned, some corrective action is required.

In addition to a budgeted income statement and balance sheet, it is usually important to produce a cash budget; often this is required by the business's bankers who want to see when and how their loans and overdrafts can be repaid. Cash budgets are dealt with in Section 13.4.

A full and formal system of budgetary control involves the production of a set of detailed budgets to include all the business's activities and which all culminate in a budgeted income statement and a budgeted balance sheet, and a cash budget. Managers in each area of the business are involved in setting the budgets. The system is supposed to express the intentions of top management, detailed as a financial plan, with a commitment from all managers to achieve the results expected.

13.3 Implementing Budgetary Control

Where budgets are used for planning and controlling a large and complex organization, different budgets have to be produced for each part of the organization, and for each major activity. Many people are involved in the process of setting budgets, and subsequently in dealing with the control information. Often it is necessary to produce a *budget manual*, specifying and standardizing how the budgets are to be produced. This will specify the various budgets that are used in compiling the *master budget.*

[7] The delivery service could be cost centre, profit centre, or investment centre in its own right.

The starting point in producing the master budget is the sales budget. It is necessary to know the likely level of sales in order to know what direct materials need to be purchased, how much labour to employ, the amount of machinery, overheads, and so on. A typical set of budgets is shown below. In a large organization there may need to be budgets for each of a number of different product groups, and/or for a number of different geographic areas. Different managers will be responsible for producing (and later for monitoring the implementation of) each budget; managers are generally dependent on information from other budgets to plan their activities.

1. Sales budget: showing budgeted sales for each month
2. Finished goods inventories and production budget: once the level of sales has been planned it is necessary to plan how much should be produced, making allowance for any inventories or finished goods
3. Direct materials usage budget: once the level of production has been planned, it is necessary to plan what materials should be purchased (again making allowance for any inventories of direct materials)
4. Direct labour budget: obviously this is dependent on the planned level of production
5. Production overhead budget: this is partly dependent on the planned level of production, but is also influenced by other factors, such as the purchase of better production facilities (capital expenditure budget)
6. Distribution cost budget
7. Administration expense budget
8. Budgeted income statement: all the above listed budgets are needed before a budgeted income statement can be produced
9. Budgeted balance sheet: even when all the above have been produced there is still not enough information to produce a budgeted balance sheet. It is necessary, first, to produce the budgets listed below
10. Capital expenditure budget: additional capital expenditure may be planned if there is to be an increase in production, or to reduce costs or improve quality. The capital expenditure budget will also include capital expenditure in relation to costs that are not directly linked to production, such as distribution costs and administrative expenses
11. Cash budget: showing receipts and payments of cash, and the resulting balances, for each month (or more often)

This may seem a lot, but in a manufacturing organization they are necessary. There may be additional budgets, such as a budgeted cash flow statement, and a research and development budget. Many of the above budgets will be made up of a number of departmental budgets such as those for advertising or the human resources departments. The definition of budgetary control (given above) notes that budgets are 'relating the responsibilities of executives to the requirements of a policy'. In many organizations there is a separate departmental budget for each departmental manager. Ideally, this should detail what each manager is expected to achieve; in practice it often does little more than show how much money they are authorized to spend.

A *master budget,* or *summary budget,* is prepared from, and summarizes, all the other budgets. This is usually taken to mean the budgeted income statement and budgeted balance sheet. It might be tempting to include the cash budget as part of the master budget; but the single figure for cash/bank on the balance sheet cannot be properly produced without first producing a cash budget.

Budgeted figures are typically shown for each month. Sometimes the whole set of budgets is produced once a year, perhaps in November for the year beginning two months later in January. With *annual* budgeting, new budgets are not then produced until the following November. But many organizations produce *rolling budgets*. This means that the budget is produced for the following 12 months; then, each month, another month is added (and the old month taken out). Typically, in November Year 7 the budget is produced for the year January to December Year 8. In December Year 7 the budget is produced for the 12 months February Year 8 to January Year 9. In January Year 8 the budget is produced for the 12 months March Year 8 to February Year 9. In this way there are always budgets for the following 12 months.

A *fixed budget* assumes a given level of production and sales. The level may be different for each period during the year (many business are seasonal; and there may be plans for growth). There could be revisions to fixed budget if circumstances change. But a fixed budget is quite different from a flexible budget.

One of the problems with fixed budgets is that actual cost figures are likely to be very different from budget, especially if output increases significantly. In Illustration 13.2 actual sales are 20 per cent up on budget, and, as we would expect, costs have increased. But not all costs should increase by 20 per cent: there may be some increases or decreases in efficiency; but some overheads (such as managers' salaries, or rents payable for premises) are 'fixed' – they do not increase as production increases. It is useful to separate 'fixed' costs from 'variable' costs, such as direct materials and direct wages, which are expected to increase in line with the volume of production. In this way we can produce a *flexed budget*, as shown in Illustration 13.3, using the principles of *flexible budgeting*.

ILLUSTRATION 13.2 A fixed budget

January Year 9	**Budget**	**Actual**
	£000	£000
Sales	100	120
Direct materials	30	35
Direct labour	20	25
Production overheads	30	32
Administration and distribution overheads	12	13
Total costs	92	105
Profit	8	15

A *flexible budget* may be most practicable where the levels of production and sales fluctuate a lot, and are hard to predict. The fixed budget shown in Illustration 13.2 shows that profit has increased to £15,000 compared with £8,000 shown in the budget. But this is not due to efficiency. Sales have increased by 20 per cent, and direct material and labour costs can be expected to increase by about 20 per cent. But overhead costs should increase by a smaller proportion because part of overheads are 'fixed': they do not increase as production increases.

In this instance it has been assumed that half of overhead costs are fixed, and half are variable. In other words, when sales and production increase by 20 per cent, it is expected that overheads will increase by 10 per cent, and the 'flexed budget' column in Illustration 13.3 has been prepared on that basis. When sales increase by 20 per cent, total costs are expected to increase from £92,000 to £106,200. In this instance efficiency has increased: most costs have increased by less than the flexible budget would suggest (although direct labour costs have gone up by more than 20 per cent, indicating some decrease in efficiency).

A simple examination of the fixed budget in Illustration 13.3 shows that all costs have increased; but sales have increased, and so has profit. It appears that everything is all right. But such control information is not very useful. There is no indication of any increases or decreases in efficiency, which are revealed by using a flexible budget.

Another disadvantage of using a fixed budget is that overheads are charged out to different jobs and products on the basis of the original fixed budget. In this instance direct labour was originally budgeted at £20,000, and production overheads at £30,000. If absorption costing is used, production overheads could be charged to products at the rate of 150 per cent of direct labour. This means that the amount *charged* for overheads increases in line with the increase in output;[8] but the amount of overheads *incurred* would increase by a smaller proportion. In Illustration 13.2 the amount of production overhead incurred was £32,000, but the amount charged to particular jobs would be (150 per cent of £25,000[9] =) £37,500. Production overheads of £5,500 would be 'over-recovered'. Most of this problem is eliminated if marginal costing is used.

ILLUSTRATION 13.3 A flexible budget

January Year 9	**Budget**	**Flexed budget**	**Actual**
	£000	£000	£000
Sales	100	120	120
Direct materials	30	36	35
Direct labour	20	24	25
Production overheads	30	33	32
Administration and distribution overheads	12	13.2	13
Total costs	92	106.2	105
Profit	8	13.8	15

[8] Or, more accurately in this instance, in line with the increase in direct labour costs.

[9] The direct labour cost incurred.

13.4 Cash Budgets

Most of us have some sort of cash budget in mind for our own personal receipts and payments. We like to know that each month there is enough coming in to meet the payments that we plan to make. Or we may plan it the other way around: we will spend no more than the cash that will be available to us. Failure to plan properly can lead to unexpected overdrafts and credit card borrowing with high charges.

It is a similar story for companies. They need to plan their monthly[10] receipts and payments for at least the next year. It may be that a company is very profitable, and expanding rapidly, but they may not be producing enough cash to meet their monthly commitments. Some companies make substantial profits, but at the year end have less cash than they had at the beginning of the year. Other companies may not be particularly profitable, but they generate lots of cash. Comparing a company's budgeted income statement with their cash budget for the coming year shows how their monthly cash flows differ from their monthly profits or losses, and why. The budgeted income statement gives a good indication of the viability of the business. The cash budget shows whether they are likely to have cash surpluses (which they may wish to invest); or whether there is going to be insufficient cash to get by. If a cash shortage problem is identified in advance, ways around the problem can be planned before it becomes a crisis. This can be seen by examining Illustration 13.4, the Holly Day Company.

A cash budget shows all the (planned or expected future) receipts and payments of an organization, typically on a monthly basis for the next year.

The receipts figure includes all cash that comes in directly from cash sales. It also includes receipts from customers (trade receivables); they usually come in a month or two after the sales are made, so the figure is different from that shown on an income statement. In Illustration 13.4 it was assumed that all sales were on credit. There may be other receipts such as money that comes in from dividends, interest, rent, commission and royalties. The cash budget will show the money as a receipt in the month when the money is expected. An income statement shows it in the month in which it is earned (or it 'accrues'), regardless of when the cash is received.

Some receipts do not appear on an income statement. These include receipts from issuing shares or debentures; borrowing money; and sales of non-current assets.[11]

The payments figure includes all the money that it is expected will be paid out. Payments for purchases are usually made a month or so after the purchases are made (and recorded for income statement purposes). The cash budget also shows payments for expenses that will also appear on the income statement. With most expenses the payment is made after the expense is incurred. Some expenses (such as rent, and perhaps advertising) are paid in advance. Again, in the cash budget, it is the period in which the payment is actually made that matters. In the income statement it is when the expense is incurred that matters.

---

[10] Or weekly or even daily.

[11] The profit arising on the sale of a non-current asset is included in the income statment. That is the differences between the net book value of the asset, and its sale proceeds.

ILLUSTRATION 13.4

Cash Budget

Question

The Holly Day Company manufactures seasonal goods for holiday-makers and supplies them to retailers in many seaside resorts. There has been little change in their seasonal sales patterns in recent years. Sales start off at £15,000 a month in January, and increase by £15,000 a month until they peak at £120,000 a month in August; they fall to £90,000 a month in September; £30,000 a month in October, and then to £15,000 a month in November and December. Customers pay for the goods, on average, two months after the sales are made.

The materials are bought and used in the month before sales take place; they are treated as an expense in the month that the finished goods to which they relate are sold; and they are paid for one month after purchase (i.e. in the month that the sale takes place). The cost of materials for making the goods amounts to one-third of the selling price.

There is a basic labour force costing £4,000 a month in October–January each year. This increases to £6,000 a month in February, and £8,000 a month in March. The labour costs in the busy time of the year are £16,000 a month, from April to September inclusive.

The only other expense is depreciation that amounts to £3,000 a month. One of the machines is getting towards the end of its life and will be replaced by a new one, costing £60,000, which will be paid for in June. Depreciation on the new machine will be charged at 20% per annum on a straight line basis. The old machine will be sold for £15,000 (which is its net book value) at the end of the year (in December).

Taxation of £50,000 is payable in March, and dividends of £55,000 will be paid in May.

Required:

a Prepare the income statement for the coming year, showing sales, expenses and profit for each month, and in total.

b Prepare the cash budget for the coming year, showing receipts and payments for each month; the net cash surplus or deficit for the month; and the bank balance at the end of each month. Assume that the business starts the year with £50,000 in the bank.

c Explain why the company has generated more profit than cash during the year.

d From examining the cash budget, what changes in plan would you suggest to minimize the need for an overdraft?

Answer

b Cash budget of the Holly Day Company

	£000 Jan	£000 Feb	£000 Mar	£000 Apr	£000 May	£000 Jun	£000 Jul	£000 Aug	£000 Sep	£000 Oct	£000 Nov	£000 Dec	£000 Total
Receipts													
From debtors	15	15	15	30	45	60	75	90	105	120	90	30	690
Sale of machine	—	—	—	—	—	—	—	—	—	—	—	15	15
	15	15	15	30	45	60	75	90	105	120	90	45	705
Payments													
Materials	5	5	10	15	20	25	30	35	40	30	10	5	230
Wages	4	6	8	16	16	16	16	16	16	4	4	4	126
New machine						60							60
Taxation			50										50
Dividends	—	—	—	—	55	—	—	—	—	—	—	—	55
	9	11	68	31	91	101	46	51	56	34	14	9	521

ILLUSTRATION 13.4 continued

Net receipts or (Deficit)	6	4	(53)	(1)	(46)	(41)	29	39	49	86	76	36	184
Opening balance	50	56	60	7	6	(40)	(81)	(52)	(13)	36	122	198	
Closing balance	56	60	7	6	(40)	(81)	(52)	(13)	36	122	198	234	234
a Budgeted income statement													
Sales	15	30	45	60	75	90	105	120	90	30	15	15	690
Expenses													
Materials	5	10	15	20	25	30	35	40	30	10	5	5	230
Wages	4	6	8	16	16	16	16	16	16	4	4	4	126
Depreciation	3	3	3	3	3	4	4	4	4	4	4	4	43
	12	19	26	39	44	50	55	60	50	18	13	13	399
Profit	3	11	19	21	31	40	50	60	40	12	2	2	291

The cash budget also shows when tax and dividends are to be paid. These items also appear on the income statement, but, again, the timing might be different. A company typically shows its tax charge on the income statement of one year, but the cash is actually paid in the following year. Similarly, a company typically decides on their final[12] dividend in one year and the cash is paid out in the following year.

Some payments do not appear at all on an income statement. Cash has to be paid out to acquire non-current assets (fixed assets), and there may be payments to buy investments such as shares in other businesses, and to repay loans.

A cash budget shows the change in the cash balance each month. There is an opening balance at the beginning of the month. Total receipts and total payments are calculated to give a figure for net receipts (or payments) for the month. Net receipts are added to the balance at the beginning of the month to show the closing balance for the month. That then becomes the opening balance for the next month.

Figures can, of course, be the other way around. If the budget shows an overdraft at the beginning of the month, net receipts for the month will reduce the overdraft.

The budget should also show the total increase, or decrease, in cash expected during the year. This will be different from the budgeted profit figure, and it is useful to compare the two to see how, and why, the profit figure for the year differs from the cash flow figure. This is illustrated in this chapter with the Holly Day Company (Illustration 13.4) and with Rachel's business (Self-testing question 6), and with Judas (Assessment question 5).

[12] Companies typically pay an interim dividend part way through the year, and a final divided after the end of the year.

13.5 Advantages of Operating Budgetary Control Systems

Budgetary control (like many management techniques) is sometimes presented as if it is a panacea, a solution to all the problems of management. If it is operated well it has a number of functions and can certainly improve the management of an organization in a number of ways.

1 *Objectives* It ensures that the objectives of an organization are defined, quantified, and set down in plans in such a way that managers (and perhaps all staff) know what they are supposed to be achieving and the contribution that they are expected to make towards the attainment of the company's objectives.

2 *Limiting factors* The budgeting process should ensure that any limiting factors are identified. Often it is the amount that the company is able to sell that is the limiting factor, and production volumes and expenses have to be planned on the basis of likely sales. But there could be different limiting factors, such as production capacity; where this is identified ways may be planned to overcome it, such as increasing capacity through shift working, or additional capital expenditure; or outsourcing. Alternatively, it may be possible to increase selling prices to reduce demand, and redirect the advertising budget to emphasize the quality of the higher-priced product. Availability of funding may also be a limiting factor: when the cash budget, and the master budget, have been prepared it may be that the company cannot afford to do what all the other budgets have suggested, and additional funding may be planned. The point is that if limiting factors are identified a month or two before the year begins, there is a good chance of overcoming them in advance, which is better than waiting for a crisis to hit.

3 *Authorising* Departmental managers are typically given budgets *authorizing* the amounts they can spend. This enables them to plan their expenditure in a systematic way, and avoids the need to seek permission for each item.

4 *Responsibility* Budgetary control systems can help to define what each manager, or budget holder, is responsible for. Advertising managers are not just allowed to spend a given sum of money; they are expected to achieve a given level of sales. Human resources managers are not just allowed to spend money on recruitment: they are expected to ensure that the staff specified in the budget are actually recruited and in the jobs that were planned.

5 *Delegation* Budgetary control facilitates the delegation of a great deal of responsibility to managers at different levels. The board of directors are usually seen as being responsible for the company achieving its objectives; but the overall objectives need to be broken down into individual chunks of responsibility, tasks and objectives that individual managers are expected to achieve. The board should know that managers are doing what their budgets specify, and leave them to get on with it.

6 *Management by exception* Senior management should concentrate on the exceptions. They do not need to scrutinize piles of detailed reports for every part of the business and try to judge whether or not things are going well. Control information

should highlight where actual results are significantly different from plan – the 'exceptions' – and where management need to take action. Where everything is going more or less according to plan, senior management can leave well alone. They can concentrate on managing the exceptions.

7 *Control* It is possible to 'control' an organization only if there are plans or expectations of results to be achieved. Budgetary control systematically provides 'control' information comparing actual results with planned results.

8 *Motivation* In some organizations employees do not have much motivation, especially where they do not know what is expected of them. Budgetary control should establish clearly what the objectives and plans are for each part of the organization. This can help to motivate managers and others to do their best to ensure that plans are implemented successfully. Budgetary control establishes targets and, provided these are realistic, they can improve motivation. Evidence shows that budgets should be 'tight but attainable'. If a car salesman who sold 100 cars last year is given a budget of 170 this year, he is likely to be utterly demotivated. But if he has a budget to sell 110 cars this year, he might consider this difficult but achievable and is likely to 'give it a go'.

9 *Performance evaluation* There are often incentive schemes and bonuses designed to motivate employees to improve their performance. Budgets provide a useful basis for measuring performance so that good performance can be rewarded.

10 *Communication and co-ordination* These should be improved. It is necessary for all parts of the organization to know what the plans are. It would cause problems if the sales team was busy securing orders that the company could not fulfil; or if the volume of production was being increased while the labour force was being reduced, and purchases of direct materials being cut back. It is necessary for managers in every part of the organization to know what the plans are for the organization as a whole.

Much of the above could be summarized in a single word: planning. Preparing budgets, and operating a system providing regular feedback that compares actual results with budgeted results is essential for managing and controlling and organisation. It can also help to achieve the benefits listed above.

13.6 Problems of Budgetary Control in Practice

In practice budgetary control may not be as successful as intended and there are many problems in implementing and operating successful budgetary control systems.

1 *Level of performance* Realistic financial plans are needed to ensure that sufficient cash and other resources are available to meet the expected level of sales; and the budgeted level of sales should not be exaggerated, otherwise the organization would be in danger of arranging for too much labour and materials to be available, and resources will be wasted if the capacity that has been planned is not used. But if the budget is also intended to motivate staff, it may be necessary to set

targets based on ambitious levels of performance, even if they are not likely to be achieved. Budgets that work in motivating staff are probably not a suitable basis for planning resources.

2 *Participation* It is usually claimed that a budgetary control system works better if staff who are responsible for implementing particular parts of the plan are involved in establishing the plan. Where managers think that plans are realistic, and have been involved in establishing them, they are more likely to identify with them. But it may be difficult to get some managers to participate, especially those with little understanding of finance.

When a set of budgets has been produced, with effective participation, they are then put together as a master budget, which, it is hoped, will achieve the objectives that are established by the board of directors. Unfortunately, a set of budgets that results from extensive participation often does not show the results required; the board may decide that the profits shown are inadequate, and decide that all the budgets need to be revised. In particular, they might seek to reduce expenditure. All those managers who had conscientiously participated in determining what levels of expenditure are necessary may suddenly find that their proposed budgets are arbitrarily cut by a fixed percentage. This undermines the effectiveness of their participation, and may alienate some managers from the budgeting process.

3 *Reward schemes* Where budgets are used as a basis for determining staff bonuses, promotion or other rewards, there are particular problems with participation and setting an appropriate level of performance. When sales managers are invited to participate in setting their budgets, if they think they can achieve sales of £5m a year, they may keep that opinion quiet, and advocate a budget of only £4.5m a year, because they know that they can easily achieve that level, and be rewarded accordingly. Similarly, advertising managers, who reckon they need an annual budget of £100,000 to achieve the budgeted sales level, are likely to press for budgets of perhaps £120,000 to make their life easier. In this way, where participation is encouraged, managers are inclined to build in *budgetary slack* so that it is fairly easy for them to achieve what the budgets require.

4 *Competition* for resources Although the budgeting process is intended to improve co-operation and co-ordination within an organization, managers often find themselves competing for resources. It is only to be expected that heads of departments, such as advertising, human resources, and research and development, want to maximize the resources available to them. Sometimes it could happen that all managers sit down and discuss idealistically how much the organization really needs to spend on each activity, and the resulting budget will be what is 'best' for the organization. More often there is likely to be some overall limit on what can be spent on these different activities, and managers will find themselves competing with each other to maximize their share, with a generous budget that authorizes how much they can spend in the coming year. Those managers who are most confident in dealing with finance may be the winners – perhaps at the expense of the organization as a whole.

5 *Incremental budgeting* The easiest way to produce a budget is simply to base it on the previous year's actual results, and add a bit for inflation, and a bit more for growth. But this is *estimating* what is likely to happen; it is not *planning* to achieve desired results. It is likely to produce budgets that are easily achievable but this 'easy' approach is not best designed to help the organization to achieve its objectives. Sometimes managers are mainly motivated by empire building and ensuring that the budget allocated to them increases each year.

6 *A paperwork exercise* Unless senior management enthusiastically endorse the budgets, and are determined to check that actual results are in line with plans, budgetary control can sometimes be little more than a paperwork exercise; something that the accounts department produces once a year, and of which no one takes much notice. This is particularly true where managers have little understanding of or training in finance. Each month, vast quantities of control information is produced that most managers do not understand or use or care about. It is too much information, and may be too late to be of much use. Often managers produce their own 'control' information, and argue that the 'official' information is neither accurate nor relevant. A management accountant has to be very able and determined to operate a budgetary control system effectively.

7 *Tendency to spend up to budget* Where managers have a budget for some sort of expenditure, they sometimes treat it as if it were bag of money that they have been given to spend within the year. Often, if they underspend their budget, that money is 'lost' to them, and they are likely to be given a smaller budget for the following year. Where managers are more interested in empire building than in doing what is best for the organization, they will tend to spend all that they can, and to seek a bigger budget allocation for the following year. In organizations where the year end is 31 March there is often a rush to spend money during February to ensure that the budget is used up by the end of the year, and that the budget will not be cut for the following year. Many suppliers expect such a rush from public sector organizations before their year end. Some find important conferences to go to in sunny climates, order large amounts of stationery, or spend money on repairs (like repainting the inside of cupboards) just before the end of the financial year. The problem can be reduced if managers are allowed to 'carry forward' unspent balances to the following year. It is, however, more difficult to eliminate an empire-building attitude.

8 *An end in itself* There is a danger that managers are expected 'only' to achieve what the budget shows, and that opportunities for more profitable activities are ignored because they are not in the budget. An unexpected, but potentially profitable sales enquiry from China may be ignored because there is no money in the budget for the necessary travelling expenses. Similarly, an opportunity to take over a competitor at a knock-down price may be missed because it was not in the budget. Budgetary control can play a valuable role in helping an organization to achieve its objectives, but once budgets are approved they should not be set in stone: there must always be some flexibility when opportunities arise.

9 *Defining objectives* For simplicity in setting budgets, a single objective may be assumed, such as achieving a given level of earnings, or return on capital employed. But often organizations have multiple and even conflicting objectives, such as to achieve sales growth (which might imply low selling prices), and to improve the quality of their products (which might imply higher selling prices). Sometimes different managers within an organization may seem to be pursuing different objectives. The problem of defining objectives, and measuring the extent to which they are achieved, is more difficult in a public sector or not-for-profit organization. In theory the budgeting process ensures that objectives are defined and quantified, but in practice it may be difficult to secure agreement on objectives.

Most management techniques are more difficult in practice than their proponents would suggest. There are all the usual difficulties of the costs of implementation, and the need to train staff to operate the systems effectively. But budgetary control is well established in most medium and large organizations and is operated with varying degrees of success.

Budgetary control is sometimes seen as a game in which the players (managers) are involved in setting their own budgets. Then the accountants put all the individual budgets together in a master budget: the budgeted income statement, balance sheet and the cash budget. It may be that all the budgets fit neatly together revealing no cash shortages, and achieving all the intended targets. Similarly, pigs might fly. It is more likely that once the first draft of the master budget is prepared, the finance director or senior management will insist on revisions: expenditure to be cut back, sales to be increased, capital expenditure to be reduced and deferred. All the careful planning put in by individual managers is overturned. But experienced managers know that this will happen, and so they put some 'slack' into the first version of the budget because experience tells them that the final version will be tougher. And the finance director knows that they know, and that they have included slack, so tougher cut-backs are demanded. But very experienced managers know this, and have included even more slack than the finance director would expect. But very experienced finance directors know this … and so all is set for another round of the game of budgetary control.

One approach to making budgetary control more effective – and to avoid the tendency for expenditure to drift upwards every year ('incremental drift') – is to use *zero based budgeting*. This means that, instead of taking the previous year's figures as a basis for planning future expenditure, the basis is taken as zero. The starting point is that each activity will spend nothing in the coming year, unless it can be justified. This may be valuable in some areas: perhaps there is no need for company cars if it is cheaper to use taxis; perhaps there is no need for a mail room if most communication is done by email. But it is usually too much hassle, expense and bureaucracy to review every activity every year, and incremental budgeting still predominates.

If budgets are seen as the official expressions of the plans and intentions of top management, they are likely to be taken seriously, and provide an effective means of controlling the business. They are likely to be less effective if they are seen as being a paperwork exercise produced by the finance department; a pointless extra burden for management; a sterile figure-producing exercise that provides information that managers do not understand, is irrelevant to their needs, and arrives in too much detail, and too late for them to act on. If they are to be successful, management accountants must produce financial information that is relevant and effective in planning, decision-making and control in the business.

13.7 Zero-based Budgeting (ZBB)

ZBB is one way of tackling the inefficiencies and budgetary slack of traditional incremental budgeting. Instead of basing each budget on the equivalent budget for the previous year, with adjustments for known changes, each year and each budget begin with an assumption of zero expenditure. Instead of arguing for an increase of 5 per cent or 10 per cent, departmental managers have to argue for any budget at all. If the head of advertising cannot defend expenditure on advertising as being cost-effective, there will be no advertising budget. If the head of distribution cannot demonstrate that it is worth while for the company to operate its own fleet of vehicles, Royal Mail and others will be invited to put in tenders for taking over the distribution function. The finance director may be astute at self-defence (or may be fed up with running the finance department!) and able to fight off proposals to outsource the finance function to a large firm of chartered accountants. But it is quite likely the payroll function will be outsourced. Even production departments may be given a zero budget (and be closed down) if it would be cheaper to cease manufacturing and buy in components, sub-assemblies or even finished goods – probably from some part of the world where production costs are lower.

The idea is to prepare a budget for each cost centre from a zero base, and every item has to be justified in its entirety if it is be included in next year's budget. A questioning attitude is required to examine every item of expenditure, and to clear out any 'dead wood'. The company's activities should be divided into separate 'decision packages'. These are evaluated according to the costs incurred and benefits generated by each activity, and ranked in order of priority. Some activities will simply be closed down if they are hardly needed, generate little benefit, are outdated, or can be done more cost effectively in another way, perhaps by outsourcing. Candidates for axing might include: subsidized staff social clubs and canteens; typing pools; final salary pension schemes; printing and photocopying departments; car pools; and some retail outlets.

A number of advantages are claimed for ZBB. It helps to identify and remove obsolete, wasteful and inefficient operations and expenditure. It is a systematic way of responding to a changing business environment and can increase staff motivation towards greater efficiency. The systematic process and documentation challenges the status quo, appraises all operations, and ensures that alternatives such as outsourcing are considered. It should lead to a more efficient allocation of resources. And it is particularly useful in public sector and not-for-profit organizations where profitability is not an appropriate measure of efficiency and effectiveness.

ZBB is, however, expensive to apply. It involves a substantial volume of work and paper, and it seems excessive to do this every year. It can lead to rational economic decisions, but these decisions should perhaps be made on a long-term basis, within an overall framework, rather on a short-term basis as part of an annual budgeting cycle. Systematic ZBB requires special training for staff, probably involving the use of consultants, and there is likely to be resistance if it seems likely to lead to redundancies. Existing information systems are likely to be inadequate, and it is difficult to evaluate the costs and benefits of all decision packages and functions.

Some of the questioning attitudes of ZBB can undoubtedly lead to the reduction and elimination of some activities and functions, improved resource allocation, and greater profitability. But most organizations would not operate all their budgets from a zero base every year.

13.8 Planning, Programming Budgeting Systems (PPBS)

PPBS was developed particularly for public sector organizations such as defence. Some would argue that there is obviously a need for more defence, perhaps listing particular problem areas, and so it is necessary to spend more on defence. But it is difficult to assess the efficiency and effectiveness of that expenditure unless it is clearly targeted to particular 'programmes' where expenditure can be measured and success assessed.

If applied to a police force a number of programmes might be identified, such as (i) reducing drug crime in the Orriton area; (ii) reducing speeding and road accidents in the Searam area; (iii) reducing muggings in the Trandton area; (iv) reducing shop-lifting in the Brandwich area; and (v) reducing burglaries in the Julby area.

An important part of the planning process would be to define a number of programmes such as these, rather that simply to describe everything as 'policing'. Then budgets allocate resources to each programme, and expenditure is classified so that it is identified with particular programmes (rather than seeming to disappear down a black hole). We can budget to spend £200,000 a year on reducing muggings in the Trandton area. Subsequent control information might show that only £170,000 was actually spent. But, more important, the effectiveness of the programme in Trandton can be measured. By how much were muggings reduced? What percentage reduction can be aimed for next year, or in a comparable programme?

The overall management of the public sector organization can control how much was spent on each programme, and see how effective that expenditure was. This can provide a basis for reallocations in subsequent years in the light of actual experience of how effective different expenditure on different programmes has been in practice.

The phrase 'PPBS' is not particularly widely used, but, within the public sector, there is increasing emphasis on identifying 'programmes', and assessing the effectiveness of expenditure on different programme areas.

Summary

Budgetary control is a well-established management accounting technique that is widely used in all but the smallest organizations. It defines objectives, establishes plans for achieving those objectives, and makes each area in the organization responsible for its part of the plan. Control information compares the results actually achieved with those that were planned on a regular basis. There are many 'behavioural' problems in practice with budgetary control that militate against the advantages that can be gained from an effective system.

Review of key points

- Budgets are financial plans showing how the objectives of an organization can be achieved.
- Budgetary control provides regular feedback information.
- A budget manual details how budgetary control is to be applied in a particular organization, and shows all the different budgets to be produced.
- A master budget, the budgeted balance sheet and income statement, shows the results of all the detailed budgets.
- A cash budget shows planned receipts and payments of cash, typically on a monthly basis for the next year.
- The budgeted net receipts of cash are likely to be very different from the budgeted profit figure.
- The availability of cash to meet liabilities as they fall due is essential to business survival.

Self-testing questions

1. Define the term 'budget' and draw attention to the most important parts of the definition.
2. Distinguish between fixed budgets and flexible budgets.
3. The owner of a car servicing and repair business, with five employees, produces an annual balance sheet and income statement, and monitors his bank statement on a monthly basis. Examine the case for and against introducing a system of budgetary control.

4 Produce a flexible budget for the Dhoon Glen Manufacturing Company and comment on the company's results for August. Assume that:

a fixed production overheads are £100,000 per month;

b fixed distribution costs are £20,000 per month;

c fixed administration overheads are £50,000 per month.

	Budget August Year 6	**Flexed budget** August Year 6	**Actual results** August Year 6
	£000	£000	£000
Sales	600		690
Direct materials	120		140
Direct labour	100		117
Production overheads	200		223
Distribution costs	80		95
Administrative overheads	60		70
Total costs	560		645
Profit	40		45

5 In what circumstances is a very profitable business likely to find that it has serious cash shortages?

6 Rachel owns a specialist boring-digging machine that she hires out, together with an operator/driver to builders and farmers. A few years ago her accountant worked out that she should charge £500 a day and that should give her a comfortable living. In the last year demand has fallen, particularly in the winter months when the weather restricts the use of the machine, and in the summer months when many people are on holiday. In the coming year (Year 3) she estimates that she will have 10 days' work a month in January and February; 20 days' work a month in March, April and May and June. Then it will fall to 12 days a month in July and August. In September, October and November she expects 20 days' work a month, and only 5 days in December.

At the end of Year 2 her debtors figure was £5,000, of which she expects to receive half in January and half in February.

On average customers pay two months after the work is done.

Operating expenses, including fuel and labour, amount to £100 per day.

Expenses are paid in the month that they are incurred.

Her fixed overheads, including depreciation, are £3,000 per month. The machine originally cost £140,000 and is expected to have a five-year life, with a residual value of £20,000. She uses straight line depreciation.

At the end of last year she had only £1,000 in her business bank account.

Rachel would like to take £45,000 a year out of the business to cover her personal living expenses. But she does not want to have an overdraft; and she does not want to be living off capital.

Required:

a Prepare the income statement for the coming year, showing sales, expenses and profit for each month, and in total.

b Prepare the cash budget for the coming year, showing receipts and payments for each month; the net cash surplus or deficit for the month; and the bank balance at the end of each month. Assume that the business starts the year with £50,000 in the bank.

c Explain why the company has generated more cash than profit during the year.

d How much do you think that she can afford to take out of the business as drawings (or dividends if it is a company) during the year? Give your reasons.

Assessment questions

1 Define the term 'budgetary control' and draw attention to the most important parts of the definition.

2 Distinguish between annual budgets and rolling (or continuous) budgets.

3 What behavioural problems are likely to arise in operating a system of budgetary control?

4 Produce a flexible budget for the Gorrie Production Company and comment on the company's results for May. Assume that:

a Fixed production overheads are £100,000 per month

b Fixed distribution costs are £20,000 per month

c Fixed administration overheads are £50,000 per month

	Budget May Year 3	**Flexed Budget** August Year 3	**Actual Results** May Year 3
	£000	£000	£000
Sales	900		810
Direct materials	200		178
Direct labour	250		227
Production overheads	240		210
Distribution costs	100		103
Administrative overheads	109		90
Total costs	899		808
Profit	1		2

5 Judas has developed a plan for a rapidly expanding business selling and installing software for individuals using computers at home. He will operate on a 100 per cent mark-up (50 per cent gross profit ratio) on the software that he sells, and will employ a team of highly paid technician/sales staff. He has piloted his business model on a number of customers and he knows that they are particularly afraid of computer viruses; he will provide a guarantee of 12 months free of viruses. But, somehow, after a year or so he knows that there will always be a return of viruses and most of his customers will request his services again. During the next 12 months he aims to build up his customer base, and make a small profit.

He has discussed his business plan with his accountant, and the following seems to be soundly based.

- **a** Sales in January will be £220,000 and will then increase by £20,000 per month. Customers pay two months after the sale is made.
- **b** Suppliers are paid one month after purchases are made. Stocks amounting to £100,000 will be bought in the first month and maintained at that level. Purchases will be made each month that are sufficient to supply sales for that month.
- **c** Wages and expenses will be £100,000 a month for the first four months of the year; then they will increase to £150,000 a month for the following three months; then they will be £200,000 a month for the next five months. They are paid during the month that they are incurred.
- **d** At the beginning of the year he will spend £840,000 on non-current assets. All non-current assets are depreciated over 10 years. Depreciation is charged on a monthly basis. In June additional fixed assets of £360,000 will be bought.

His accountant advises him that although the business should make a modest profit, there will be substantial cash outflows to begin with. She prepared a monthly budgeted income statement, and a monthly cash budget. But Judas had £1m available to finance the business and reckoned that there would be no problem. He refused to pay her fees and so she did not show him the monthly budgets.

You are required to:

- **i** Prepare a monthly income statement for the first year of the business, showing the profit or loss each month, and for the year in total.
- **ii** Prepare a cash budget for the year, showing the receipts and payments for each month, and the cash surplus or deficit each month.
- **iii** Explain and comment on the results.

Group activities and discussion questions

1 What plans do you have for this year? Would it be helpful to define and quantify them? What do you do when what actually happens is very different from what you had planned?

2 If you have work experience, did you see evidence that your employer operated a system of budgetary control? What were the attitudes of your colleagues towards budgets and budgetary control?

3 Do you prepare a cash budget for yourself for the coming year? What is the case for and against bothering to do this? Is it *essential* for a company to prepare a cash budget? Is it *essential* for you?

4 Should large companies publish their budgets for the coming year? Do companies publish any forecasts?

5 Is budgetary control too idealistic? Is it inevitable that powerful employees will feather their own nests and empire build rather than working to achieve the objectives of the company?

References and further reading

Bhimani, A., C.T. Horngren, S.M. Datar and G. Foster (2008) *Management and Cost Accounting* (4th edition). FT Prentice Hall.

Drury, C. (2006) *Management Accounting for Business* (3rd edition). Thomson Learning.

Proctor, R. (2008) *Managerial Accounting for Business Decisions* (3rd Edition). Pearson.

Seal, W. (2008) *Management Accounting* (3rd edition). McGraw-Hill Education.

Weetman, P. (2006) *Management Accounting: An Intro.* FT Prentice Hall.