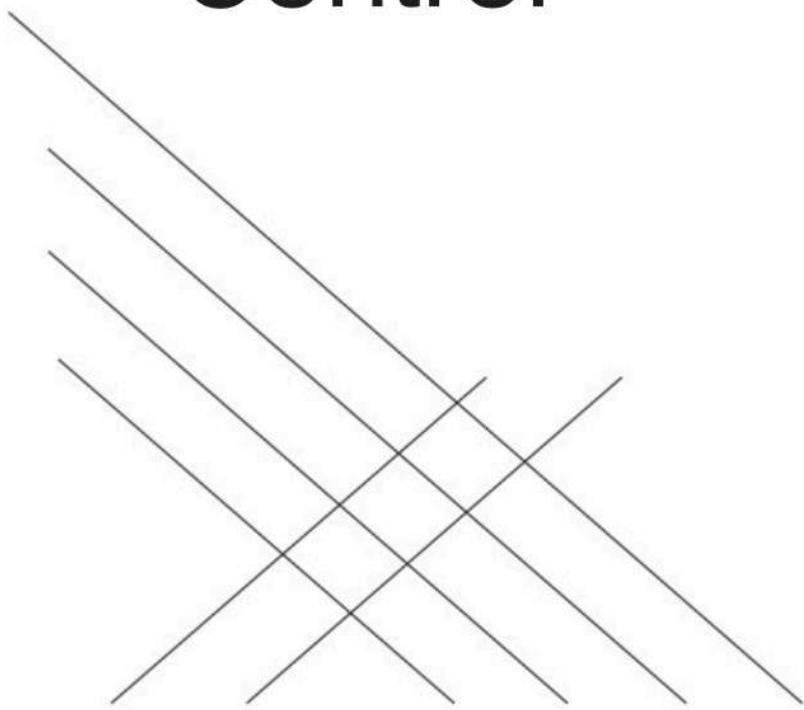




# 10

## Budgetary Control



## Learning Objectives

After studying this chapter, you should:

- Be aware of the way budgets are used in controlling companies
  - Be able to explain the difference between an imposed budget and a participatory budget
  - Be able to explain how responsibility can only be exercised where there is a high level of control
  - Be able to execute budgetary control in revenue centres, cost centres, and profit centres
  - Be able to interpret a simple balanced scorecard
  - Be aware of the behavioural aspects of budgeting
- 

### 10.1

#### Controlling Organizations

What do mission statements, company values, codes of conduct, organizational charts, process maps, directives and guidelines, performance reports, and reward and promotion systems have in common? First, they are all part of how the decisions and actions taken by directors, managers, and employees help the organization achieve its goals. For example, a mission statement guides the decisions and actions within the organization through articulating its purpose. An organizational chart shows the structure of a firm and simultaneously defines the roles and responsibilities of employees through assigning them to specific subunits of the firm, thereby directing reporting, supervising, and communication lines between departments and employees.

Second, this list of examples shows that control is not — as often thought — solely about constraining or limiting behaviour and actions; it is simultaneously about enabling and empowering behaviour and actions. With control, we thus refer to all mechanism that direct employees' activities and behaviour toward the attainment of organizational goals. These mechanisms can have a positive force, meaning that they guide, motivate, promote or reward particular behaviour and actions, or they can have a negative force, meaning that they prescribe, discourage, prevent, or sanction particular behaviour and actions. According to control theories, both positive and negative control forces must coexist. They are like yin and yang and need to be balanced to ensure the effective steering of organizations.

Third, this list of examples emphasizes that control is exerted through a potpourri of different tools, policies, procedures, and systems. The management accounting professors Teemu Malmi and David A. Brown classify the different types of controls that organizations have available into planning, cybernetic (i.e., plan-do-check-act cycle), reward and compensation, administrative (e.g., governance structure, organizational structure, or policies and procedures), and cultural (i.e., values, beliefs, and social norms) controls. The Harvard professor

Robert Simons proposes in his well-known framework that organizations have four levels of control: belief systems, boundary systems, diagnostic control systems, and interactive control systems. Belief systems, such as mission statements, corporate values, or credos, communicate the core values and the mission of the organization to inspire employees to contribute to the success of the organization and to promote commitment to its chosen direction. Boundary systems, such as codes of conduct, specify and enforce what employees are expected not to do to avoid pressure and temptation and instead to do right. The interesting element of boundary systems is that because they are formulated negatively, they can produce a lot of creativity and entrepreneurial thinking. Why? Because telling employees what to do carries the risk that they simple follow the recipe or standard operating procedure. No innovation ensues. In some cases, such as high-reliability organizations (e.g., nuclear power plant operation, space shuttle exploration), we want our employees to exactly follow the predefined steps and not to deviate from the operating procedure. But in other cases or parts of the organization, we want employees to experiment and innovate. Telling employees instead what not to do leaves an opening for the creative and entrepreneurial mind to figure out what to do. So instead of telling employees what to do, telling employees what not to do — the off-limits or rules of the game — can nurture creative and entrepreneurial thinking among employees. That is the potential of boundary systems. They define the off-limits and empower creativity and entrepreneurship within those off-limits.

Diagnostic control systems, such as planning and performance measurement systems, scorecards, or performance reports, convey the critical performance variables to employees to achieve organizational goals and implement the chosen strategy. Based on a plan-do-check-act logic, diagnostic control systems are used to monitor results and take corrective actions if deviations from pre-set performance standards occur. Interactive control systems, such as discussing trend indicators in face-to-face meetings or disruptive forces in cross-functional meetings, enable organizational dialogue and discussion to encourage learning and search to respond to strategic uncertainties — or what keeps managers awake at night. This might bring about emergent strategies that calibrate or alter the intended strategy. What renders interactive control systems different from diagnostic control system is the active, regular, and personal involvement of managers in the decisions and activities of their staff because the information provided by the interactive control systems is seen as highly strategic, demanding frequent and regular attention from all echelons of the organization.

In the following, we will focus on the use of budgets for controlling organizations. Remember that budgeting translates strategy into an annual financial plan for the organization to work on to realize its strategy. The budget is the organizational plan, expressed in financial term, of what the company plans to achieve in the next year. This way it directs, meaning controls, a significant amount of decisions and actions throughout the organization. The use of budgets to control organization is called budgetary control. It is based on the idea of management by exception and thus is typically used diagnostically to identify deviations from plans to initiate corrective actions. However, budgets or, more broadly, planning activities might be also used interactively — for example, when unexpected performance threats or interruptions happen.

## 10.2

### Controlling with Budgets

As was described in the previous two chapters, a primary objective of a budget is planning: the budget represents the financial dimension of the organizational plan.

Another objective of a budget is that it enables budgetary control. In budgetary control, the budget is used as an objective or standard. It represents an acceptable level of performance. From the perspective of the senior management, achieving the budget is evidence of having achieved the organization's objectives, and failing to achieve the budget indicates that the objectives have not been met.

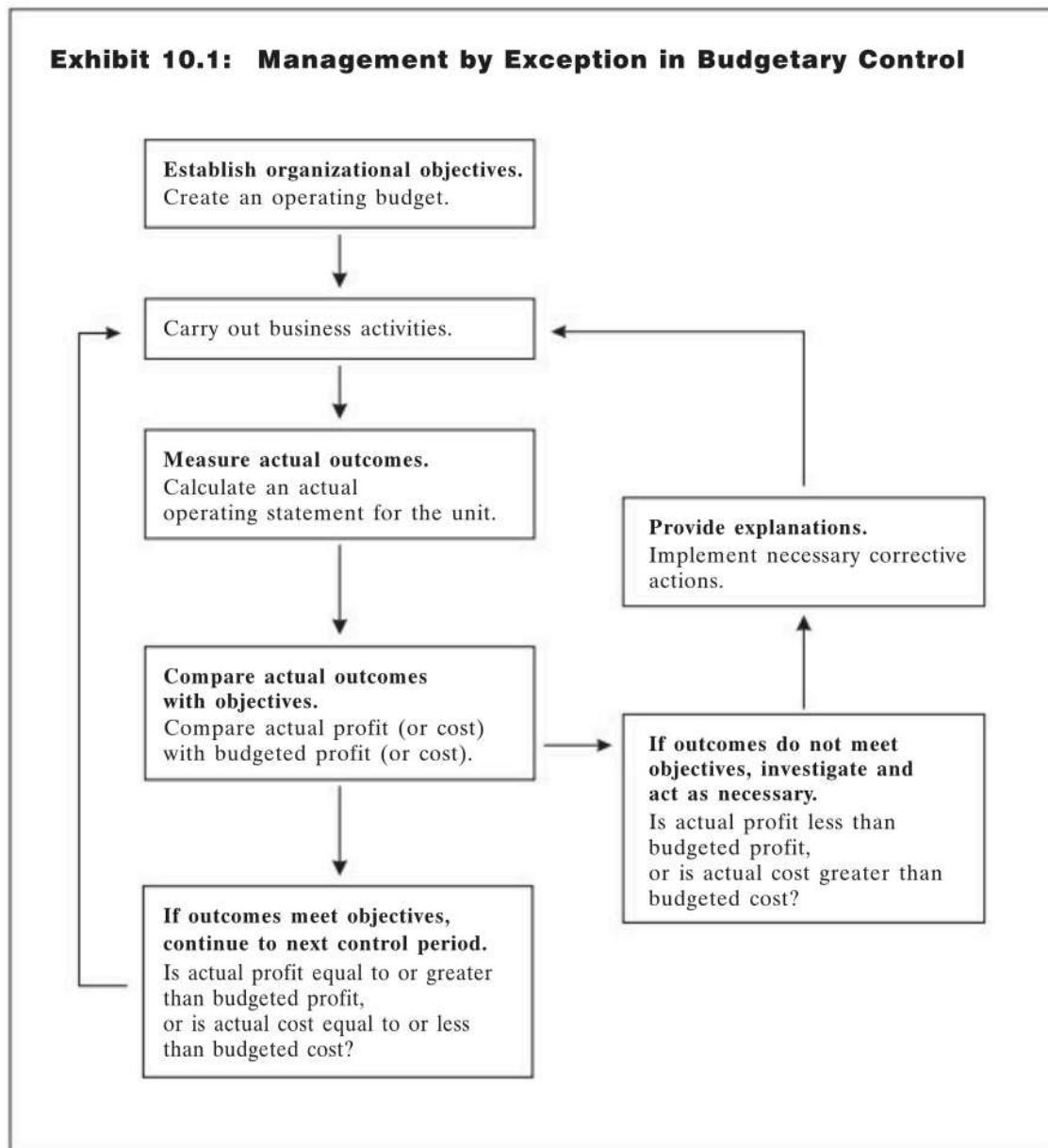
If the budget in question is a budget for the whole organization, the bottom line will be a budgeted profit, and achieving the budget means bringing in an actual profit at least as big as the budgeted profit. If the budget is for a smaller part of the organization (e.g., a human resources management department), achieving the budget may be a question of keeping actual costs below budgeted costs.

Budgetary control of this type is extremely important, but there are also many other aspects to the control process that are non-financial in nature. Maintaining good customer relations and preserving the organization's reputation for quality products or services, for example, are both control issues but largely fall outside the strict limits of budgetary control. As we shall see later in this chapter, the balanced scorecard can bring these non-financial controls into a routine control report.

The essence of budgetary control can be found in the idea of "management by exception". This idea proposes that once organizational objectives have been set and communicated to organizational members, then a routine process of comparison of actual outcomes with the objectives will reveal one of two states. The objectives will have been achieved or not achieved. Although in the former case no action is required, in the latter, corrective action is required as it represents an "exception". Now management will have to investigate the situation so that an explanation for the exception can be found, and appropriate corrective action can be implemented. This can also be described as a feedback loop, and it is illustrated in Exhibit 10.1.

Let's turn to an example. Imagine that a company may have budgeted for a profit of \$500,000 for the month of August. If the actual profit were \$520,000, the company would probably consider it (a) close enough and (b) erring on the plus side rather than the negative. The idea of management by exception would imply that the organizational objectives had been achieved, and they could carry on with business as usual.

If, on the other hand, the actual profit were \$370,000, management by exception would call for an investigation because the variance (minus \$130,000) is both large and unfavourable. If the investigation then revealed that there had been production problems and that these had resulted in customers' orders not being fulfilled, then the production manager would be expected to show what changes had been made to prevent it from happening again. Because there was an exception (missing the profit target by \$130,000), management action was required (reports and corrections).

**Exhibit 10.1: Management by Exception in Budgetary Control**

As another example, a human resources department may have had an operating budget that authorized it to spend \$200,000 in August. If the actual expense were to be \$190,000, it would probably be treated as “in control”. If the actual expense were to be \$250,000, then the department manager would have to explain what happened (perhaps she had to deal with an unusually high level of production employee turnover) and show what she had done to prevent the overspending from recurring.

## 10.3 Imposed and Participative Budgets

In order for the budget to be an effective control, it has to have validity — that is, all the people involved have to accept it. There are two broad approaches to achieving acceptability: imposed budgets and participative budgets.

An imposed budget is one that is dictated by the higher levels of management, without the people responsible for carrying it out having any say in what it comprises. Imposed budgets are rooted in a hierarchical approach to management, such as would be found in a military unit. The superiors are recognized as having authority to impose the budget by virtue of their position in the organization. The inferiors are required to accept the budget because they have been ordered to do so, and the order comes from a source with legitimate authority.

There are a number of situations where this is an appropriate way to plan and to exercise control, considering the context in which the organization operates. For example, if there are factors that are known to senior management but not known to lower levels, then an imposed budget may be the only way that information can be recognized in the organizational plan. More commonly, though, an imposed budget reflects an organizational style of tight control that is caused by the personalities of the senior managers.

One danger of imposed budgets is that they may be set at an unreasonable level of performance. If people know that the budget is impossible to meet, they may become careless and cease trying because they know they are going to fail anyway. Alternatively, they might feel pressured to commit fraud or break rules.

A participative budget, by contrast, is one where the people who have to carry out the work engage in an interchange of information with their managers, such that both sides can eventually agree on a budget that is mutually acceptable. This budget represents performance that is acceptable to the senior managers because it meets the organization's objectives; it is also acceptable to operating staff because they regard it as a reasonable task that is within their capabilities.

As with imposed budgets, a participative budget can be the result of situational factors. For example, in a diversified multinational firm, it is likely that operative personnel in the different regions and different product lines have more detailed knowledge about market developments and specific customer requirements than senior managers at the global headquarter. Here a participatory budget allows them to harvest this local know-how for the benefit of the organization. A participatory budget might also be chosen because of senior managers' leadership style, which is more open to discussion and compromise.

There is a high level of agreement that a participative budget is likely to have a higher degree of "buy-in" than an imposed one. The people controlled by a participative budget will be more motivated to achieve it, and they are likely to have a more positive attitude toward their work situation. The downside is that the budget-setting process sometimes allows people to set unreasonably low standards: budgets that have a lot of budgetary slack or padding built in and that are relatively easy to meet.

Pseudo-participation can be observed where an organization wants to be seen to have adopted a participatory approach, so it introduces superficial participation and seeks approval by lower-level employees, without really giving

them the possibility to say no. Pseudo-participation will most unlikely result in an appropriate budget or in superior motivation.

Few organizations are likely to run things at either the totally imposed or the totally participative extreme, and most exhibit some budget behaviours of each type. Smart organizations will choose the budget style that matches the underlying factors of each budget situation rather than insisting on a universal approach throughout.

## 10.4

### **Responsibility and Control**

Underlying the control process is another management theory: that of responsibility and control. It is a reasonable assumption that you can hold someone responsible for the things they can control, but you should not hold them responsible for things over which they have no control. Otherwise, the control process is not perceived as fair. What is meant by this is that each manager has a responsibility area within which his or her decisions affect the outcomes. They can be held accountable for those outcomes through the control process, but not for outcomes beyond their influence.

A production manager, for example, has control over the production process, and his or her decisions will affect the quantity and quality of production output. If production is at acceptable levels of quantity and quality, everything is okay. If there is a shortfall of quantity or an unacceptable deterioration of quality that is going to have serious negative consequences for the organization, the control system should be identifying the production area as the problem and, probably, the production manager as the person responsible.

Now imagine that further investigation led to the conclusion that the problem had been caused by the purchasing department buying below-standard raw materials. If the production manager was not in control of the purchasing decision, he cannot be held responsible for the effects of a purchasing decision. The responsibility then shifts to the purchasing manager.

Like many management theories, this is obviously correct at the extremes but tends to become highly problematic in real cases due to blurred lines of responsibility.

Missing the sales budget, for example, might be caused by the following:

- Marketing decisions, leading to an inappropriate product specification
- Design decisions, leading to a poor design
- Production decisions, leading to poor quality
- Sales decisions, leading to a low level of sales effort
- Marketing decisions, leading to advertising in the wrong media
- Logistics decisions, leading to late deliveries
- After-sales decisions, leading to poor warranty work

This underlines how there might be several issues that caused lower than budgeted sales. Not one manager but several managers are responsible for the unfavourable performance.

As another example, often the costs of common facilities, such as rent for the office space or property taxes for the production plant, are allocated to departments

or products through an overhead recovery system. We will cover in Chapter 12 in detail how an overhead recovery system works. For now, it is only important to remember that allocating costs of common facilities makes sense in establishing the full cost of operating the department or making the product, but it is not a situation where the manager has any control over these costs. As a result, it becomes problematic to hold him or her responsible for these allocated central costs.

## 10.5

### Control in Organizational Subunits

We can consider responsibility and control by relating it to the organizational subunits that have been created, such as business units, divisions, or departments. Subunits can be classified as either revenue centres, cost centres, profit centres, or investment centres. Cost centres can be further divided into those responsible for delivering a service for other subunits in the organization, such as an HR or maintenance department, and production cost centres that produce goods or services to be sold to customers. The difference between profit centres and investment centres is that profit centres have no control over investment in assets, whereas investment centres have. The budgetary control reports should match the realities of what is controlled.

#### 10.5.1

##### Control in Revenue Centres

A sales department is an example of a revenue centre. It is responsible for making sales. Its success or failure may be judged by the difference between budgeted and actual sales. This can be measured in units, or in sales revenue dollars, or even in terms of the contribution margin the sales have earned. (Contribution margin is the sales revenue less the variable cost of sales.)

**Example:** Northgate Supplies has budgeted to sell 2,000 widgets in the month of September, creating \$50,000 of sales revenue (before taxes). Actual sales were 2,100 widgets, and actual sales revenue was \$54,600. Northgate has exceeded its budget in both units (widgets sold) and revenues, so the company has more than met its budget.

**Northgate Co.  
Budgetary Control Report — October**

	Budget	Actual	Variance
Units sold	2,000	2,100	
× Selling price	\$25	\$26	
Total	<u>\$50,000</u>	<u>\$54,600</u>	<u>\$4,600</u> F

Note that, by convention, any difference between a budget and an actual is called a variance, and variances that decrease profits are called unfavourable (U), whereas variances that increase profits are called favourable (F). This is easier to deal with than calling them plus or minus.

In case of Northgate Co., the total revenue variance is \$4,600 favourable. In order to know whether the overall positive variance is due to the quantity sold,

**Exhibit 10.2 Isolating the Effect of Volume and Price Changes in Total Revenue Variance**
*Adjusting step by step ...*

$$\begin{array}{l}
 \text{Budget:} \\
 \left. \begin{array}{l}
 \text{Sales Volume Variance} \\
 [\text{Difference of (1) \& (2)}]
 \end{array} \right\} \begin{array}{l}
 \text{Budgeted Volume} \times \text{Standard Price} = \$... \\
 \boxed{\text{Actual Volume} \times \text{Standard Price}} = \$...
 \end{array} \right\} \text{Difference in Volume}
 \\[10pt]
 \left. \begin{array}{l}
 \text{Sales Price Variance} \\
 [\text{Difference of (2) \& (3)}]
 \end{array} \right\} \begin{array}{l}
 \text{Actual Volume} \times \underline{\text{Actual Price}} = \$...
 \end{array} \right\} \text{Difference in Price}
 \end{array}$$

*... from budgeted to actual figures*

**Northgate Co.  
Control in a Revenue Centre: Sales-Related Variances**

(1)	(2)	(3)		
Static Budget	Sales Volume Variance	Flexible Budget	Sales Price Variance	Actual Sales
$2000 \times \$25$ = \$50,000	$(2,100 - 2,000) \times \$25$ = \$2,500 F	$2,100 \times \$25$ = \$52,500	$2,100 \times (\$25 - \$26)$ = \$2,100 F	$2,100 \times \$26$ = \$54,600

the selling price, or both, we need to isolate the effect of volume and of selling price on the total variance of \$4,600. Maybe you remember from statistics that to isolate individual effects in a comparison, we need to change one variable in the equation at a time. Our revenue equation is rather simple: revenues = quantity sold  $\times$  selling price per unit. Quantity sold is also referred to as units sold or volume. What do we compare in budgetary control? We are comparing budgeted with actual results. Note that we also call our budgeted figures standard figures because the budget sets the performance standard that the company targets to achieve.

In order to isolate the effect of volume (i.e., sales volume variance) and of the selling price (i.e., sales price variance), we move the revenue equation step by step from budgeted revenues to actual revenues as shown in Exhibit 10.2.

The general idea about all variances is that they explain the difference between the organization's original plan (i.e., the budget) and what occurred (the actual results). To do that in a columnar presentation, we put the static, or original, budget in the left column, and the actual results in the right column. By changing one thing at a time as we move across the table, we separate the individual elements that changed and measure their dollar amounts.

The middle column shows the flexible budget. This is the original budget flexed to reflect the change to actual volume. The static budget was that Northgate expected to sell 2,000 units @ \$25 each. They actually sold 2,100 units. That change, by itself, would have caused an increase in sales revenue of an additional \$2,500 of revenue. This is called the sales volume variance.

### Market Volume and Market Share Variance

In addition to the sales volume and selling price variances, the market volume and market share variances provide relevant information to control revenue centres. The market volume — also referred to as market size — equals the total amount of sales generated by all competitors in a specific market. The market volume variance informs the company whether and how changes in the market size affected the company's sales, and thus profit level. It shows whether an increase/decrease in sales resulted from an increase/decrease in the size of the market. The market volume variance is calculated as follows:

#### Market Volume Variance

$$= (\text{Actual Market Volume} - \text{Budgeted Market Volume}) \\ \times \text{Budgeted Market Share (\%)} \times \text{Budgeted Contribution Margin per unit (\$)}$$

The market share variance informs the company whether and how changes in its market share affected the company's sales, and thus profit level. It shows whether an increase/decrease in sales resulted from gaining or losing market share and is calculated as follows:

#### Market Share Variance

$$= \text{Actual Market Volume} \times (\text{Actual Market Share (\%)} \\ - \text{Budgeted Market Share (\%)}) \times \text{Budgeted Contribution Margin per unit (\$)}$$

#### Example: Canadian passenger car market

Let's take the example of the Canadian passenger car and light vehicle market. From March 2020 onwards, car manufacturers experienced a sharp sales decline due to the COVID-19 pandemic. Ford, for example, reported that its sales dropped by about 14% in the first quarter of 2020 (compared to last year's Q1 results). Calculating the market volume and share variances, the effect of market volume and market share on this sharp sales decline can be isolated.

#### Effect of Market Volume

In the first quarter of 2020, 329,108 cars were sold (actual market volume), compared to 411,465 in the first quarter of 2019. If Ford would use last year's figures for budgeting purposes, the budgeted market volume for Q1 2020 would have been 411,465 cars and its budgeted market share 15.15% (or 62,337 cars). Let us put the budgeted contribution margin per unit aside as it is not publicly known and we have not covered the concept of contribution margin yet. If we exclude the contribution margin per unit from the formula, it simply means that we are computing the effects on car sales and not on profits.

continued on the next page

**Market Volume and Market Share Variance (continued)**

Market volume variance for Q1 2020:

$$\begin{aligned} &= (329,108 \text{ cars} - 411,465 \text{ cars}) \times 15\% \\ &= 12,354 \text{ cars (Unfavourable)} \end{aligned}$$

This means that Ford sold 12,354 cars (20%) less than budgeted because of the overall decline of the market volume in Canada's passenger car and light vehicle market.

*Effect of Market Share*

Ford sold 53,729 cars in Q1 2020, leading to an actual market share of 16.33%. Again, we leave the budgeted contribution margin per unit aside. Thus, Ford's market share variance for Q1 2020 is:

$$329,108 \text{ cars} \times (16.33\% - 15.15\%) = 3,883 \text{ cars (Favourable)}$$

This means that Ford could compensate — by the equivalent of 3,883 cars (6% more) — part of the sharp sales decline by increasing its market share from 15% to 16.33%. This is some positive news for Ford. The car manufacturer could enlarge their market share in Canada in this turbulent first quarter of 2020.

The static budget was that Northgate expected to sell their product for \$25 per unit. The difference between the middle column and the right-hand column is \$2,100, which is the effect of getting an additional \$1 per unit over the planned selling price on each of the 2,100 units that were sold. This is called the selling (or sales) price variance.

## 10.5.2

### **Control in a Cost Centre 1: Service Department**

A department of human resources management is an example of a cost centre that delivers a service for the organization and its subunits. Its role and objective would be to provide HR services and expertise to the rest of the organization — hence, the term “service department”.

The HR department has (i.e., its manager has) control over how much HR service to provide. How much service the department can provide will be strongly influenced by the resources the HR manager is allowed to consume by virtue of his or her budget. When the budget is established, it would be the HR manager's role to argue the case for an adequate budget to carry out the task at hand (hence the importance of a participative budget). During the execution phase, the manager will allocate resources appropriately to carry out the work. Two linked but separate control questions can then be addressed. First, did the required HR services and expertise get delivered? Second, did the HR department operate within the budget? Clearly, budgetary control as such can only address the second question.

## Chapter 10 Budgetary Control

**Example:** The Southgate Co. has a human resources department with an operating budget of \$500,000. This comprises salaries for the employees, travel and entertainment expenses, supplies, and the costs of operating a computer system for the payroll. The actual expense for the year has come out to \$565,000, as follows:

**Southgate Co.**  
**Budgetary Control Report for the Year**

	<b>Budget</b>	<b>Actual</b>	<b>Variance</b>
Salaries	\$250,000	\$300,000	\$50,000 U
Travel & entertainment	50,000	70,000	20,000 U
Supplies	10,000	10,000	nil
Computer system costs	190,000	185,000	5,000 F
Total	<u>\$500,000</u>	<u>\$565,000</u>	<u>\$65,000</u> U

The salaries and travel and entertainment lines are both overspent, whereas the supplies are exactly on target and the computer system costs are underspent. If asked, the HR manager may have a rational and logical explanation. For example, if the organization had been required to deal with some unexpected hirings and firings or to adapt to new HR legislation, then the overspending could be treated as a legitimate response to a situation that has changed since the budget was set. Conversely, if no such changes from the original business plan could be identified, the HR manager should be in serious trouble for the overspending and should provide a detailed description of the actions that have been taken to avoid overspending in future.

### 10.5.3

#### **Control in a Cost Centre 2: Production Department**

A production department is responsible for producing a good or a service for sale. Because there is some measurable production or service activity, the work done can be expressed not only as a total but also on a “per unit” basis. This enhances the control process because the effect of changes in the volume of activity (e.g., how many units were produced) can be separated from the effect of price changes or efficiency changes.

**Example:** Eastgate Co. manufactures ethical pharmaceuticals (i.e., prescription medicines). The budget for the production of Patent Pain Pills for October and the actual results are as follows:

**Eastgate Co.**  
**Budgetary Control Report for Patent Pain Pills — October**

	<b>Budget</b>	<b>Actual</b>	<b>Variance</b>
<b>Volume</b>	<b>500,000</b>	<b>600,000</b>	<b>100,000</b>
Raw material	\$ 5,000	\$ 6,300	\$1,300 U
Direct labour	2,000	2,400	400 U
Allocated overhead			
Variable	4,000	4,800	800 U
Fixed	6,000	7,200	1,200 U
Total	<u>\$17,000</u>	<u>\$20,700</u>	<u>\$3,700</u> U

## Control in Organizational Subunits

The original budget is for a total expense of \$17,000 — that is, the materials, the direct labour costs, and the overhead required for producing 500,000 Patent Pain Pills. The overhead is an allocation based on the budgeted labour cost: 200% for variable overhead and 300% for fixed overhead. Both overhead amounts represent the use of facilities shared by all products made by the company, such as the warehouse, production plant, or distribution centre. We will talk more about overhead allocation in Chapter 12.

The actual cost is made up of the actual raw materials and direct labour, plus allocated variable overhead (200% of the actual labour cost) and allocated fixed overhead (300% of the actual labour cost).

The first thing we would probably notice is that the budget has been overspent — a budget of \$17,000 has become an actual reported cost of \$20,700 — and that the unfavourable variances total to \$3,700. However, it is important to note that the budget was for the production of 500,000 units, whereas the actual was the cost of producing 600,000. Clearly, this comparison of totals is unfair because the amount of work done has increased by 20%. If we produce more units, of course we will need more raw materials and direct labour.

This work increase can be seen, however, if the cost is expressed on a per unit basis. The budget was for 500,000 pills to cost \$17,000, which is \$34 per thousand units. The actual cost of \$20,700 made 600,000 pills, at a cost of \$34.5 per thousand units. Although there has still been some overspending, it is not as extreme as the crude totals would indicate.

In order to separate the effect of volume changes from the effect of price and efficiency changes, the budget can be recalculated as if the actual volume had been known in advance: this is called preparing a flexible budget (to contrast it with the static or original budget).

**Eastgate Co.  
Flexed Budgetary Control Report for Patent Pain Pills — October**

	<b>Rate \$ per unit</b>	<b>Static Budget</b>	<b>Flexible Budget</b>	<b>Actual</b>
<b>Volume</b>		<b>500,000</b>	<b>600,000</b>	<b>600,000</b>
Raw material	\$ 0.010	\$ 5,000	\$ 6,000	\$ 6,300
Direct labour	0.004	2,000	2,400	2,400
Allocated overhead				
Variable	0.008	4,000	4,800	4,800
Fixed	0.012	6,000	6,000*	7,200
Total	<u>\$0.034</u>	<u>\$17,000</u>	<u>\$19,200</u>	<u>\$20,700</u>

\* Fixed costs are not normally “flexed” in a flexible budget because it is expected that they do not change when the volume of activity changes (e.g., how many units were produced). Hence, we keep the fixed costs amount of \$6,000 from the static budget also in the flexible budget.

The effect of the volume change (increase from 500,000 to 600,000) is that we would expect the expense to increase from \$17,000 to \$19,200. The \$2,200 change does not represent an “out-of-control” situation; it represents a reasonable additional expense of making the additional 100,000 units.

The difference between the flexible budget (\$19,200) and the actual expense (\$20,700) is an amount of \$1,500 overspent. In this case, it is overspending on materials of \$300 plus overspending on fixed overhead of \$1,200. As a percent-

## Chapter 10 Budgetary Control

age of the raw materials budget, this is only 5% and may be regarded as relatively unimportant ( $\$300 \div \$6,000 \times 100\% = 5\%$ ).

We clearly see in the above budgetary control report that materials are overspent by \$300. However, at this stage, we do not know whether that was due to a price increase or due to a reduction in efficiency (e.g., wasting materials) or a combination of the two.

In order to find out how much is due to price and how much is due to efficiency, we follow the same approach as before when we calculated the sales volume and selling price variance. So what do we do? We move step by step from the budgeted raw material costs of \$6,000 in the flexible budget to the actual raw material costs of \$6,300. We can even start from the static budget of \$5,000, move to the flexible budget of \$6,000, and then change one variable at a time to reach the actual results of \$6,300. This way we compute all three variances for raw material: volume variance, efficiency variance, and price variance.

To do so, we need to know the following four cost items: first, the standard price (SP) to purchase one unit of raw material; second, the standard quantity (SQ) of raw materials required to produce one unit of Patent Pain Pills; third, the actual price (AP) to purchase one unit of raw material; and fourth, the actual quantity (AQ) of raw materials that were used to produce one unit of Patent Pain Pills.

In the case of Eastgate, the standard (or budgeted) and actual raw material quantity and price to produce one pill are:

$$\begin{aligned} SP &= 0.2 \text{ cents per milligram} \\ SQ &= 5 \text{ milligrams per pill} \\ AP &= 0.15 \text{ cents per milligram} \\ AQ &= 7 \text{ milligrams per pill} \end{aligned}$$

Let us isolate the price and efficiency effect and calculate the raw material price and efficiency variance. Note that the price variance is sometimes also called a rate variance and the efficiency variance the usage or quantity variance.

Exhibit 10.3 shows two approaches to identify all the three different variances — variances due to changes in volume produced, in efficiency, and in price. The row approach reminds us that we are adjusting step by step or row by row one variable at a time as we move from the static budget (row 1) to the actual costs (row 4). We add the flexible budget (row 2) to capture the volume variance and we add the hybrid budget (row 3) to capture the efficiency and price variance.

In more detail, the difference between the static and the flexible budget (row 2) is the volume variance. For example, in Eastgate Co., the volume variance of \$1,000 explains that making 100,000 additional pills can be reasonably expected to add \$1,000 of material costs.

Differences between the flexible budget and the actual costs are due to changes in the amount of materials used in the production of pills and/or changes in the purchasing price of these materials. The budget was that 5 milligrams of material (SQ) should be used per pill. But the actual usage was 7 milli-

**Exhibit 10.3 Isolating the Effect of Volume, Price, and Efficiency Changes in Total Cost Variance**

**Eastgate Co.**  
**Control in a Production Centre: Materials Variances**

**Row Approach**

(1) Static Budget:	BV 500,000 pills	× SQ × 5 mg	× SP × 0.2 cents per mg	= \$5,000	\$1,000 F Volume Variance \$2,400 U Efficiency Variance \$2,100 F Price Variance
(2) Flexible Budget:	AV 600,000 pills	× SQ × 5 mg	× SP × 0.2 cents per mg	= \$6,000	
(3) "Hybrid" Budget	AV 600,000 pills	× AQ × 7 mg	× SP × 0.2 cents per mg	= \$8,400	
(4) Actual:	AV 600,000 pills	× AQ × 7 mg	× AP × 0.15 cents per mg	= \$6,300	

**Columnar Approach**

1	2	3	4	5	6	7
Static Budget (SQ @ SP)	Volume Variance	Flexible Budget (AQ @ SP)	Efficiency Variance	Price Variance		
500,000		600,000		AQ @ SP		AQ @ AP
500,000	(600,000 – 500,000)	600,000	600,000	600,000	600,000	600,000
× 5 mg	× 5 mg	× 5 mg	× (7 – 5) mg	× 7 mg	× 7 mg	× 7 mg
× 0.2 ¢	× 0.2 ¢	× 0.2 ¢	× 0.2 ¢	× 0.2 ¢	× (0.2 – 0.15) ¢	× 0.15 ¢
\$5,000	\$1,000 F	\$6,000	\$2,400 U	\$8,400	\$2,100 F	\$6,300

Note: BV stands for Budgeted Volume and AV for Actual Volume.

grams per pill (AQ). The efficiency variance of \$2,400 informs the unfavourable effect of consuming 2 milligrams more per pill than budgeted.

To facilitate the calculation of the efficiency variance, we introduce the "hybrid" budget in row 3. There is no common term for the budget in row 3; we refer to it as a hybrid budget because it combines the actual quantity (AQ) with the standard price (SP) at the actual volume produced (AV). The hybrid budget shows what the actual usage of materials would have cost, had they been bought at budgeted prices (SP).

The difference between the hybrid budget and the actual costs shows the price variance. Each milligram of raw material used should have cost 0.2 cents

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(SP), but it cost only 0.15 cents (AP). The price variance was \$2,100 lower than budgeted and, therefore, favourable.

To conclude, with the help of the four rows we have captured the volume, efficiency, and price variance. Alternatively, we can use the columnar approach, depicted at the bottom of Exhibit 10.3, by simply converting the rows (1) to (4) to columns (1) to (4). The differences between each set of columns yield the corresponding variances.

If there would have been a variance between flexible budget and actuals for direct labour or variable overhead, we would also have isolated the price and efficiency effect and computed the efficiency and price variance in the same way as for raw materials. Note that we can apply this step-by-step adjustment to all variable cost items but not to fixed costs. For fixed costs, we simply keep it at the total variance level, which is, in the case of Eastgate, \$1,200.

The overspending on fixed overhead of \$1,200 on a budget of \$6,000 is far more serious and warrants further explanation by the manager in charge. Despite the apparent overspending, this production department is reasonably in control.

This concept of flexing the budget for changes in activity should be applied in all circumstances where there is a relevant measure of the volume of activity. Generally, this means that it should be applied for the control of all production cost centres.

### 10.5.4 Control in a Profit Centre

A profit centre is an organizational subunit that has control over both revenues and costs and, therefore, over the operating profit. The same techniques that are available for controlling revenue centres and cost centres are available for controlling profit centres. Additionally, control in a profit centre is exercised by comparing the actual profit to the budgeted profit. In the same way that a production department has a physical measure of its activity (the number of units produced), a profit centre also has a physical measure of activity (the number of units sold). This also enables “flexing” the budget to separate changes in the level of activity from other spending changes.

**Example:** The appliance division of Westgate Inc. had budgeted to make an operating profit of \$10,000 in September, but its actual operating profit was \$15,400.

#### Westgate Inc. Budgetary Control Report for Appliance Division — September

	Budget per Unit	Static Budget	Actual	Variance
Units		1,000	1,200	200 F
Sales revenue	\$50	\$50,000	\$62,400	\$12,400 F
Less: Variable cost of goods sold	<u>30</u>	<u>30,000</u>	<u>35,000</u>	<u>5,000</u> U
Contribution margin	\$20	\$20,000	\$27,400	\$ 7,400 F
Less: Fixed costs	<u>10</u>	<u>10,000</u>	<u>12,000</u>	<u>2,000</u> U
Operating profit	<u>\$10</u>	<u>\$10,000</u>	<u>\$15,400</u>	<u>\$ 5,400</u> F

## *Control in Organizational Subunits*

The operating profit has increased from \$10,000 to \$15,400. The first thing that can be said is that the profit objectives have been comfortably exceeded. Clearly, the increase in sales from 1,000 in the budget to 1,200 actual is a part of the change in profit. Further analysis calls for creating a flexible budget: the expected profit for selling 1,200 units.

**Westgate Inc.**  
**Budgetary Control Report for Appliance Division — September**

Units	Budget per Unit	Static Budget	Flexible Budget	Actual
Sales revenue	\$50	\$50,000	\$60,000	\$62,400
Less: Variable cost of goods sold	<u>30</u>	<u>30,000</u>	<u>36,000</u>	<u>35,000</u>
Contribution margin	\$20	\$20,000	\$24,000	\$27,400
Less: Fixed costs	<u>10</u>	<u>10,000</u>	<u>10,000</u>	<u>12,000</u>
Operating profit	<u>\$10</u>	<u>\$10,000</u>	<u>\$14,000</u>	<u>\$15,400</u>

With the flexible budget column added, the volume effect can be separated from any other effects. The original budget called for sales of 1,000 units of product and an operating profit of \$10,000. The flexible budget shows that sales of 1,200 units should have resulted in an operating profit of \$14,000. The \$4,000 increase is due to the additional sales of 200 units, each one of which makes a contribution margin of \$20. The contribution margin is the difference between the selling price and the variable costs. We will discuss it in more detail in the next chapter.

The difference between the flexible budget operating profit (\$14,000) and the actual operating profit (\$15,400) is \$1,400. We can explain this line by line from the statement.

Sales revenue was \$62,400, compared to the flexible budget's \$60,000. We got a \$2,400 favourable variance by selling products at prices higher than the budgeted prices. This is the selling price variance (also called sales price variance) that we know from the budgetary control report of revenue centres.

The cost of goods sold was actually \$35,000, compared to the flexible budget of \$36,000. Either because we paid less for inputs, such as raw materials and labour (a price effect), or because we used fewer raw materials and less labour (an efficiency effect), we spent less overall than was expected and created a \$1,000 favourable variance. In order to determine the price effect and efficiency effect, we could again move step by step from the flexible budget to the actual figures and change one variable at a time to isolate both effects. This would inform us about the efficiency/usage variance and the price/rate variance. As we have done this before when we examined Eastgate's budgetary control report, we can skip it here (see Exhibit 10.3).

The budgeted spending on fixed overhead was \$10,000. Note that this item does not get flexed in the flexible budget. Whereas revenues and the cost of goods sold are expected to rise or fall when the volume of activity rises or falls, fixed costs are not expected to be affected by volume changes. The actual expense was \$12,000, so an overspending or unfavourable variance of \$2,000 has occurred.

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Summarizing these variances, we get the following:

Sales price variance	\$2,400 F
Variable cost of goods sold variance	1,000 F
Fixed cost variance	2,000 U
Net flexible budget variance	\$1,400 F

and

Sales volume variance (for operating profit)	4,000 F
Total change	<u>\$5,400 F</u>

Note that in comparison with the revenue centre, the sales volume variance is calculated here differently to show the effect of changes in sales volume on profit. After all, we are in a profit centre, so we are interested in the profit effect when we sell more units. To show the profit effect, we multiply the increase in sales units of 200 with the contribution margin per unit of \$20, resulting in a favourable profit effect of \$4,000 due to selling 200 additional units. In the revenue centre we showed the effect on revenues, not on profit.

This profit centre has done very well overall. It has generated an additional \$4,000 of profit from increasing sales volume and has generated an increased profit of \$2,400 by increasing selling prices and a further \$1,000 by reducing the variable cost of goods sold. The profit centre reduced its profit by \$2,000 by overspending on fixed costs.

Whoever was responsible for the increased sales and the reduced variable cost of goods sold is likely to be praised and maybe rewarded. Whoever was responsible for the overspending on fixed costs will have to explain exactly what happened, why it happened, and what corrective actions have been implemented.

### 10.5.5

#### Control in an Investment Centre

An investment centre is a profit centre with one addition: in addition to having control over its profit-making activities, it also has control over the investment in assets. An investment centre can be controlled using all the methods available for controlling revenue centres, cost centres, and profit centres. Additionally, an investment centre can be controlled through so-called return ratios, such as ROA (return on assets employed) or ROI (return on investment). We covered ROA in Chapter 7 (Financial Statement Analysis) and will talk more about ROI in Chapter 15 (Long-Term Decision Making).

**Example:** Compass Inc. is a multidivisional organization for which the budgeted and actual results for the year were as follows:

Compass Inc. Budgetary Control Report for the Year (\$ millions)		
	Budget	Actual
Sales revenues	\$200	\$240
Cost of goods sold	150	180
Gross margin	\$ 50	\$ 60
Operating expense	20	24
Operating income	\$ 30	\$ 36
÷ Total assets	\$300	\$450
Return on assets (ROA)	10%	8%

## *Control in Organizational Subunits*

Although sales and profits have increased, so have assets. The budgeted return on assets was 10%, but the actual return is only 8%. The lower return on assets means that Compass Inc. was not as effective as expected in using the assets at its disposal to generate return for the company.

All organizations can be controlled in total as investment centres as they are all capable of exercising control over both profits and investments. Most large organizations will extend the idea down through the company. They do this by splitting the company up into subunits that have control over both profits and investment in assets. Often these subunits are called segments, divisions, or business units. This creates a decentralized organizational structure, and it makes each autonomous subunit controllable through the return ratio.

Suppose that Compass Inc. had structured itself into three autonomous subunits: aircraft, motor vehicles, and consulting services. Its budgetary control report might look like Exhibit 10.4. (All amounts that follow are in millions.)

Compass Inc. started off with the expectation of earning \$30 of operating income, which is a 10% return on \$300 of invested assets. The actual results come out as a higher profit (\$36), but also a higher asset total (\$450). This is a return of only 8%, so the company has not met its profitability objective of a 10% return on assets. Fundamentally, the \$6 of additional earnings do not justify the \$150 of additional investment. Because the company controls its three subunits as investment centres, the discrepancy can be located quite precisely.

The aircraft division expected to make \$15 of income on \$150 of assets, which is a 10% return. The actual result is a smaller profit (\$6) on the same level of assets, for a 4% return. The division contributed to the problem by making insufficient operating profit, whereas the assets are the same as were budgeted.

The motor vehicles division budgeted to make a profit of \$6 on \$120 of assets, which is a 5% return on assets. The actual result shows a higher operating profit (\$17) on a greater amount of assets (\$170), and an actual return that has gone up to 10%. Clearly, this division is not the problem!

**Exhibit 10.4: A Budgetary Control Report by Investment Centres**

**Compass Inc.**  
**Budgetary Control Report for 2020 (\$ millions)**

	Aircraft		Motor Vehicles		Consulting		Total	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
Sales revenues	\$ 50	\$ 40	\$100	\$135	\$ 50	\$ 65	\$200	\$240
COGS	25	24	89	109	36	47	150	180
Gross margin	\$ 25	\$ 16	\$ 11	\$ 26	\$ 14	\$ 18	\$ 50	\$ 60
Operating expense	10	10	5	9	5	5	20	24
Operating income	\$ 15	\$ 6	\$ 6	\$ 17	\$ 9	\$ 13	\$ 30	\$ 36
÷ Total assets	<u>\$150</u>	<u>\$150</u>	<u>\$120</u>	<u>\$170</u>	<u>\$30</u>	<u>\$130</u>	<u>\$300</u>	<u>\$450</u>
ROA%	<u>10%</u>	<u>4%</u>	<u>5%</u>	<u>10%</u>	<u>30%</u>	<u>10%</u>	<u>10%</u>	<u>8%</u>

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The consulting division planned to make a \$9 profit on \$30 of assets, which is a 30% return. Actually, the division made a larger profit (\$13) but had a massive increase in assets, which rose from \$30 to \$130, and the return on assets fell to 10%. The division made more profit, but it was not enough to justify the additional investment of \$100.

The aircraft division and the consulting division were the culprits in the drop in return on assets from 10% to 8%.

Further ratio analysis can also be carried out on these data. For example, the ratio of gross margin to sales could be looked at, and its budgeted rate could be compared to its actual rate. In the aircraft division, for example, the gross margin was budgeted to be 50% (gross margin: \$25 divided by sales revenue of \$50 = 50%). The actual gross margin was 40% ( $= \$16 \div \$40$ ). This goes a long way to explaining why the division did so badly.

Note that as with most budgetary control analyses, the accountant can accurately calculate the effect of a deviation from the budget and measure how much it damages the organization, but the accountant has no idea what the underlying causes are. That part of the management process has to come from the managers who are in control of the subunits or departments.

## 10.6

### The Balanced Scorecard

One of the criticisms of the budgetary control approach is that it dwells only on financial measures and deals only with the past or what has already happened. To stay with the example from before, the aircraft division of Compass Inc. achieved a return on assets of 4% in the last year. But companies have wider objectives than can be described purely financially, and management should be about the future, not solely the past. The balanced scorecard has been developed to change this emphasis. It considers the past, the present, and the future, and it includes both financial and non-financial information when assessing and controlling the performance of the company and its subunits. In this way, the control process can be explicitly linked to the organizational strategy.

How do we develop a balanced scorecard? First, the balanced scorecard needs to be linked to the company's strategy in order to help the organization to realize its strategy. Hence, we first derive key objectives to achieve our strategy. Hereby, not only the financial perspective is relevant (as it tends to be in traditional budgetary control) but also the customer, internal business, and learning and growth perspective.

We have these four perspectives because it is the underlying assumption of the balanced scorecard that learning and growth activities lead to better internal business performance and better customer satisfaction, and these, in turn, lead to better financial performance.

Next measures of success or failure are identified for each objective, followed by setting targets for each measure. Now it is time to work on achieving these targets. Hence, so-called initiatives are developed and implemented to achieve the targets. To see whether the company is on track, actual results are reported against that target.

## **Transfer Pricing**

When transactions take place between the company and outside parties, the cost of the purchase or sale is unambiguous. However, transactions also take place within a company — when goods or services are provided by one division and sold to another internal division. (Divisions in this sense could be two departments in the same company, or two subsidiaries in the same group of companies, or any similar situation.) When that happens, the price for the transaction is called a **transfer price**. The amount of the transfer price, rather than being determined by market forces, is an administered price. Transfer prices may be market based, cost based, or negotiated.

When the transfer price is set, there are three objectives:

- Goal congruence: The transfer price should encourage both sides to the transaction to take actions that are in the best overall interest of the company.
- Accuracy of divisional performance evaluation: The transfer price should be set so that it fairly represents the sales revenue for the selling division and the cost to the purchasing division.
- Maintaining decision-making autonomy: If divisional autonomy is an issue, the transfer price should respect the decision-making autonomy of both parties.

Transfer pricing is a particular feature of vertically integrated manufacturing companies, where one organizational unit provides a partially processed product to another unit, and that unit brings it into finished goods for sale. Transfer pricing is also a feature of organizations where cost centres that provide a service are expected to treat the departments that use their services as arm's length customers.

If the transfer relates to something that is potentially available from outside suppliers, then a market price will exist. To illustrate, when an auto manufacturer's rolling mill is providing sheet steel to the same auto manufacturer's car body plant, the transfer price can be market based. Because there is a publicly known market price for sheet steel, the market price can be used as the internal transfer price.

If the outside market price is used as the transfer price, then in virtually every situation it will lead to the achievement of all three objectives. Both divisions will make decisions in the best interest of the entire company, both divisions' profitability will be accurately assessed, and both divisions will retain their autonomy.

When there is no clear outside market price, the transfer price will have to be negotiated between the two parties or imposed on them by a higher level of management. One approach is to base the transfer price on the cost incurred by the supplying unit. However, cost is a somewhat fuzzy term and can include a range of actual numbers in any given situation. Below are some of the choices that could be used:

- Marginal cost or full cost
- Standard (budgeted) cost or actual cost
- Inclusion or exclusion of a markup on cost

continued on the next page

**Transfer Pricing (continued)**

*Marginal Cost versus Full Cost*

If the transfer price is set at marginal cost, it would represent the additional cost incurred to make one additional unit of production or supply one additional unit of service. For the supplying division, it is the out-of-pocket cost for that one unit, and it is often the variable cost of production. It leaves unsettled the issue of how the fixed costs of the supplier are to be recovered and makes performance evaluation virtually meaningless. If the transfer price is set at full cost, then there is a better chance of the supplying division being able to cover its costs. However, in that case, it becomes axiomatic that the supplying division is a cost centre, not any form of profit centre.

*Standard Cost versus Actual Cost*

If costs are to be transferred at standard (budgeted) rates, then any efficiency or inefficiency that happened in the supplying division is felt by the supplying division (which seems fair as that is where it happened). If costs are to be transferred at actual cost, then any efficiency or inefficiency in the supplying division is automatically passed on through the transfer price to the purchasing division (this seems unfair as that is not where they happened).

*Markup*

If the transfer price is set at bare cost, then by definition the supplying division is being treated as a cost centre and not as a profit centre. Add a markup on cost (whether a % of cost or a flat \$ amount), and the supplying division becomes a profit centre. This has implications for the organizational structure and control system of the company.

**Example**

Hazel Keay is human resources manager at Tizer Foods Inc. Until recently, her unit has budgeted its annual cost for providing human resource services to the rest of the company and then went ahead and provided those services as required. The budget for the upcoming year is \$750,000. The number of employees in the four production departments totals 500.

To provide a better sense of the performance of the production departments, it has been decided that from January 1, human resource services will be billed to production departments through a transfer price. What would be the effect of using the following transfer price approaches?

1. Transfer price of \$1,500 per employee, which is based on \$750,000 budgeted cost divided by 500 budgeted employees.
2. Transfer price of the actual cost (whatever it comes out to at the end of the year) divided by however many employees were actually employed.
3. Transfer price of \$50 per employee plus \$125,000 per department. This is based on there being a fixed cost of \$500,000 to run the HR department, and \$50 is the marginal cost per employee.

continued on the next page

**Transfer Pricing (continued)**

4. Transfer price of \$2,000 per employee. This is based on the HR department getting a quotation to supply the complete human resource function from Sunnyside People Management Inc., a company that specializes in total human resource solutions.
5. Transfer price of \$1,650, which is based on the full budgeted cost (\$1,500 per employee) plus a 10% markup on cost.
6. Transfer price of \$1,000 per employee, which is imposed by top management as they think any higher amount would be unreasonable.

The effects of each of these transfer prices would be as follows:

1. If the full cost transfer price of \$1,500 per employee is used, the HR department becomes a cost centre, and the production units are charged with the budgeted cost of HR services. The greater the number of employees, the higher the HR cost. The efficiency of the HR department can be assessed by how well it keeps within its budgeted cost.
2. If the actual cost is used, then the result is similar to (1), but any efficiencies or inefficiencies are passed on to the production units. This is a problem. Although production departments cannot control the costs they are being charged with, the HR department has no motivation to restrain its costs as they get passed on automatically.
3. If the transfer price is based on a fixed cost plus a per employee cost, then the motivation to keep employee numbers down becomes a bit weaker; other than that, the effect is similar to (1).
4. If the transfer price is a market price of \$2,000, then the HR department is being treated as a profit centre. Its efficiency would be measured by how much profit it made. This may, or may not, be what the company wants. At this (rather high) price per employee, and assuming that production departments have true autonomy, production departments may take their HR business elsewhere, bringing in outside suppliers for some or all HR services, if they can get the services more cheaply. This will probably not be a result that the top management of the company wants to see.
5. If the transfer price is \$1,650, then, again, HR becomes a profit centre and can be judged on the basis of profitability. Does top management really want the production departments to pay a profit markup as well as cost for an essential service such as HR?
6. If an imposed transfer price of \$1,000 is used, then they will have a situation that is neither fish, flesh, fowl, nor good red herring. The production departments are not paying the full cost of HR services. The HR department will not recover its costs. Imposed prices undercut any sense of divisional autonomy. Probably no one will be happy.

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A balanced scorecard thus derives for each perspective:

Objectives	Measures	Targets	Initiatives
What are we trying to accomplish?	What do we measure to assess our level of performance on this objective?	What level of performance do we want to achieve?	What action plans do we initiate to achieve the target?

A typical balanced scorecard contains the following four performance perspectives, which can, of course, be expanded if pertinent for achieving the organization's strategy:

1. **Financial perspective:** Financial measures such as profitability or return rates are reported here. Financial measures are not ignored in the balanced scorecard, but their dominance is mitigated by the presence of other measures. That is why it is called a balanced scorecard: it balances financial and non-financial measures.
2. **Customer perspective:** The customer's perspective is considered through measures such as customer satisfaction, retention, or acquisition. Companies can obtain an understanding of how the customers see them by direct measurement, such as getting customers to fill in questionnaires about service levels and satisfaction, and by indirect measurement, such as the number of complaints and the number of sales returns. The customer perspective, unlike the financial perspective, is about the present, not the past.
3. **Internal business perspective:** The internal business perspectives derive measures for the company's key business processes and competences to excel at these. The ways in which the business has changed its internal operations to better achieve its objectives are considered through such measures as process restructuring, technology, and logistics improvements.
4. **Learning and growth:** The organization will have a successful future only if it learns and grows over time. This section is future oriented. It lists the activities that have been engaged in that create that rosy future. Here it would report training initiatives, employee motivation, new product development, and basic research.

An effective balanced scorecard has the following characteristics:

- It articulates the link between strategy and operations.
- It helps to communicate strategy to employees.
- It creates a balanced perspective between financial and non-financial measures for employees.
- It creates a balanced perspective between the past, the present, and the future in the management process.
- It restricts itself to a few key measures.

**Exhibit 10.5: The Balanced Scorecard**

Carberry Hotels Balanced Scorecard for September 2020				
Objective	Measure	Target	Actual	
<i>Financial perspective:</i>				
Shareholder value	Return on equity	15.0%	15.6%	
	Share price growth	5.0%	6.0%	
<i>Customer perspective:</i>				
Quantity	Occupancy rates	90.0%	93.2%	
Quality	Room rack-rate growth	4.0%	5.0%	
	Customer satisfaction score	9/10	9.3/10	
	Written complaints	0	0	
<i>Internal business perspective:</i>				
Cleanliness	Random checks score	10/10	10/10	
Restaurant	Menu changes	5	6	
Accessibility	Wheelchair access	98.0%	98.0%	
<i>Learning and growth perspective:</i>				
Staff training	Training hours	100	75	
Market segments	New segments targeted	2	1	
Product development	New facilities	1	0	

*Assessment:* Carberry Hotels has done very well in three areas, meeting or exceeding its targets on each criterion for financial, customer, and internal business perspective. However, it has failed to meet its targets for learning and growth. It is probable that learning and growth, which are about developing the future, have been compromised in the company's efforts to achieve current success.

- It identifies the effect of trade-offs between competing objectives.
- It is integrated with the motivation and reward system.

Exhibit 10.5 provides an example of a balanced scorecard for a hotel.

## 10.7

### Selecting Key Performance Indicators

The measures in the balanced scorecard are often referred to as key performance indicators (KPIs). Management scholars have coined the phrase “if you can’t measure it, you can’t manage it”, meaning that an organization can only know whether it is successful or not when it has defined what success is and better tracks it through measuring it. KPIs are intended to do exactly this: assess the success of the organization, a subunit, or an employee in achieving objectives for performance.

The balanced scorecard already informed us that there are financial, such as return on assets or profitability, and non-financial, such as customer satisfac-

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tion and/or defect rates, performance indicators. Another way to distinguish between indicators is to classify them as either lagging or leading indicators. Whereas lagging indicators report on what has been achieved, leading indicators represent performance drivers that are expected to channel or lead into future success. For example, the performance indicator “return on assets” of 10% is the result or outcome of many decisions and actions throughout the firm, such as allocating resources to modernize the assembly line, continuous improvements in assembling the products in a more cost-efficient manner, or marketing and pricing decisions for the products. All of these, in turn, lead to better financial performance and many other decisions and actions channelled into an ROA of 10%. The ROA is thereby a lagging indicator of performance. It reports what has been accomplished. In comparison, the performance indicator “number of new products developed” is an example of a leading indicator as developing new products will, hopefully, result in new sales, sales growth, and thereby financial success of the firm. This indicator gives a leading indication of performance.

Although there are different suggestions on how companies should select their KPIs, Mike Kennerley and Andy Neely have succinctly summarized them into nine test questions (based on the work of Michael Hammer and Bob Johnston). These nine test questions, summarized in Exhibit 10.6, help companies in designing relevant KPIs. In case a KPI fails in one of these tests, it must be modified until it passes all of them.

In particular, the ninth test, the gaming test, is important as KPIs can trigger unwanted behaviour and actions, resulting in negative side effects and unintended consequences for the organization. A classic example of this dark side of using KPIs is a railway company that used “percentage of trains on time” as a KPI. It looks like a relevant KPI for a transportation company because timely trains make customers happy, who will then more likely return to its transportation services; as the word spreads, more and more people might use the train to

### Exhibit 10.6: Testing Criteria for Designing Relevant Performance Measures/Indicators

1	The truth test	Is the measure definitely measuring what it's meant to measure?
2	The focus test	Is the measure only measuring what it's meant to measure?
3	The consistency test	Is the measure consistent whenever or whoever measures?
4	The access test	Can the data be readily communicated and easily understood?
5	The clarity test	Is any ambiguity possible in interpretation of the results?
6	The so what test	Can, and will, the data be acted upon?
7	The timeliness test	Can the data be analysed soon enough so that action can be taken?
8	The cost test	Is it worth the cost of collecting and analysing the data?
9	The gaming test	Does the measure encourage any undesirable behaviours?

**Source:** M. Kennerley & A. Neely, “Measuring performance in a changing business environment”, *International Journal of Operations & Production Management*, (2003) 23(2): 220.

commute from one place to the other. Based on this chain of arguments, “percentage of trains on time” is a leading indicator for customer satisfaction that channels into increased overall performance of the railway company. However, what happened after introducing this KPI is that trains that were running very late got cancelled. This was not the intention when managers of the railway company selected this KPI to improve customer satisfaction. Cancelling late trains was an unintended consequence of starting to measure performance based on the “percentage of trains on time”. A cancelled train was not a train that ran late; hence, it did not deteriorate the KPI result. However, we can be quite sure that a cancelled train is worse than a late train for customer satisfaction; thus, this action did quite the opposite from increasing customer satisfaction, which, ironically, was why the company selected this KPI in the first place.

As another example, store sales staff of a known outdoor clothes manufacturer received a bonus based on the average daily sales per customer. If the average daily sales surpassed a specific and relatively high dollar amount, they would receive a bonus. The intention was to motivate sales, customer service, and cross-selling of several articles. However, several unintended consequences resulted: First, sales staff were not that interested in helping store visitors who showed interest in purchasing small items, such as a cap or a scarf. Instead, everyone was fighting to sell jackets, trousers, or other expensive items to keep their average daily sales per customer up. The best scenario would be if a sales person sold an expensive item in the beginning of a shift and then for the rest of the day stayed away from helping other store visitors, which would only lower the person’s KPI performance. Another side effect that emerged was that the sales of small items were booked on the same sales staff account. This way the other sales staff in the store could keep their averages up and receive a bonus. The following day, someone else took the small items on his or her account.

Here a third and final example of how KPIs can produce unwanted behaviour and actions. The IT helpdesk for customer support of a large telecommunications firm measured the performance of its IT specialists based on the number of tickets (which refers to an IT support request from a customer) solved during a day. The noble intention was to respond to customers and quickly solve their IT issues. However, the design of this KPI overlooked the fact that tickets would vary very much in their complexity and thus the time required to solve the IT issue. Measuring the quantity of solved tickets, the KPI created the wrong incentive to solve the easy tickets first and therefore relatively quickly and avoid the complex ones, which would consume so much time, but potentially were key in order to retain the customer in the future. Furthermore, unwanted group dynamics resulted from this KPI. The IT helpdesk had several teams across the country, from the East Coast to the West Coast, and operated in three shifts to make sure that 24/7 IT support was available for its customers. Because of the different time zones, often the East Coast IT support team was left with the more difficult tickets as the West Coast team had already picked the easy ones during their shift. This problem was amplified for the night shifts, who tend to be left with solving time-consuming IT tickets.

These three examples illustrate unintended consequences produced by the selected KPI. They are reminiscent of Goodhart’s Law: “When a measure becomes a target, it ceases to be a good measure.” To avoid this, managers have the nine tests available to improve the chosen KPIs. But still unintended conse-

quences might arise. Thus, managers need to be attentive to those in order to quickly react and countervail them. For example, it helps if managers explain the intention of choosing this KPI for measuring performance, thereby providing relevant context and situating the KPI into the larger purpose of using it. The intention is usually to reach the strategic objective related to the KPI. Emphasizing that the objective is customer satisfaction at least makes one wonder whether cancelling trains that are delayed brings the railway company closer to its objective. Overall, KPIs influence the behaviour and actions of employees, and we need to be mindful of intended and unintended consequences. We cover the behavioural aspect of budgeting more generally next.

## 10.8

### The Behavioural Aspect of Budgeting

Budget preparation and budgetary control may seem like mechanical processes: they may be described by a series of rules about how budgets are prepared, how actual results are compared to budgets, and how management actions arise from the comparison. In reality, a substantial degree of influence over how the process is carried out is exerted by the people involved. This is referred to as the behavioural aspect of budgeting.

A unit manager who is responsible for preparing a budget may be motivated to reduce her forecast of sales or increase her forecast of expense, for example. Either action results in a budget that is easier to achieve. A senior manager who approves unit managers' budgets, on the other hand, would only accept their budgets if the budgets have an optimistic estimate of profit, which is an incentive for the units to strive for superior performance. In general, these conflicting situations arise because both the organization and its employees have goals and objectives that are not the same, and the organization's goals can only be met through the actions of the employees.

The ideal situation is where the organization's goals can be met by the employees pursuing their own goals. This is called "goal congruence". One example of how to create goal congruence is through the use of incentive rewards.

Basing part of remuneration on whether or not goals have been achieved is called an incentive-based reward system. It makes the link between doing what the organization wants and the presumed economic objectives of employees immediate and tangible. The typical incentive scheme gives a monetary reward (a bonus) for achieving some small but clearly defined goals that are part of the organization's plan. The rewards are frequently monetary but can also be non-monetary (such as being recognized as "employee of the month"). Threat of punishment for not achieving goals can also be used but tends to set up a negative and confrontational work atmosphere.

Examples of incentives include the following:

- A salesperson might be given a \$1,000 bonus for every 1% increase in sales volume.
- A shift of production workers might be given a \$250 bonus for every week when no product defects were identified.

## *Summary*

- An employee might have his or her picture displayed in the lobby for helping customers beyond the call of duty.
- A manager might be dismissed for failing to meet profit objectives.

Creating a climate of goal congruence should be a carefully thought out process rather than a lucky accident. Ideally, goal congruence fits in with other ideas mentioned earlier in this chapter, such as the creation of realistic budgets, the linkage between responsibility and control, the participative budget-setting process, and feedback loops (which should be frequent and which should clearly and frequently indicate what is going well and what is going badly).

Failure to create a system of goal congruence may lead to dysfunctional behaviours, such as creating budgetary slack (e.g., padding the budget with unnecessary expense) and employees' making decisions that benefit them but harm the achievement of organizational goals.

## **10.9**

### **Budgetary Control and the Functional Manager**

Functional managers have responsibility for the areas where they make resource decisions. Through the control process, they can be held accountable for the decisions they make:

- Sales/marketing managers can be held responsible for meeting sales revenue budgets.
- Production managers can be held responsible for the cost of products.
- Service cost centre managers (such as human resources managers) can be held responsible for the costs of their areas (e.g., the cost of a new training program).

Functional managers should not, however, be asked to take responsibility for outcomes over which they have no control. This goes back to the principle of aligning responsibility and control.

## **10.10**

### **Summary**

The management activities of planning and control are realized through the preparation and use of budgets. Budgeting consists of estimating operating income, expense, and cash flow, and budgetary control consists of using the budget to keep the organization on track to meet its objectives. Recently, budgeting as a financial activity has been supplemented with the balanced scorecard, which brings non-financial data into the equation of measuring performance. The balanced scorecard further tries to make control more forward-looking by dealing not only with past results but also with present and future drivers of performance.

## Self-Study Problems

- Carlton Co., which is an autonomous part of a conglomerate of luxury goods producer, makes luxury travel bags that are to be sold to retailers for \$250 each. Material costs are \$40 per bag; labour costs are \$60 per bag; overhead is a fixed amount of \$100,000 per month. The company expects to sell 1,000 bags per month.

### Required

- Should the luxury travel bag division of Carlton Co. be controlled as a cost centre, a profit centre, or an investment centre?
- What is the budgeted monthly profit?
- The actual results for August were as follows:

Sales revenue	900 bags @ \$260	\$234,000
Materials	\$ 35,000	
Labour	50,000	
Overhead	<u>102,000</u>	<u>187,000</u>
Operating profit		<u>\$ 47,000</u>

Was the company in control or out of control?

- The maintenance and cleaning department at Concordia Hospital had the following budget for July:

Wages	\$ 500,000
Supplies	300,000
Vehicle expenses	250,000
Office expenses	100,000
Total	<u>\$1,150,000</u>

The actual expense totalled \$1,250,000, as follows:

Wages	\$ 475,000
Supplies	430,000
Vehicle expenses	250,000
Office expenses	95,000
Total	<u>\$1,250,000</u>

### Required

- Should this unit be controlled as a revenue, cost, profit, or investment centre?
- Was the department in control or out of control?
- As part of an exercise in preparing a balanced scorecard, identify three customer satisfaction measures and say how you would assess them for (a) Tim Horton's (a fast food franchise) and (b) Uber (a transportation/ridesharing company).

### Solutions

1. (a) Carlton Co. is an autonomous organization within a conglomerate of luxury goods producer. This suggests that the luxury travel bag producer has control over its revenues and its costs and, hence, over its profit and would also have control over its investment in assets. Therefore, in theory, it should be controlled as an investment centre. In this example, the information presented includes revenues and expenses but does not include investment, so we would have to treat it as a profit centre for control purposes.

- (b) The budgeted monthly profit is as follows:

Sales revenue	(1,000 bags @ \$250)	\$250,000
Materials	(1,000 bags @ \$40)	\$ 40,000
Labour	(1,000 bags @ \$60)	60,000
Overhead		100,000
Operating profit		<u>\$ 50,000</u>

- (c) The original (or static) budget was that Carlton Co. would make an operating profit of \$50,000. The actual operating profit was only \$47,000, so the company missed its target. The \$3,000 gap can be further analyzed as follows. The actual results and the static budget results are the bookends in the following chart. In the middle is the flexible budget. The flexible budget shows that at a sales level of 900 units, we would expect Carlton Co. to make a profit of \$35,000.

	Actual 900 bags	Flexible Budget 900 bags	Static Budget 1,000 bags
Sales revenue	<u>\$234,000</u>	<u>\$225,000</u>	<u>\$250,000</u>
Materials	\$ 35,000	\$ 36,000	\$ 40,000
Labour	50,000	54,000	60,000
Overhead	<u>102,000</u>	<u>100,000</u>	<u>100,000</u>
Total expense	<u>\$187,000</u>	<u>\$190,000</u>	<u>\$200,000</u>
Operating profit	<u>\$ 47,000</u>	<u>\$ 35,000</u>	<u>\$ 50,000</u>

*Sales volume effect (on operating profit):* The company planned to sell 1,000 bags but actually sold only 900 bags. Each bag not sold could be expected to earn a “contribution margin” of \$150. (The contribution margin is the difference between the selling price [\$250] and the variable cost [\$40 + \$60] and is \$150 for this product. See the next chapter for a fuller discussion of contribution margin.)

Variance = 100 bags @ \$150 = \$15,000 (unfavourable).

This \$15,000 U variance explains the difference between the static budget profit of \$50,000 and the flexible budget profit of \$35,000.

## Chapter 10 Budgetary Control

*Selling price effect:* The company planned to sell its bags for \$250; the actual price was \$260. Each of the 900 bags brought in an additional \$10 of sales revenue due to the price increase.

Variance = 900 @ \$10 = 9,000 (favourable).

*Materials cost effect:* The company planned to spend \$40 per bag on materials; for 900 bags, that would be \$36,000. The actual cost was \$35,000, so the company saved \$1,000.

Variance = \$1,000 (favourable).

*Labour cost effect:* The company planned to spend \$60 per bag on labour; for 900 bags, that would be \$54,000. The actual cost was \$50,000, so the company saved \$4,000.

Variance = \$4,000 (favourable).

*Overhead cost effect:* The company planned to spend \$100,000 (total) on overhead; the actual cost was \$102,000, so the company overspent by \$2,000.

Variance = \$2,000 (unfavourable).

### Summary:

Original budgeted profit (static budget)	\$50,000
Actual profit	<u>47,000</u>
Difference	<u>\$ 3,000</u> (unfavourable)

Which is explained by the variances:

Sales volume variance (profit effect)	\$15,000 U
Sales price variance	9,000 F
Material cost variance	1,000 F
Labour cost variance	4,000 F
Overhead cost variance	<u>2,000 U</u>
Total	<u>\$ 3,000 U</u>

Was the company out of control? It is a judgment call as to whether the gap of \$3,000 is a serious issue or a relatively trivial one. But note that the \$3,000 net unfavourable variance conceals an unfavourable sales volume variance of \$15,000, which is almost certainly a cause for concern. This is why we need to break down the total variance into its components to analyze the performance of organizational subunits, such as Carlton Co.

2. (a) This unit should be controlled as a cost centre, specifically a “service” cost centre. The department has a responsibility to clean and maintain and the right to spend \$1,150,000 per month to do so, but the department does not produce a saleable product and has no revenue.
- (b) There is overspending of \$100,000 in the month, which represents a little under 10% of the budget of \$1,150,000. This would probably

### *Self-Study Problems*

be regarded as a significant amount. The department would have to (at the very least) explain why the overspending happened. Yes, on the face of it, the department is out of control.

On a “line-by-line” examination of the budget, we can see that the department actually underspent on each expense area except supplies, so spending on supplies (overspent by \$130,000) is the only problem. There may be a good explanation, such as an unexpected major repair to a piece of equipment or a building, but it is up to the unit manager to justify the overspending.

3. (a) Tim Horton’s customer satisfaction measures:
  - Percentage of customers responding “very satisfied” to a customer satisfaction survey
  - Number of written or e-mail complaints in the complaints log
  - Waiting time for orders, as measured by observation
- (b) Uber’s customer satisfaction measures:
  - Percentage of 5-Star trips offered by Uber drivers
  - Average rating of Uber drivers
  - Number of complains per hundred rides

## Discussion Questions and Problems

### Discussion Questions

1. What is the purpose of feedback in budgetary control?
2. Who should set a budget: the upper management of the organization or the employees who have to carry out the actual work?
3. How should a service department (such as a human resources department) be controlled?
4. How should a production department (such as a bottle-filling station in a food factory) be controlled?
5. How should a revenue centre (such as a sales team) be controlled?
6. How should a retail store that is a branch of a national chain be controlled?
7. What is the link between responsibility and control?
8. If a product is sold at a higher price than the budgeted price, is it out of control?
9. Is spending less than the budget always a good idea?
10. How can the organization create “goal congruence”?
11. What are the four sections usually found on a balanced scorecard?
12. How does a balanced scorecard improve the budgetary control process?

### Problems

1. You are the marketing manager for Eros Company. This fall you met with the chief operating officer and discussed the outlook for furniture sales next year. Although you both agreed that selling prices should not be raised, an increase in advertising and offering “buy now, pay later” to customers would result in modest increases in sales volume. Next year’s sales budget was agreed as follows:

Eros Company Next Year's Sales Budget			
	Furniture	Appliances	Total
Units	10,000	25,000	35,000
Unit price	\$500	\$200	
Budgeted sales	\$5,000,000	\$5,000,000	\$10,000,000
Marketing costs	\$1,000,000	\$1,000,000	\$2,000,000

#### Required

- (a) Is this an imposed budget or a participative budget?  
(b) If actual sales turned out to be \$10,500,000 and actual costs turned out to be \$2,050,000, would the marketing department be in control or out of control?
2. Below is a list of responsibility areas in the Eros Company:
  - (i) Furniture sales department
  - (ii) Marketing department
  - (iii) Chair manufacturing plant
  - (iv) Appliance delivery unit

*Discussion Questions and Problems*

- (v) Manager in charge of all retail outlets in Ontario
- (vi) Production manager
- (vii) Chief executive officer

**Required**

- (a) Identify each of the listed responsibility areas as a revenue centre, a cost centre, a profit centre, or an investment centre.
- (b) For each responsibility area, determine whether it should be controlled through a participative budget or an imposed budget. Explain why.
3. The human resources department at Eros Company has the following budget and actual results for the current year:

**Eros Co.**  
**Human Resources Department**  
**Budgetary Control Report for Current Year**

<b>Details</b>	<b>Budget</b>	<b>Actual</b>	<b>Variance</b>
Salaries	\$ 250,000	\$ 275,000	\$ 25,000 U
Salary-related costs (20% of base salaries)	50,000	55,000	5,000 U
Travel	100,000	125,000	25,000 U
Office expenses	200,000	220,000	20,000 U
Training programs	500,000	400,000	100,000 F
Total	<u>\$1,100,000</u>	<u>\$1,075,000</u>	<u>\$ 25,000 F</u>

**Required**

- (a) Based only on the bottom line (i.e., total expenditure), is the HR department in control or out of control?
- (b) Based on the individual line budgets, is the HR department in control or out of control?
- (c) Do you think the HR department has carried out the HR activities that it was expected to do?
- (d) Some organizations have “loose” control systems, and some have “tight” control systems. Does this matter in respect of how we look at the above data?
4. The Chair Plant at Eros Company had the following budgeted and actual data for this year, and you are the manager of that operation:

**Eros Co.**  
**Chair Plant — Budgetary Control Report for Current Year**

<b>Details</b>	<b>Budget</b>	<b>Actual</b>	<b>Variance</b>
Chairs produced (units)	10,000	10,600	600 F
Raw materials	\$200,000	\$205,000	\$ 5,000 U
Labour	100,000	108,000	8,000 U
Variable manufacturing overhead	200,000	205,000	5,000 U
Fixed manufacturing overhead	100,000	100,000	nil
Total	<u>\$600,000</u>	<u>\$618,000</u>	<u>\$18,000 U</u>

## Chapter 10 Budgetary Control

When you received the report, it had the following message from the management accounting staff: “There will be a meeting on Tuesday between us, you, and the production manager. At the meeting, you will be expected to explain why your area has overspent its budget by \$18,000.”

### Required

Prepare a report that explains the overspending in your area.

5. Eros Company budgeted to sell 25,000 appliances in 2021. This was based on an estimated total market of 2,500,000 appliances that were expected in Ontario and that Eros Company would get 1% of the total market. If, in 2021, the total number of appliances actually sold in Ontario was 2,750,000, what are the implications for the Appliance Division of Eros Co.?
6. You are given the following information for the Face-Care Products Division of Cygnet Inc.:

Cygnet Inc. Face-Care Products Budgetary Control Report of January (\$ millions)		
Details	Budget	Actual
Total face-care product market	\$10,000	\$12,500
Market share	5%	4%
Sales revenue	<u>\$500</u>	<u>\$500</u>
Variable costs		
Raw materials	\$ 80	\$ 95
Direct labour	150	150
Overhead	50	45
Marketing	<u>20</u>	\$300
Fixed costs		
Production	\$ 50	45
Marketing & administration	<u>10</u>	<u>60</u>
Total costs	<u><u>\$360</u></u>	<u><u>\$350</u></u>
Operating income	<u><u>\$140</u></u>	<u><u>\$150</u></u>

### Required

- (a) Is the Face-Care Products Division in control or out of control?
- (b) In any areas where the division has deviated from the original plan, identify which managers should be held responsible.
- (c) How much operating income do you think the Face-Care Products Division should have made in January?
7. Swan Co. is a cosmetics manufacturer. In 2021, the company had planned to make a net income of \$10,500,000 and has net assets of \$75,000,000. At the start of 2021, the company made a substantial acquisition, buying a manufacturing plant from a competitor. Actual net income at the end of the year was \$15,000,000, and actual net assets were \$100,000,000.

## Discussion Questions and Problems

### **Required**

- (a) What budgetary control measures should Swan Co. use?  
(b) How well is Swan Co. doing compared to its original plan?  
(c) Suppose that the investment in the new plant was made at the end of the year instead of at the beginning. As a result, although the assets increased to \$100,000,000, the company did not get the benefit of the acquisition during the year, and net income was only \$10,500,000. Reassess their return on investment situation in the light of these new data.
8. Pen Co. is a retailer of fine foods. The company has two outlets: Arnprior and Bethesda. Corporate expectations are for a 60% gross margin, an operating income of 10% of sales, and a return on investment of 20%. The most recent year's results are as follows:

**Pen Co**  
**Budgetary Control Report for the Year (\$ '000)**

Details	Arnprior		Bethesda		Total	
	Budget	Actual	Budget	Actual	Budget	Actual
Sales revenue	\$100	\$120	\$250	\$200	\$350	\$320
Cost of goods sold	40	45	100	75	140	120
Gross margin	\$ 60	\$ 75	\$150	\$125	\$210	\$200
Expenses	50	60	125	100	175	160
Operating income	\$ 10	\$ 15	\$ 25	\$ 25	\$ 35	\$ 40
Total assets	\$ 50	\$ 50	\$125	\$100	\$175	\$150

### **Required**

- (a) Is Pen Co. using the correct type of budgetary control measure for its operations?  
(b) Do the budgeted data support Pen Co.'s expectations?  
(c) How well, overall, did Pen Co. actually do in the year (were the budgeted expectations met)?  
(d) How well did the individual branches actually do in the year?
9. The balanced scorecard has been introduced to improve reporting by moving from purely budgetary control to an environment where control is exercised on information that is non-financial as well as financial, which covers wider aspects of the strategic mission (customers, internal operations, investment in the future) and the present and future, as well as the past. Comment on the suitability of the balanced scorecard for the following organizations:
- (a) A retail outlet such as Hudson's Bay Co.  
(b) An architect's practice  
(c) A manufacturing unit, such as the Chair Plant of Eros Co.  
(d) A sales unit, such as the box office of the Toronto Ballet  
(e) A not-for-profit organization, such as the University of British Columbia  
(f) A service unit, such as the HR department at Eros Co.

## Chapter 10 Budgetary Control

10. The following appears in a Google search of Leon's Furniture:

"Leon's Furniture offers high-quality furniture, major appliances and home electronics at guaranteed lowest prices, online and at locations across Canada."

Based on this quotation, suggest suitable objectives and measures to be included in a balanced scorecard that would be used to manage Leon's.

11. The Wellness Club runs franchised fitness centres throughout Ontario. Their latest balanced scorecard is as follows:

Wellness Club Balanced Scorecard Current Year			
	Measure	Target	Actual
<i>Financial perspective</i>			
Shareholder value	Share price	+ 2.0%	+ 2.0%
Franchise income	Franchisees' income	+ 3.0%	+ 2.5%
<i>Customer perspective</i>			
Market share	Customer retention	75%	80%
Customer satisfaction	Complaints	0	3
<i>Internal business perspective</i>			
Cleanliness	Survey	9/10	8.75/10
Efficiency	Administration costs	-5%	-4%
<i>Learning &amp; growth perspective</i>			
Training	Training hours	20	15

### Required

- (a) Does this balanced scorecard effectively capture the main strategic issues for this business?
- (b) According to this balanced scorecard, how well are they doing?
- (c) Does this balanced scorecard suggest any ways that they could improve?
12. Some organizations (e.g., McDonalds or Tim Horton's) run a tight budgetary control system, with rewards for meeting budgetary targets and (sometimes extreme) sanctions for missing budgetary targets. Other organizations (e.g., Google) use the budgets and actual results for information and play down the tight control side of things and operate on a loose control system. Which method is correct?
13. Flower House budgeted to sell in April 500 tomato gardening plants for \$17.50 each. As April was surprisingly sunny and warm, the sales manager of Flower House thought to capture this market opportunity and offer the tomato gardening plants for \$14.99 each. Customers bought 750 units.

*Discussion Questions and Problems*

**Required**

- (a) Calculate the sales volume and selling price variance.
- (b) Assuming that the manager of Flower House operates a revenue centre, was it a good decision to reduce the selling price?
- (c) Each tomato gardening plant contributes \$5 to profit when sold at \$17.50. Assuming that the manager of Flower House operates a profit centre, was it a good decision to reduce the selling price?



## Comprehensive Case #1

### **Balanced Scorecard for Air Canada**

In Chapter 8, we discussed Air Canada's mission, vision, and strategic priorities. To implement this strategy, the CEO plans to roll out an enterprise-wide balanced scorecard. You are asked to prepare this balanced scorecard for Air Canada. Focus on defining objectives, measures, and initiatives for Air Canada under each performance dimension of the balanced scorecard. You can leave the target-setting process to Air Canada's employees to ensure their buy-in.

Here is background information on Air Canada's strategy:

Mission: To connect Canada with the world

Vision: To be among the best global airlines

Four strategic priorities:

1. Implement cost reduction and revenue enhancing initiatives
2. Pursue international growth opportunities
3. Engage customers by enhancing their travel experience
4. Foster a positive cultural change inside the firm

## Comprehensive Case #2

### **Mississauga Meals**

Mississauga Meals specializes in complete tray dinners for long-haul airlines that fly out of Pearson Airport in Toronto. One of its most popular products is Meal #27. Meal #27 is a vegetarian delight, and it contains the following:

- 200 g of green salad
- 1 sachet of Thousand Islands dressing
- 1 crusty roll
- 1 small packet of butter
- 250 g of linguini
- 50 g of béchamel sauce
- 1 fruitcake
- 1 cutlery and condiment package
- 1 set of reusable tray and dishes

The standard labour time to prepare Meal #27 is three minutes, so a competent employee should be able to complete 20 units in one hour. Food assemblers are paid \$15 per hour. Company contributions to employment insurance, etc., add another \$1 to the wage cost. The standard labour cost per hour is therefore \$16.

The actual labour costs for last week were higher than budgeted. The actual labour cost per hour were \$14 (including the company contributions to employment insurance, etc.), and it took 3.9 minutes to prepare one meal. There were 5,000 meals prepared last week.

#### **Required**

The production supervisor has been asked to calculate the labour cost variance and show the effect of labour rate and labour efficiency on the total labour cost variance.

Based on the computation, the production supervisor needs to further provide an explanation of the likely causes of the unfavourable variance.

Remember: To isolate the efficiency and price effect, we compute the efficiency variance and price variance for labour. In the case of labour costs, the price variance is called rate variance because the company is not paying a labour price but a labour rate.