

## ACCA Performance Management (PM)

### Section C practice question – Budgeting and control

*Pre-session question for live revision session – attempt BEFORE the session*

*Time allowed: 36 minutes (20 marks). Attempt under exam conditions, then bring your answer to the live session where we will work through the approach together.*

#### VOLTIQUE CO

Voltique Co manufactures and sells accessories for electric bicycles, including batteries, chargers, lighting systems and security devices. The market grew rapidly for several years but is now attracting large, well-funded competitors, and both selling prices and input costs have become increasingly volatile.

Voltique Co prepares a fixed annual budget, broken down into four quarters. The budget is prepared between October and December each year by the finance team, using the previous year's budget as a starting point and adjusting it for expected inflation. Functional managers are not involved in setting the budget: they receive their targets in December, and the budget is not changed for the remainder of the year. Managers receive an annual bonus based on achieving the fixed budget.

During 20X4, quarterly sales targets became increasingly unrealistic as competition intensified. In the final quarter, the sales director authorised large price discounts in an attempt to reach the annual revenue target. The discounting badly damaged margins, and Voltique Co has found it difficult to restore prices to their previous levels. In addition, part-way through that year, the board committed to a \$4m expansion of production capacity, relying on the original budgeted sales figures. The additional capacity is currently under-utilised.

A new finance director (FD) has recently been appointed. She has said: 'Our budgets are out of date almost as soon as they are approved. From now on we will use rolling budgets, updated quarterly. We will also finally start using the data capabilities we have already paid for.' She is referring to the cloud-based enterprise resource planning (ERP) system which Voltique Co implemented last year. The system includes real-time sales dashboards, data analytics tools and access to external market data feeds, but so far it has only been used to process routine accounting transactions.

The original fixed budget for the year ending 31 December 20X5, for which the first quarter (Q1) has just ended, is shown below:

| <b>Budget Y/E 31 December 20X5</b> | <b>Q1</b>    | <b>Q2</b>    | <b>Q3</b>    | <b>Q4</b>    | <b>Total</b>  |
|------------------------------------|--------------|--------------|--------------|--------------|---------------|
|                                    | <b>\$000</b> | <b>\$000</b> | <b>\$000</b> | <b>\$000</b> | <b>\$000</b>  |
| Revenue                            | 10,000       | 10,400       | 10,816       | 11,249       | 42,465        |
| Cost of sales                      | (5,500)      | (5,720)      | (5,949)      | (6,187)      | (23,356)      |
| Gross profit                       | 4,500        | 4,680        | 4,867        | 5,062        | 19,109        |
| Selling and distribution costs     | (500)        | (520)        | (541)        | (562)        | (2,123)       |
| Administration costs               | (1,150)      | (1,150)      | (1,150)      | (1,150)      | (4,600)       |
| <b>Operating profit</b>            | <b>2,850</b> | <b>3,010</b> | <b>3,176</b> | <b>3,350</b> | <b>12,386</b> |

The budget was based on the following assumptions:

- (1) Sales revenue would grow at a fixed compound rate of 4% each quarter.
- (2) Gross profit margin would remain stable each quarter.
- (3) Selling and distribution costs would remain a fixed percentage of revenue each quarter.
- (4) Administration costs would be fixed each quarter.

The actual results for the first quarter (Q1) have just been produced and are as follows:

| <b>Actual results</b>          | <b>Q1</b>    |
|--------------------------------|--------------|
|                                | <b>\$000</b> |
| Revenue                        | 9,600        |
| Cost of sales                  | (5,568)      |
| Gross profit                   | 4,032        |
| Selling and distribution costs | (480)        |
| Administration costs           | (1,150)      |
| Operating profit               | <b>2,402</b> |

The difference between the actual and budgeted results for Q1 has been investigated. Revenue was below budget because a major competitor entered the market during the quarter. The sales director now considers that a compound growth rate of 2% per quarter, applied to Q1's actual revenue, is a realistic assumption for the next four quarters. The fall in the gross profit margin was caused by an increase in raw material prices which is expected to be permanent, so the actual Q1 gross profit margin is expected to continue for the foreseeable future. Assumptions (3) and (4) above remain valid.

### **New product line under consideration**

Separately from the figures above, Voltique Co is considering launching a new product, a smart bicycle lock, which would be produced in quarterly batches. The product has not yet entered commercial production and is not reflected in any of the budget figures above. Management is currently evaluating whether to proceed. A pilot batch produced solely for testing took 8,000 labour hours. The manufacture of the smart lock is highly labour-intensive and, because it would be a genuinely new product for the workforce, an 80% learning rate is expected to apply as cumulative batches are produced. Labour would be paid at \$12 per hour.

The finance director has observed that the smart lock illustrates why she wants to move to rolling budgets. Although the effect of learning could be reflected in the original annual budget, changes in production volumes or the actual rate of learning could quickly make the original labour cost forecasts unrealistic. Before the decision is made, she wants a reliable estimate of the labour cost for the early batches. The pilot batch should be treated as the first batch for learning-curve purposes.

For an 80% learning rate,  $b = -0.321928$

### **Required:**

- (a) Prepare Voltique Co's rolling budget for the four quarters ending 31 March 20X6. The smart lock is not yet in production and should not be included in this budget. **(6 marks)**
- (b) Calculate the labour cost of producing the second batch of the smart lock, to help the finance director evaluate the proposed launch. **(3 marks)**
- (c) Discuss three weaknesses of Voltique Co's current budgeting process. For each weakness identified, discuss the extent to which rolling budgets would address it. **(6 marks)**
- (d) Discuss the difficulties which Voltique Co may face in changing to the new system of rolling budgets. **(3 marks)**
- (e) Explain two ways in which the ERP system and its data analytics capabilities could be used to improve the budgeting process at Voltique Co. **(2 marks)**

**(Total: 20 marks)**