

Scenario 1

A local business which has produced a new electronic component have received a large order from a major company in the electronic industry and they anticipate substantial profits.

The following projected cash flow has been produced for the first six months in which components are to be produced:

	Jan £	Feb £	Mar £	Apr £	May £	Jun £
Bank Loan	200					
Payments from customers			60	120	120	120
Payments for machinery	(60)	(30)				
Payments to suppliers	(30)	(30)	(30)	(30)	(30)	(30)
Other payments e.g. Rent, wages etc	(20)	(20)	(20)	(20)	(20)	(20)
Bank loan repayments					(200)	

The bank has agreed to provide a loan commencing on Jan 1st to be repaid on May 31st. The company anticipates that customers will pay 2 months after the month of sale and suppliers will be paid 2 months after the month of purchase (e.g. the sales of £60,000 were made in January). The company's management is anxious about the loan repayment.

Budgeted Cash Flow Statement

The cash flow statement sets out the anticipated cash inflows and cash outflows over the coming months. Each column shows money coming into and out of the business in that month. The cash flow statement takes information from a variety of sources to show an overall picture of the monies flowing into and out of the business during the financial year.

The statement then shows the effect of each month's cash flow upon the business's cash balance/total. One essential rule to the cash flow statement construction is that money is shown when it is received or paid. Therefore it is important to emphasise that the profit of the business may be significantly different from the cash flow. The statement is intended to show information that is not available from examining the profit and loss account and balance sheet.

The statement concentrates on liquidity. The cash flow statement shows if there is sufficient cash available each month. Although the company may be profitable in the long-term, in the immediate short-term the company suffers cash flow difficulties as output continues to increase. In the short-term, cash flow plays a vital role and the business does survive without making a profit for some time. It should be noted that for future long-term survival and especially growth, profit is essential.

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MODULE: MANAGEMENT ACCOUNTING ASSIGNMENT 5 BUDGETING

BUDGETED CASH FLOW STATEMENT

Period: January - December 2003

MONTH	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Opening Balance	200,000	90,000	10,000	20,000	90,000	40,000	30,000	100,000	170,000	240,000	310,000	380,000
RECEIPTS												
Sales			60,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000
TOTAL RECEIPTS	200,000	90,000	70,000	140,000	210,000	80,000	150,000	220,000	290,000	360,000	430,000	500,000
PAYMENTS												
Machinery	60,000	30,000										
Suppliers	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Other payments	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Bank loan repayments					200,000							
TOTAL PAYMENTS	110,000	80,000	50,000	50,000	250,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
CLOSING BALANCE	90,000	10,000	20,000	90,000	40,000	30,000	100,000	170,000	240,000	310,000	380,000	450,000

Note:

The cash flow statement has been based on the assumption that receipts and payments from July to December will be the same as those in the month of June.

Memorandum

To: Managing Director
From: Financial Consultant

Subject: Improvements on Cash Flow Projection.

Clearly, the arranged bank loan will be sufficient to meet the cash flow requirements of the business. Armed with the cash flow information, the bank loan could perhaps be re-negotiated, or timing changes could be made to the payments. Capital expenditure could also be spread throughout the year.

The healthy cash surplus of £450,000 in December leaves the business with a favourable cash position at the end of the budget period. The bank loan re-payment in May leaves a negative bank balance at the end of the month of £40,000 which is carried forward into the following month.

As the bank loan re-payment in full predicts a negative cash balance in the month of May and is the only source of finance in at the beginning of the budget month, the business can take actions to avoid such problems. It can do this in several ways:

Speeding up cash inflows: This can be done by:

- **Negotiating shorter credit for customers:** if customers agree to pay for the goods earlier, cash is received earlier. In a very competitive market the length of credit may be a competitive issue. Discounts can be offered to encourage early payment of bills. Often, this policy will result in a loss of goodwill and problems with customers. There will also be very little scope for speeding up payments when the credit period currently allowed to debtors is no more than the norm for the industry. Currently the business allows customers up to two months credit which could be reduced to one month which would considerably help reduce the negative cash balance in the month of May. The business could suffer should customers take there business elsewhere.
- **Credit management:** businesses can improve cash flow by ensuring that payment is received on time. This is likely to involve writing reminder letters and making phone calls to persuade customers to pay promptly. Chasing debtors for early repayment may lead to long term loss of trade, as the debtors may buy from another business next time, but it can be an effective method of solving short-term cash flow problems.

Factoring: It may be possible to factor the debt. By factoring the company is able to receive 80% of the amount due within 24 hours of an invoice being presented. The factor then collects the money from the customer when the credit period is over. And pays the seller the remaining 20% less the factoring fees. These depend on the length of time before the payment is due, the credit rating of the creditor and current rates of interest. The fees are usually no more than 5% of the total value of the sale.

Delaying cash outflows: This can be done by negotiating longer credit for supplies - this postpones cash outflows, which can help the business, get through a difficult

period. The length of credit will often depend on the stability of the company. As the business currently pays all its suppliers immediately, creditors may not be reluctant to extend credit. The current re-payment period allowed by suppliers is two months which clearly should not be abused any further. Although the capital expenditure on machinery could be spread throughout the year which would again help reduce the negative cash balance in the month of May.

It should also be noted that payment to creditors can only be made if debtors pay on time. Should debtors not pay on time the company would be unable to pay off its creditors which could result in possible liquidity difficulties, therefore having a knock-on-effect on the whole of the business operations.

Cutting or delaying expenditure: Ways of decreasing expenditure include:

- Decreasing levels of stock: often cash flow problems arise because too much capital is tied up in stock. When we talk about stock we mean raw materials, work-in-progress and finished goods. Many firms are now implementing practices such as Just-in Time, and Kan Ban, which are designed to reduce capital tied up in stock and allow it to be used in more effective ways within the business;
- Cutting costs;
- Postponing expenditure: extending a credit period will help short term cash flow, this could be done by delaying paying bills for an extra 30 days, meaning there will be more cash in the bank for this period. Unfortunately this type of action may upset the businesses suppliers, after all they have their own cash flows to think of.

Finding additional funding to cover cash shortages: This can be done by:

- **Using an overdraft** - an overdraft is arranged with a bank. It allows the business to overdraw up to an agreed limit negotiated in advance. Overdrafts usually incur high rates of interest. As much as 6% - over base rate. An overdraft ensures the business only borrows money on the days it really needs it. It is a very flexible form of borrowing. This makes it suitable for small or short-term shortages of cash. Although it should only be used to fund short-term problems. A risky aspect of an overdraft is that the bank can withdraw the facility at any time and demand instant repayment. So, when a business needs it most, such as in a recession, it may find the bank has withdrawn it. The business could obtain an overdraft in order to substitute the negative bank balance in the month of May.

The business is showing a positive cash flow throughout the financial year, apart from the month of May when there is a negative balance due to the bank loan being repaid in full. The business could clearly finance the bank loan repayments via its current practices and use a wide range of actions mentioned to help reduce the negative cash flow in the month of May.

If the business was to reduce the credit period to its customers in order to subsidise payment for the bank loan in full, this policy will result in a loss of goodwill and problems with customers and even loss of trade. Obtaining further finances to cover

the negative cash flow balance in the month of May, such as an overdraft would result in the business having further liabilities and having to pay unnecessary interest charges on the amount borrowed. The business would end up paying far greater than the other latter options.

Therefore, the most viable option the business should select in order to finance the bank loan repayment would be to spread the cost of repayments throughout the budget year and thus avoid the negative cash flow balance in the month of May.

This way the company would not have to change any of its current practices or borrow any further cash from external sources and pay unnecessary interest in addition to admin charges in the event of late payment.

Measure	Result	Drawback
stimulate sales for cash - e.g. discount	increase sales reduce stock generate cash	may undermine pricing structure may leave stock low
sell off stocks of raw materials	reduces stocks	may leave low stocks
sell of any fixed assets that are not vital	releases cash	assets no longer available
sell off fixed assets and lease them back	releases cash assets still available reduces tax liability	increase costs company no longer owns assets
chase overdue accounts	gets payments in sooner	may upset customers
sell debts to a factoring company	generate cash proportion of income guaranteed	reduces income from sales cost can be high
only make essential purchases	cuts down on expenditure	may leave business without means to continue
extend credit with selected suppliers	allows time to pay	may tarnish credit reputation
negotiate extra short term loans	provides cash interest payments add to expenditure	has to be repaid.

Scenario 2

The owner of the Rembrandt Restaurant has produced the following budget information at the end of her financial year:

Last year's Budget

Sales	£
Meals	600,000 (40,000 meals)
Wine sales	200,000 (20,000 bottles)

Costs	
Food	120,000
Wine	100,000
Catering Staff	100,000 (5 chefs)
Waiters	100,000 (10 staff)
Fixed Costs	<u>250,000</u>
Total Costs	670,000
Net Profit	130,000

Other information:

- One chef produces 8,000 meals per annum.
- One waiter/waitress is required for 4,000 customers per annum.
- The material/food cost per meal is £3.00.

Selling prices have been adjusted to allow for inflation based on the retail price index but had not adjusted costs. The index for the year prior to the budget was 120 and the budget year was 123.6.

The actual results for the year were:

Sales	£
Meals	700,000 (46,000 meals)
Wine sales	200,000 (23,000 bottles)

Costs	
Food	142,200
Wine	120 200
Catering Staff	123,600
Waiters	125,400
Fixed Costs	<u>254,500</u>
Total Costs	765,900
Net Profit	134,000

The profit is less than expected.

Flexible Budget

Definition: A flexible budget is a budget that is a function of one or more levels of activity. Thus, the budget depends on one or more measures of activity volume rather than being fixed in amount.

Purpose: The purpose of a flexible budget is to develop an estimate or estimates of cost for one or more levels of activity. Activity levels are typically measured in terms of activity inputs, levels, or outputs. Such a budget is flexible in the sense that it depends upon a specified level of activity volume.

Common uses of flexible budgets include:

1. To estimate total indirect factory costs at different levels of activity to compute **budgeted** activity cost rates,
2. To budget total indirect factory costs at different levels of activity to compute **standard** activity cost rates,
3. To estimate **total** activity costs at different levels of activity to compute **budgeted** or **standard** activity cost rates.
4. To estimate total activity cost **for the level of activity achieved** for control and performance evaluation purposes,
5. To forecast total activity costs for **cash budgeting** purposes,
6. To forecast activity costs for **expense budgeting** purposes, and
7. To forecast total activity costs to **forecast earnings** under different scenarios.

The master budget, as company policy, is a fixed budget and will have been based on forecasts and predictions of sales at a certain level of activity, with the resulting costs incurred applicable to that level of sales. It is a fact of life, however, that budgets are not always achieved: sometimes sales are more than expected, sometimes less.

Comparisons of costs and revenue between the fixed budget, set at one level of output, and the actual results achieved at a different level, will therefore not be able to be made with ease. This is because of the behavioural nature of costs. Fixed costs, of course, could be compared, for they would not be expected to change in line with the changes in activity. But variable costs will, as they are deemed to have a linear relationship with sales.

To recognise this fact flexible budgets are often used. To achieve this, the fixed budget costs need to be analysed between fixed costs and variable costs, using marginal costing techniques. Actual costs incurred will also be analysed by cost behaviour. Then, using the actual sales units as the driver, the fixed budget will be reworked at the actual level of sales achieved. The budgeted variable costs will reflect the actual units sold; the fixed costs will stay the same as the original budget.

Revised Flexible Budget

Flexible Budget: Rembrandt Restaurant

Variable	Unit (£)	£ 000 (spare capacity)	£000 (no spare capacity)
Sales			
Meals	15.00	690,000	690,000
Wine	10.00	230,000	230,000
Costs			
Food	3.11	143,060	143,060
Wine	5.18	119,140	119,140
Catering Staff	20,000 (6 Chefs)	120,000	115,000
Waiters	10,000 (12 Waiters)	120,000	115,000
Fixed Costs		250,000	250,000
Total Costs		752,200	742,200
Net Profit		167,800	177,800

Notes:

Original Budget: 40,000 Meals
 20,000 Wine Bottles

Actual Budget: 46,000 Meals
 23,000 Wine Bottles

Flexible Budget: 46,000 Meals
 23,000 Wine Bottles

Unit selling prices were calculated as follows:

Meals = Sales £600,000 / 40,000 Meals = £15.00
 Wine = Sales £200,000 / 20,000 Bottles = £10.00

Selling prices have been
 adjusted to allow for inflation

Total Flexible Budget Sales:

Meals = 43,000 * £15.00 = £690,000
 Wine = 23,000 * £10.00 = £230,000

Unit cost prices were calculated as follows:

Food = Cost £120,000 / 40,000 Meals = £3.00
 Wine = Cost £100,000 / 20,000 Bottles = £5.00

Selling prices have not been
 adjusted to allow for inflation.

Thus leaving a spare capacity up to the next threshold of 48,000 customers.

Without any spare capacity the calculation would be as follows:

Catering staff: $46,000 \text{ Customers} / 4,000 \text{ Customers} = 11.5 * \underline{\pounds 10,000}$

$\pounds 115,000$

10 waiters would be employed for the full budget year and 1 would be employed for 2 quarters of the budget year (6 months).

Fixed Costs:

Fixed costs are not expected to change in line with the changes of activity and will therefore remain static irrespective of any changes in activity.

Variance Analysis

In each accounting period, actual results will be compared with the budget, and budget variances arrived at. This is the difference between the actual results and the equivalent budget figures. Variances enable 'management by exception' techniques to be operated so that management need look at those areas of performance and activity which are out of line with the budget. They therefore have more time available to deal with the problems and opportunities thrown up by the figures.

It is important to note that variances are referred to as adverse or favourable – not positive or negative. A favourable variance is one which leads to higher than expected profit (revenue up or costs down). An adverse variance is one which reduces profit.

Variance Analysis: Rembrandt Restaurant

Variable	Flexed Budget	Actual Results	Budget Variances
Sales			
Meals	690,000	700,000	10,000 F
Wine	230,000	200,000	30,000 A
Costs			
Food	143,060	142,200	860 F
Wine	119,140	120,200	1,060 A
Catering Staff	120,000	123,600	3,600 A
Waiters	120,000	125,400	5,400 A
Fixed Costs	250,000	254,500	4,500 A
Total Costs	752,200	765,900	13,700 A
Net Profit	167,800	134,000	33,800 A

Note:

Favourable = F

Adverse = A

The flexible budget with spare capacity has been employed for the variance analysis.

Comments on the Analysis

Sales in meals had a favourable variance, an increase of £10,000. This was due to the increase in the selling price per meal by £0.22 from £15.00 to £15.22. The increase in selling price could have been as a direct result of costs in producing per meal increasing.

Variable (Sales)	Flexible Budget selling price per unit (£)	Actual Budget selling price per unit (£)	Variance on selling price per unit (£)
Meals	$690,000 / 46,000 = £15.00$	$700,000 / 46,000 = £15.22$	0.22

Food costs also had a favourable variance, a decrease of £860.00, resulting from the reduction in purchase costs per meal by £0.02 from £3.11 to £3.09 per meal. Discounts on bulk purchases may have been received or supplies may have been purchased from an alternative supplier at a more competitive price. It's also possible that much greater care has been taken in preparing meals and purchasing quality supplies thus limiting the amount of wastage.

Variable (Costs)	Flexible Budget cost price per unit (£)	Actual Budget Cost price per unit (£)	Variance on cost price per unit (£)
Food	$143,060 / 46,000 = £3.11$	$142,200 / 46,000 = £3.09$	0.02

Wine sales had an adverse variance, a difference of £30,000 resulting from the decrease in the selling price per bottle by £1.31 from £10.00 to £8.69 per bottle. The reduction in price could have resulted as a result of less consumer demand due to a change in consumer tastes or to attract new market segment or new customers.

Variable (Sales)	Flexible Budget selling price per unit (£)	Actual Budget selling price per unit (£)	Variance on selling price per unit (£)
Wine	$230,000 / 23,000 = £10.00$	$200,000 / 23,000 = £8.69$	1.31

Wine costs also had an adverse variance, an increase of £1,060.00 from £119,140 to £120,200. This was a direct result of the increase in purchase costs per bottle from £5.18 to £5.22 per bottle. It's possible that there could have been a change in quantity purchased thus reducing the amount of discounts allowed or that suppliers had increased their selling price per bottle. It's also possible that there may have been a

change in the type of wine purchased. If the wine was imported, it's possible their could have been a movement in currency.

Variable (Costs)	Flexible Budget cost price per unit (£)	Actual Budget Cost price per unit (£)	Variance on cost price per unit (£)
Wine	$119,140 / 23,000 = £5.18$	$120,200 / 23,000 = £5.22$	0.04

Catering staff costs had an adverse variance, an increase in costs of £3,600 from £120,000 to £123,600. One chef produces 8,000 meals per annum and a total of 6 chefs were required, based on a spare capacity up to the next threshold.

Variable (Costs)	Flexible Budget cost price per unit (£)	Actual Budget Cost price per unit (£)	Variance on cost price per unit (£)
Waiter's	$120,000 / 6 = £20,000$	$123,600 / 6 = £20,600$	600.00

Costs per chef had increased by £600 per annum from £20,000 to £20,600. The increase could have been due to an increase in wages. It's also possible that each chef was unable to produce the required amount of meals due to poor morale/working conditions or a change in working methods thus resulting in the introduction of overtime or even another chef being employed.

Waiter's costs also had an adverse variance, an increase in costs of £5,400 from £120,000 to £125,400. One waiter is required for 4,000 customers per annum and a total of 12 waiters were required, based on a spare capacity up to the next threshold.

Variable (Costs)	Flexible Budget cost price per unit (£)	Actual Budget Cost price per unit (£)	Variance on cost price per unit (£)
Catering staff	$120,000 / 12 = £10,000$	$123,600 / 12 = £11,400$	1,400

Costs per waiter had increased by £1,400 per annum from £10,000 to £11,400. The increase could have been due to an increase in wages. It's also possible that more than 1 waiter was required for every 4,000 customers due to poor morale/working conditions or a change in working methods thus resulting in the introduction of overtime or even another waiter being employed.

Fixed costs had an adverse variance, an increase of £4,500 from £250,000 to £254,500. This could have been as a direct result in the change of fixed overheads, e.g. rent, rates and standing charges.

In selling 46,000 meals and 23,000 wine bottles the expected costs should have been £752,200. Instead, actual costs were £765,900 i.e. £13,700 higher than had expected. The reason for the increase being that costs were much higher than expected.

Net profit had an adverse variance of £33,800, mainly due to the increase in costs and the decrease in sales revenue from wines.

Incremental v Zero Budgeting

Incremental based budgeting is an approach whereby firms treat last year's budget figures as the main determinant of this year's budget. Minor adjustments will be made for inflation and other foreseeable changes. It is very unlikely that budgets will fall if this method is being used. The great advantage of this method is that very little time needs to be spent on the budget setting task.

The advantages of incremental budgeting are that it is less time consuming and it may be the best method for budgeting basic cost items. The disadvantages of incremental budgeting are that:

- it assumes that all current functions should be continued in their present form, and therefore carries forward all the current weaknesses, as well as strengths.
- it assumes that performance in the current period is a reasonable basis for predicting the future regardless of any positive or negative factors (external or internal) that may have affected the current performance.
- it makes no attempt to assess what the potential is.

Zero based budgeting is an approach which sets each department's budget at zero and demands that budget holders, in setting their budget, justify every amount they ask for. This helps to avoid the common phenomenon of budgets creeping upwards each year. The advantages and disadvantages of this method are set out below:

Advantages of zero budgeting:

- Helps to identify those departments that no longer need as large a budget. This can release funds for growth areas elsewhere within the organisation.
- Can work effectively as a way of cutting the entire cost base of the organisation. This may be necessary in times of recession.

Disadvantages of zero budgeting:

- In order to justify every pound of every budget, a great amount of management time is spent on the budget setting process. This time could be used, perhaps more effectively, elsewhere.
- Fails to overcome the age-old problem that some managers are more devious than others in trying to justify a larger budget than is really needed.

The best criteria for setting budgets are:

- To be clear about the firm's objectives and the strategy for achieving them. Departments with a key role to play in achieving objectives might expect an increase in the year's budget. Departments where no extra activity is required can expect their budget to be frozen, or perhaps cut back a little to release funds.

- To involve as many people as possible in the process. People will be more committed to reaching the targets if they have had a say in how the budget was set.
- To make the process as transparent as possible, so that everyone knows how decisions are reached.

Recommendation

When setting budgets it is often the practice to see what happened in the pre-budget year and, using this as the base, simply add extra costs to those figures, perhaps as a straight percentage increase to that year's actual costs. This is a common budget approach by Rembrandt Restaurant. This method of budgeting carries with it the likelihood of past excesses and inefficiencies being carried forward and added to from one year to the next, thus effectively projecting these negatives into the future as self-perpetuating routines.

The technique of zero based budgeting takes the view that every item of expenditure incurred in an activity needs to be re-valuated and reassessed from the beginning when a budget is being prepared. The previous year's results are thereby effectively ignored.

Each expenditure heading starts from '£0': the zero base; each component of cost created by the activity is evaluated and justified, and the budget for the expenditure heading is thus built up. Thus every part of the activity that generates cost will be analysed and alternative methods for completing each will be considered and evaluated.

Zero based budgeting can therefore take a long time to complete, with each and every activity needing to be broken down and the alternatives considered, costed and justified, with the budget slowly built up using the best considered alternatives and clearly a much better suited approach which should be adopted by Rembrandt Restaurant. Also with zero based budgeting the spare capacity consuming additional costs would have been eliminated.

There are several advantages to Rembrandt Restaurant in employing zero-based budgeting. It better equips management to make decisions when comparing actual program performance to the budget. Zero-based budgeting most often gives a better estimate of revenue projections and helps create a model for spending by breaking the habit of budgeting non-essential costs simply because they were incurred the prior year. The disadvantages of zero-based budgeting are that it is time-consuming and some categories in the budget are best estimated based on historical data because they are difficult to calculate from zero. For example, the cost of general supplies may best be calculated by examining existing data for historical usage combined with the projected rate of inflation.