



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Management Accounting

Budgetary control: cash and profit
budgeting

Trawsnewid Addysg; Trawsnewid Bywydau
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Overview

- All businesses need to plan for the future if they are to survive
- Budgeting is a technique widely used in business when planning for the future
- Budgeting is a management accounting method

Financial Accounting versus Management Accounting

Financial Accounting

- For external consumption
- Past activities
- Objectivity (audit)
- Precise (accurate?) data
- Regulations
- Legal obligation

Management Accounting

- For insiders
- Future activities
- Decision-making
- Flexibility (forecasts)
- No regulations
- No legal obligation

Cash and profit - 1

- The first thing to note is the difference between cash and profit
- Cash is the most liquid form of asset and is immediately exchangeable for goods and services
- In terms of profit, there are many different types. For example, profit before tax and interest, profit distributable to shareholders, retained profit etc.

Cash and profit - 2

- However, for our purposes here, we will focus on gross profit and net profit – terms normally associated with smaller businesses
- Gross profit is the amount that results from deducting the cost of sales from the sales figure. Gross profit is not distributable, it tells us how well the business has managed its buying and selling
- Net profit is the amount that results from subtracting the total amount of overheads (expenses) from the gross profit . Net profit may be distributable, but only if all the sales amounts have been realised

Realisation

- Realisation occurs when all sales have been paid for – that is both cash and credit sales.
- This the difference between cash and profit

What is a budget?

A budget is “a quantitative expression of a plan for a defined period of time. It may include planned sales volumes and revenues, resource quantities, costs and expenses, assets, liabilities and cash flows. A budget provides a focus for the organisation aids the co-ordination of activities and facilitates control.”

(Chartered Institute of Management Accountants (CIMA) 2005)

The benefits of budgeting

Promote forward thinking and identification of short-term problems

Budgets

Help co-ordinate the various sections of the business

Motivate managers to better performance

Provide a basis for a system of control

Provide a system of authorisation

3-month cash budget layout

	January	February	March
Balance b/fwd (A)			
Receipts:			
Total (B)			
Payments:			
Total (C)			
(A+B) – C = Balance c/fwd			

Worked example – 1 (receipts)

The following data has been extracted from the operating budgets of the Hereford Organisation for 2020. You are required to produce a cash budget for the three months ending December 2020.

Estimated Sales	Ticket Sales	Food & Beverage Sales	Sundry Sales
	£	£	£
September	4,000	2,950	80
October	4,400	3,200	130
November	4,600	3,400	160
December	4,500	3,150	180

Worked example – 2 (payments)

Estimated expenditure	Food & Beverage Purchases	Labour costs	Overheads
	£	£	£
September	1,180	2,325	1,395
October	1,216	2,560	1,535
November	1,360	2,720	1,632
December	1,197	2,600	1,560

Worked example (notes)

1	Ticket sales are made on a credit basis. The Hereford Organisation allow one month’s credit to customers						
2	All food and beverage and sundry sales are on a cash basis.						
3	Payments for food and beverage purchases are made one month after the month of purchase.						
4	Overheads are paid one month after they are incurred						
5	Labour costs are paid in the month to which they refer.						
6	Expenditure on new equipment costing £2,000 will be due for payment as follows: - £1,250 in October, £750 in December.						
7	The opening bank balance on 1st October 2020 is forecast to be £3,000						
8	Information relating to stocks of food and beverages is as follows: <table><tr><td>Stocks as at:</td><td>1st October 2020</td><td>31st December 2020</td></tr><tr><td></td><td>£620</td><td>£800</td></tr></table>	Stocks as at:	1st October 2020	31st December 2020		£620	£800
Stocks as at:	1st October 2020	31st December 2020					
	£620	£800					

Worked example (cash budget solution)

	October	November	December
Balance b/fwd (A)	3,000	3,945	6,434
Receipts:			
Ticket sales	4,000	4,400	4,600
Food and beverage sales	3,200	3,400	3,150
Sundry sales	130	160	180
Total (B)	7,330	7,960	7,930
Payments:			
Food and beverage purchases	1,180	1,216	1,360
Labour costs	2,560	2,720	2,600
Overheads	1,395	1,535	1,632
New equipment	1,250		750
Total (C)	6,385	5,471	6,342
(A+B) – C = Balance c/fwd	3,945	6,434	8,022

Worked example (profit budget solution)

- 1 Ticket sales are made on a credit basis. The Hereford Organisation allow one month's credit to customers
- 2 All food and beverage and sundry sales are on a cash basis.
- 3 Payments for food and beverage purchases are made one month after the month of purchase.
- 4 Overheads are paid one month after they are incurred
- 5 Labour costs are paid in the month to which they refer.
- 6 Expenditure on new equipment costing £2,000 will be due for payment as follows: - £1,250 in October, £750 in December.
- 7 The opening bank balance on 1st October 2012 is forecast to be £3,000
- 8 Information relating to stocks of food and beverages is as follows:
 Stocks as at: 1st October 2020 31st December 2020
 £620 £800

Estimated Sales	Ticket Sales	Food & Beverage Sales	Sundry Sales
	£	£	£
September	4,000	2,950	80
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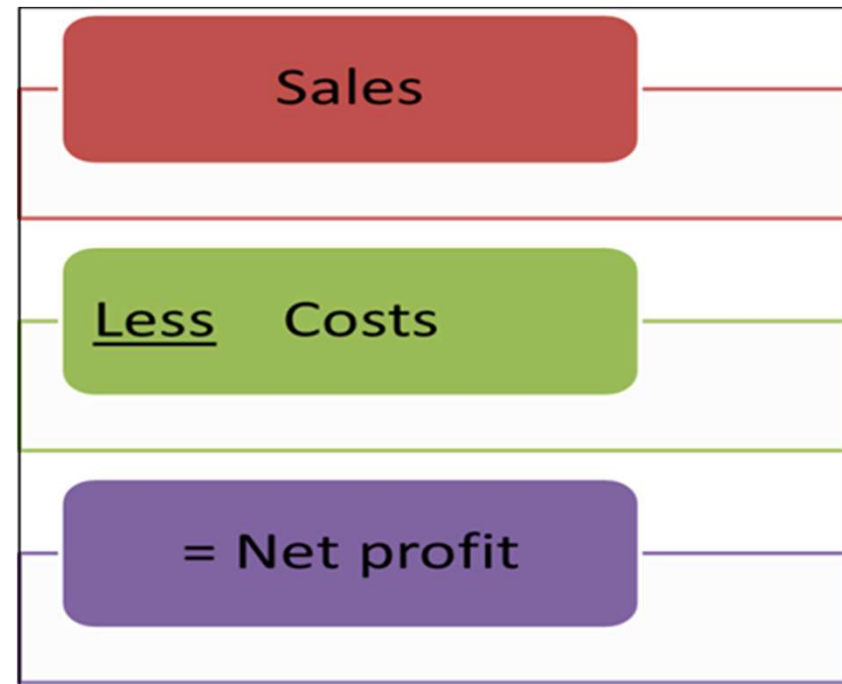
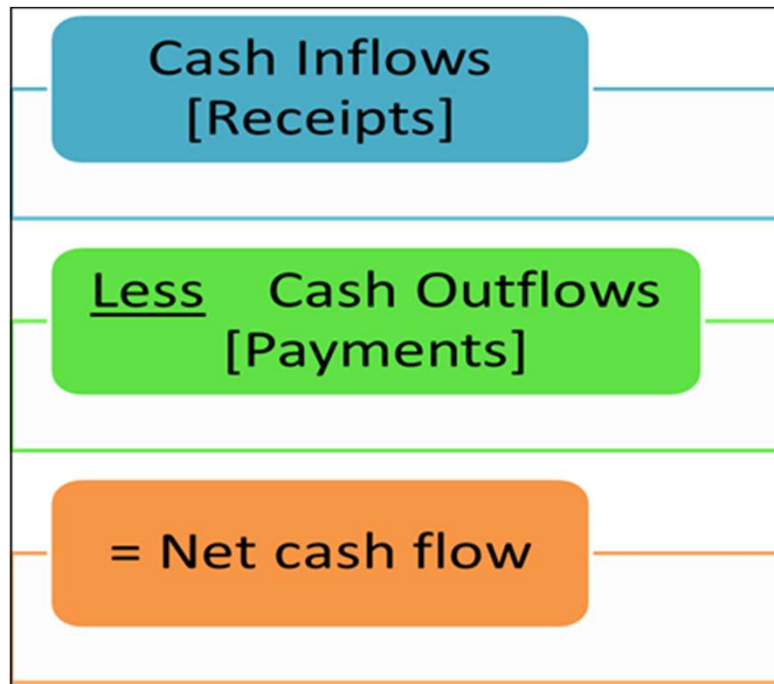
Cash and profit - 1

At the end of the financial year it is unlikely that the value of profit will be the same as the cash balance. Differences between cash and profit can arise for a number of reasons.

For example...

- If goods have been sold on credit, payment for the goods may not yet have been received but the sale will have been recorded in the profit and loss account
- Purchase of fixed assets will reduce cash balances but will have no effect on the profit which a company makes.
- Depreciation will reduce the profit but will have no effect on cash balances
- Businesses must therefore keep records of both their cash and profit position
- It is possible for a business to trade for many years without making a profit. For example, the Channel Tunnel was created in 1986 but recorded a profit for the first time in 2007
- However, it is possible for a profitable business to collapse if it runs out of cash

Cash and profit - 2



Cash and profit - 3

Sales	£10,000	20% cash 80% credit
Purchases	£4,000	Cash
Overheads	£3,000	Cash
New asset	£2,000	Paid for in January
Opening bank balance	£1,000	Cash

Cash budget	January (£)
Balance b/fwd	1,000
Receipts: Sales (20% cash)	2,000
TOTAL RECEIPTS	3,000
Payments: Purchases	4,000
Overheads	3,000
New Equipment	2,000
TOTAL PAYMENTS	9,000
Balance c/fwd	(6,000)

Profit and loss budget	January (£)
Sales	10,000
Less cost of sales: purchases	4,000
GROSS PROFIT (60%)	6,000
Less expenses: Overheads	3,000
NET PROFIT (30%)	3,000

Cash and profit – 3 (profit budget layout)

Profit and loss budget	(£)	(£)
Sales		
Less cost of sales: plus opening inventory (stock)		
less closing inventory (stock)		
Gross profit		
Plus other income:		
Less expenses and overheads:		
Net profit		

Constructing the profit budget- 1

- Constructing the profit and loss account for our worked example - Hereford Organisation
- The first thing to calculate all the relevant totals for the profit and loss budget period. These comes from the data in the question, so use the question sheet for your workings
- Other income are sales revenues without identified related costs of sales
- The next step is to calculate the cost of sales figures, which are also given in the question – purchases from the now totalled estimated payments, and opening and closing stock from the notes. Always remember to read *all* the information in the notes!

Constructing the profit budget- 2

- You are now in a position to calculate the gross profit
- Start with opening stock, add purchases, and subtract closing stock, making sure to follow the accounting layout protocols
- Now enter the other income items, and total
- Next comes the expenses for the period which include both a total for overheads and a labour expense
- Total these, again remembering again accounting layout protocols, and subtract their total from the total income figure (gross profit plus other income) to give net profit

1	Ticket sales are made on a credit basis. The Hereford Organisation allow one month's credit to customers		
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6	Expenditure on new equipment costing £2,000 will be due for payment as follows: - £1,250 in October, £750 in December.		
7	The opening bank balance on 1 st October 2012 is forecast to be £3,000		
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September	4,000	2,950	80
October	4,400	3,200	130
November	4,600	3,400	160
December	<u>4,500</u>	<u>3,150</u>	<u>180</u>
Totals	13,500	9,750	470

Profit and loss budget	(£)	(£)
Sales		9,750
Less cost of sales: opening inventory (stock)	620	
plus purchases	<u>3,773</u>	
	4,393	
less closing inventory (stock)	<u>800</u>	
Cost of sales		<u>3,593</u>
Gross profit		6,157
Plus other income: Ticket sales	1,3500	
Sundry sales	<u>470</u>	<u>13,970</u>
Total income		20,127
Less expenses and overheads: Labour costs	7,880	
Overheads	<u>4,727</u>	<u>12,607</u>
Net profit		7,520

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Worked example – cash and profit comparison

	October	November	December
Balance b/fwd (A)	3,000	3,945	6,434
Receipts:			
Ticket sales	4,000	4,400	4,600
Food and beverage sales	3,200	3,400	3,150
Sundry sales	130	160	180
Total (B)	7,330	7,960	7,930
Payments:			
Food and beverage purchases	1,180	1,216	1,360
Labour costs	2,560	2,720	2,600
Overheads	1,395	1,535	1,632
New equipment	1,250		750
Total (C)	6,385	5,471	6,342
(A+B) – C = Balance c/fwd	3,945	6,434	8,022

Profit and loss budget	(£)	(£)
Sales		9,750
Less cost of sales:		
opening inventory (stock)	620	
plus purchases	<u>3,773</u>	
	4,393	
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Plus other income:		
Ticket sales	1,3500	
Sundry sales	<u>470</u>	
Total income		<u>13,970</u>
Less expenses and overheads:		
Labour costs	7,880	
Overheads	<u>4,727</u>	
		<u>12,607</u>
Net profit		7,520

Cash budget with credit time lags

Sales	£10,000	20% cash 80% credit
Purchases	£4,000	Cash
Overheads	£3,000	Cash
New asset	£2,000	Paid for in January
Opening bank balance	£1,000	Cash

Cash budget	January (£)
Balance b/fwd	1,000
Receipts: Sales (20% cash)	2,000
TOTAL RECEIPTS	3,000
Payments: Purchases	4,000
Overheads	3,000
New Equipment	2,000
TOTAL PAYMENTS	9,000
Balance c/fwd	(6,000)

Profit and loss budget	January (£)
Sales	10,000
Less cost of sales: purchases	4,000
GROSS PROFIT (60%)	6,000
Less expenses: Overheads	3,000
NET PROFIT (30%)	3,000

Worked example - 2

The following data has been extracted from the operating budgets of the Worcester Organisation for 2020. You are required to produce a cash budget for the six months ended September 2020.

Notes:

- It is estimated that approximately 80% of income from hire of facilities is received on a cash basis and 20% is received after one month. All other sales are on credit and debtors take two months on average to pay.
- The credit period for the payment of suppliers' accounts is two months
- All food and drink purchases are on credit.
- Wages are paid as incurred.
- Overheads are paid on average one month after they are incurred
- New equipment and furniture is to be acquired in the month of May at a cost of £50,000 and this will be paid for in the following month
- The bank balance on 31st March 2012 is expected to be £5,000

	Income from Hire of Equipment	Income from Food & Drink Sales	Food & Drink Purchases	Wages	Overheads
	£	£	£	£	£
February	30,000	9,000	4,500	12,000	10,500
March	31,400	9,500	4,800	12,500	10,600
April	34,000	9,200	5,500	13,000	10,800
May	35,000	12,500	6,500	14,500	11,100
June	46,000	13,500	6,900	15,000	11,500
July	50,000	16,000	8,200	14,500	11,300
August	45,000	14,000	7,200	13,500	10,700
September	35,000	13,000	6,500	12,500	10,400

Notes:

- It is estimated that approximately 80% of income from hire of facilities is received on a cash basis and 20% is received after one month. All other sales are on credit and debtors take two months on average to pay.
- The credit period for the payment of suppliers' accounts is two months
- All food and drink purchases are on credit.
- Wages are paid as incurred.
- Overheads are paid on average one month after they are incurred
- New equipment and furniture is to be acquired in the month of May at a cost of £50,000 and this will be paid for in the following month
- The bank balance on 31st March 2012 is expected to be £5,000

	Income from Hire of Equipment	Income from Food & Drink Sales	Food & Drink Purchases	Wages	Overheads
February	30,000	9,000	4,500	12,000	10,500
March	31,400	9,500	4,800	12,500	10,600
April	34,000	9,200	5,500	13,000	10,800
May	35,000	12,500	6,500	14,500	11,100
June	46,000	13,500	6,900	15,000	11,500
July	50,000	16,000	8,200	14,500	11,300
August	45,000	14,000	7,200	13,500	10,700
September	35,000	13,000	6,500	12,500	10,400

		April	May	June
Balance brought forward	(A)	5,000	19,380	33,580
<u>Receipts :</u>				
Hire of Equipment – cash (80%)		27,200	28,000	368,00
Hire of Equipment – credit (20%)		6,280	6,800	7,000
Food & Drink sales		9,000	9,500	9,200
TOTAL RECEIPTS	(B)	42,480	44,300	53,000
<u>Payments :</u>				
Food & Drink purchases		4,500	4,800	5,500
Wages		13,000	14,500	15,000
Overheads		10,600	10,800	11,100
New Equipment				50,000
TOTAL PAYMENTS	(C)	28,100	30,100	81,600
Balance Carried Forward		19,380	33,580	4,980
(A + B – C)				

Using the data below, prepare a budgeted profit and loss account for the 6 months ended 30th June 2020

- All beverage sales are on a cash basis
- It is estimated that approximately 60% of income from hire of facilities is received on a cash basis and the remaining 40% is received after one month
- Suppliers of beverage purchases allow Malvern Venue Hire Company two months credit on their purchases
- Overheads are paid one month after they are incurred
- Labour costs are paid in cash at the end of each month
- New equipment costing £70,000 will be purchased and paid for in March.
- The company's bank balance on 1st January 2020 was forecasted to be £4,000
- Information relating to inventory of stocks of food and beverages is as follows:

Stocks as at:	1 st January 2020	30 th June 2020
	£1,000	£1,500

Worked example - 2

	Income from Hire of Facilities	Income from Beverage Sales	Beverage Purchases	Labour	Overheads
	£	£	£	£	£
November	20,000	6,000	3,000	8,000	7,000
December	22,000	6,200	3,100	8,400	7,000
January	24,000	7,200	3,600	8,400	7,200
February	28,000	8,400	4,200	9,200	7,200
March	32,000	9,600	4,800	10,000	7,400
April	36,000	10,800	5,400	10,000	7,400
May	32,000	9,600	4,800	9,600	7,400
June	26,000	7,800	3,900	8,800	7,200

Worked example – 2 solution

	Income from Hire of Facilities	Income from Beverage Sales	Beverage Purchases	Labour	Overheads
	£	£	£	£	£
November	20,000	6,000	3,000	8,000	7,000
December	22,000	6,200	3,100	8,400	7,000
January	24,000	7,200	3,600	8,400	7,200
February	28,000	8,400	4,200	9,200	7,200
March	32,000	9,600	4,800	10,000	7,400
April	36,000	10,800	5,400	10,000	7,400
May	32,000	9,600	4,800	9,600	7,400
June	<u>26,000</u>	<u>7,800</u>	<u>3,900</u>	<u>8,800</u>	<u>7,200</u>
Totals	178,000	53,400	26,700	56,000	43,800

Profit and loss budget	(£)	(£)
Sales		53,400
Less cost of sales: opening inventory (stock)	1,000	
plus purchases	<u>26,700</u>	
	27,700	
less closing inventory (stock)	<u>1,500</u>	
Cost of sales		<u>26,200</u>
Gross profit		27,200
Plus other income: Hire facilities		<u>178,000</u>
Total income		205,200
Less expenses and overheads: Labour costs	56,000	
Overheads	<u>43,800</u>	<u>99,800</u>
Net profit		105,400

Student exercise

You are required to prepare both a cash and profit budget for the three-month period ending the 30th of November 2020

Notes

- Beverages sales are sold and paid for in the same month
- 30% of wholesale purchases of beverages are paid in cash, 50% are paid with one month's credit, and 20% are paid with two month's credit
- Labour is paid one month in arrears
- 50% of overheads are paid for in cash, and 50% are paid with two month's credit
- Depreciation is charged at £1,600 per annum
- Sundry sales commission is paid one month in arrears
- Inventory is forecast to be £1,000 at the end of 31st of August 2020 and £650 at the end of 30th of November 2020
- The bank balance as at the 1st of September is projected to be £8,500

	Sales of beverages	Wholesale purchases of beverages	Labour	Overheads	Sundry sales commission
April	1,000	550	0	250	2,500
May	1,300	600	0	250	3,400
June	4,000	1,980	500	400	5,500
July	6,500	3,400	1,500	1,000	7,000
August	5,400	2,700	1,100	1,000	6,100
September	4,300	2,100	750	800	2,010
October	2,100	1,100	500	700	1,100
November	1,980	2,000	500	300	1,000

Depreciation - 1

- You will notice the term 'Depreciation is charged at £1,600 per annum' in student exercise – 2
- This is a topic that we do not need to study in any detail for this module, the only thing to note is that it is an accounting term that reflects the reduction in the value of an asset over time
- It is not a cash item, and only appears in the Profit Budget as an expense
- A simple calculation is shown on the next slide, which is taken from a short article explaining basic depreciation, that I will put separately on Moodle for you

Depreciation – 2 (example)

- A motor vehicle costs £10,000 when bought by its present owner. It has an expected useful economic life of 4 years and a residual (scrap) value of £2000
- £10,000 less £2,000 = £ 8,000. £8,000 divided by 4 = £2,000 per year
- The charge to the profit and loss account is therefore £2,000 each year
- The entries in the Statement of Financial Position (Balance Sheet) for the four years are shown in the table below

Year	At cost £	Accumulated depreciation £	Carrying value (NBV) £
1	10,000	2,000	8,000
2	10,000	4,000	6,000
3	10,000	6,000	4,000
4	10,000	8,000	2,000