CE29x Team-Project Challenge

Management Accounting

Professor Anthony Vickers
Room: 1NW.3.17 e-mail: vicka

with acknowledgements to Keith Primrose and Michael Fairbank

Acknowledgment

* This lecture is based on chapter seven of:

Bott, F., 2014, "Professional Issues in Information Technology", 2nd Ed

Introduction

- The previous two lectures looked at
  - The financial state of a company as a whole
  - The way this has to be presented to satisfy the requirements of the law and of stock exchanges.
- Such information is intended primarily for potential investors and trading partners.
- It is not very useful in the day-to-day running of the company.
- It is concerned with the past
- Managers need to know what is likely to happen in the future
  - Hence "Management Accounting"

Introduction (2)

- "Management Accounting":
  - i.e. how the managers of a company need to receive information about their company's financial performance.
  - So then can know what is likely to happen in the future
- This lecture is useful for you if you have ambitions to move into management at any point in your career
  - Or to run your own business, and plan your cash-flow correctly…
  - …so that you don't unexpectedly run out of money and go bankrupt

Introduction (3)

- Note that unlike financial accounts which are published to the public, management accounts are only visible within the company,
  - typically to the board and first-line managers.
  - They are used to monitor and control departments and to inform tactics.

E.g. The sales manager might produce a sales forecast for the year ahead in conjunction with the marketing manager (maybe on a rolling basis).

  - The sales manager would also produce a more detailed forecast for the next month/quarter.

Budget and Cash-Flow Forecast

- In this lecture we study
  1. Budget statements
  2. Cash-Flow forecasts

- Everything in these statements are *forecasts*
  - They are about the future
  - They may not come exactly true

1. Budget statement
2. Cash-Flow forecasts

As a simple example, we consider a company that assembles and sells computers.

(Forecast) Costs

(Forecast) Income

Total:

An Example Budget	
Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250
Sales Income	
Basic model (250 @ £595)	148,750
Advanced model (100 @ £795)	79,500
Professional model (50& £895)	44,750
Total Sales	273,000
Profit	27,750

First look at costs….

An Example Budget	
Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250
Sales Income	
Basic model (250 @ £595)	148,750
Advanced model (100 @ £795)	79,500
Professional model (50& £895)	44,750
Total Sales	273,000
Profit	27,750

Costs

Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250

Fixed and Variable Costs

Fixed overheads

Operating costs

Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250

- Some costs will be incurred regardless of the level of business conducted.
  - These are called Fixed Overheads (e.g. premises, professional fees, secretary's payroll costs, etc.)
- Some costs will vary as the level of business varies.
  - These are often called Operating Costs
- Together the make up the overall projected cost of running the business.

Owner's payroll Costs

Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250

- Assume the company is run by its owner:
  - For many reasons: tax; social security etc, owners should treat themselves as employees
  - Pay themselves a salary (rather than attempt to live on the company's profits).
  - This accounts for the item labelled 'Owner's payroll costs'.

Other overhead costs

Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250

- Most of the other overhead costs are obvious…

Professional fees

Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250

- The services of an accountant will be necessary
  - To help prepare the annual accounts
  - Possibly to give advice from time to time
- The advice of a lawyer may also be necessary from time to time.

Insurance

Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250

- Employers are legally required to carry insurance
  - To cover any claim against them for injuries suffered by employees during the course of their employment
  - Other insurance, e.g. against theft from the company's premises

Operating costs

Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
~~Technicians' payroll costs~~	~~74,000~~
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250

- Reminder: Operating costs vary as the level of business varies.
- The cost of components is a variable cost
  - It will increase if we sell more computers than expected
  - Or decrease if we sell fewer.

Operating costs

Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250

- The cost of the technicians can also be adjusted to match the sales volumes, (though less easily),
  - By recruiting another technician
  - Or making a technician redundant.

Next look at the forecast income ("Sales Income")....

An Example Budget	
Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250
Sales Income	
Basic model (250 @ £595)	148,750
Advanced model (100 @ £795)	79,500
Professional model (50& £895)	44,750
Total Sales	273,000
Profit	27,750

Sales Income

Sales Income	
Basic model (250 @ £595)	148,750
Advanced model (100 @ £795)	79,500
Professional model (50& £895)	44,750
Total Sales	273,000

* The sales income is an estimate
  * Based on how many computers we think will be sold and at what price.
  * Very difficult to be precise
  * Needs monitoring month to month

The bottom line ("Profit"):

An Example Budget	
Overhead Expenditure	
Owners Payroll Costs	52,000
Secretary's payroll cost (part time)	10,000
Costs of van (including fuel, insurance and depreciation)	7,500
Internet connection, telephone, postage etc.	1000
Advertising	2,500
Premises (heating lighting, rent, rates)	6,000
Professional fees	1,500
Insurance	750
Total overheads	81,250
Operating Costs	
Technicians' payroll costs	74,000
Bought-in components	90,000
Total Operating Costs	164,000
Total Costs	245,250
Sales Income	
Basic model (250 @ £595)	148,750
Advanced model (100 @ £795)	79,500
Professional model (50& £895)	44,750
Total Sales	273,000
Profit	27,750

Monitoring the Budget

- Budget forecast is a healthy +£27750 for the year

- The budget is used to monitor the company's performance
- On a month-by-month basis
- At the end of each month management must compare reality against forecast.
- If there are exceptions (e.g. where income is less, or expenditure more, than expected.), Management will
  - Investigate the reasons
  - Take appropriate actions if needed

Enough?

- Let's assume our little company is on track to make its budget
- It seems to be headed for a tidy little profit at roughly 10% of Sales after all costs are met
- So everything looks good
- Or does it?
- This company actually risks going bankrupt
  - Why?
  - Cash flow

1. Budget statement
2. Cash-Flow forecasts

Cash-Flow Forecasts

- A company may be very profitable but unable to pay its bills.
- For that reason, it may be forced into receivership.
- This apparent paradox typically arises because bills have to be met
  - In particular staff have to be paid,
  - Before the income they generate is received.
- In order to avoid this difficulty businesses need to prepare cash-flow forecasts
  - Estimates of the amount of money that will flow into and out of the company each month.

Example cash-flow forecast:

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000
Net monthly cash flow	(7,900)	(6,824)	(6,124)	(4,724)	(1,124)	1,376
Cumulative cash flow	(7,900)	(14,724)	(20,848)	(25,575)	(26,696)	(25,320)

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000
Net monthly cash flow	(7,900)	(6,824)	(6,124)	(4,724)	(1,124)	1,376

- This example only forecasts six months
- In practice, companies normally try to forecast twelve months ahead.

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000
Net monthly cash flow	(7,900)	(6,824)	(6,124)	(4,724)	(1,124)	1,376

- In this example, we will (unrealistically) assume:
  - the company is starting operations on 1st January.
  - the company is launching into its operations at full stretch from day 1

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000

- The figures in each cell show the amount of cash entering or leaving the company during that month
- E.g. The highlighted £750 figure:
  - Means that an insurance premium of £750 will be paid sometime in January.

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000

- The highlighted figure of £7,500
  - Means that £7,500 will enter the company's bank account in March as a result of trade customers paying invoices.

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000

- The timing of the payments is important
- It depends on commercial practice
  - e.g. Rents are normally paid quarterly, in advance
  - i.e. The rent payment will be made at the beginning of January and the beginning of April.

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000

- Components will probably be bought against credit accounts
  - Under such arrangements, invoices for components delivered in one month will be issued at the end of that month
  - Customers will be expected to pay the invoice within 28 days of its being issued.
  - Hence there is no forecast payment for components in January

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000

- Similar arrangements will probably apply to energy costs
  - Payments start a month late
  - But these will reduce as we move from the cold winter months into the warmer season.

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000

- We have assumed that retail sales are paid for immediately
  - And that these start at £4,000 rising to a steady level of £6,000 per month throughout the period.

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communications		83	83	83	83	83
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000

- Trade sales are typically paid for in the month following delivery.
  - We expect these sales to increase steadily during the period.

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payro						
Comm						
Insura						
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000

* How were the figures £91k and £111k calculated?

* The total cash received for the six-month period is estimated to be £91,000.
* Since trade sales made in month 6 will not appear in this figure, it looks as though the sales for the period are estimated to be around £111,000.

Seasonality

- So we forecast an income of £111,000 in the first 6 months.
- The budget forecast total sales of £273,000,
  - Leaving £162,000 to be earned in the second six months.
  - This is not unreasonable. Demand both from consumers and from businesses is traditionally at its highest in September, October and November

Budget (reminder):

Sales Income	
Basic model (250 @ £595)	148,750
Advanced model (100 @ £795)	79,500
Professional model (50& £895)	44,750
Total Sales	273,000

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payro						
Comm						
Insurance	750					
Components		4,000	7,000	10,000	10,000	10,000
Advertising		500		250		500
Road tax and insurance (van)	700					
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000
Net monthly cash flow	(7,900)	(6,824)	(6,124)	(4,724)	(1,124)	1,376
Cumulative cash flow	(7,900)	(14,724)	(20,848)	(25,575)	(26,696)	(25,320)

* How many "good" months are there of net cash flow?

* How is the net monthly cash flow calculated?

Cash-Flow Forecast

Month	Jan	Feb	Mar	Apr	May	Jun
Cash outflow						
Rent and property taxes	750			750		
Energy costs		425	425	325	225	225
Payroll costs	9,400	11,516	11,516	11,516	11,516	11,516
Communica						
Insurance						
Component						
Advertising						
Road tax an						
Professional fees			300			
Van operating costs	300	300	300	300	300	300
Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000
Net monthly cash flow	(7,900)	(6,824)	(6,124)	(4,724)	(1,124)	1,376
Cumulative cash flow	(7,900)	(14,724)	(20,848)	(25,575)	(26,696)	(25,320)

* How much initial cash in the bank does this company need to survive the first 6 months of trading?

* How is cumulative cash flow calculated?

The Issue

- Assuming that the estimates are realistic
  - Forecast shows that, at no time during the period, will the cash received come close to balancing the cash paid out.
  - At the worst point, at the end of month 5, the cash paid out will be £26,696 more than the cash received.

Monthly cash outflow	11,900	16,824	19,624	23,224	22,124	22,624
Cash inflow						
Income from retail sales	4,000	5,000	6,000	6,000	6,000	6,000
Income from trade sales		5,000	7,500	12,500	15,000	18,000
Monthly cash inflow	4,000	10,000	13,500	18,500	21,000	24,000
Net monthly cash flow	(7,900)	(6,824)	(6,124)	(4,724)	(1,124)	1,376
Cumulative cash flow	(7,900)	(14,724)	(20,848)	(25,575)	(26,696)	(25,320)

The Issue

Cumulative cash flow	(7,900)	(14,724)	(20,848)	(25,575)	(26,696)	(25,320)

- This has nothing to do with the company's profitability
  - It could well be that the company is on track to meet the budget (shown earlier) and make a respectable profit.
    - Remember £27,750 profit was forecast for the year
  - Nevertheless, the company will need to have at least £26,696 available in cash if it is to keep operating through this period.
  - Prudence suggests that it should plan on requiring £35,000 to allow for things going wrong.

Cash Requirement

- The amount of cash required to allow the company to continue to operate over a period is called its **cash requirement**.
- Also often referred to as **working capital**
  - As we saw in 'The Balance Sheet' when considering financial accounting, "working capital" meant "Net Current Assets"
  - = the difference between current assets and current liabilities
  - The two concepts are related but they are not identical
- The traditional way of funding a company's cash requirement is through a bank overdraft,
  - But banks are not always eager to lend to small companies and loans from other sources may be necessary.

Rolling Cash-Flow Forecast

- An initial cash-flow forecast is an essential part of a business plan
- A well-run company will maintain a rolling 12-month cash-flow forecast.
  - i.e. Each month it will produce a new cash-flow forecast for the next 12 months
- Such forecasts will provide early warning of any prospective cash shortage

Rolling Cash-Flow Forecast

- Banks traditionally respond well to a request for an increase in overdraft facilities
  - That is made well in advance
  - Based on detailed cash-flow predictions.

Summary

- Cash-flow forecasts and budgets may seem very much the same thing
- It is important to understand the difference
- Cash-flow forecasts deal with the flow of cash or its equivalents in and out of the company, on a month-by-month basis
- Budgets deal with income and expenditure, typically for a year at a time

Summary

- Assume our company delivers computers worth £100,000 to a large customer today and sends it an invoice:
  - This will immediately appear as income when we are monitoring the budget
  - However, it could be three or four months before the invoice is paid and the corresponding payment appears as cash
  - The difference can be crucial

Summary

* Lecture quiz will be released on Moodle.

* Next lecture:
    * Marketing