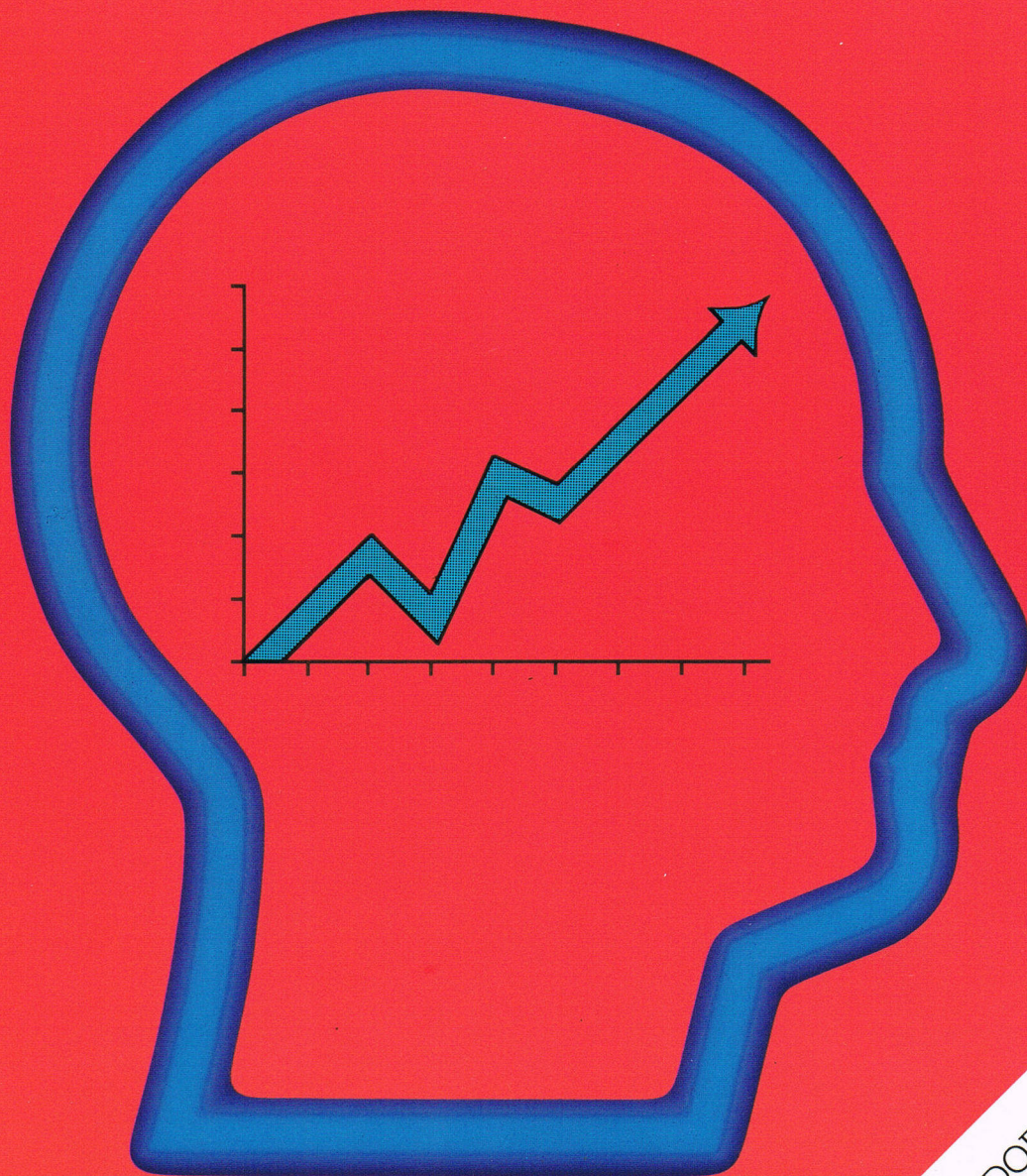


ENTREPRENEUR

The complete business start-up kit



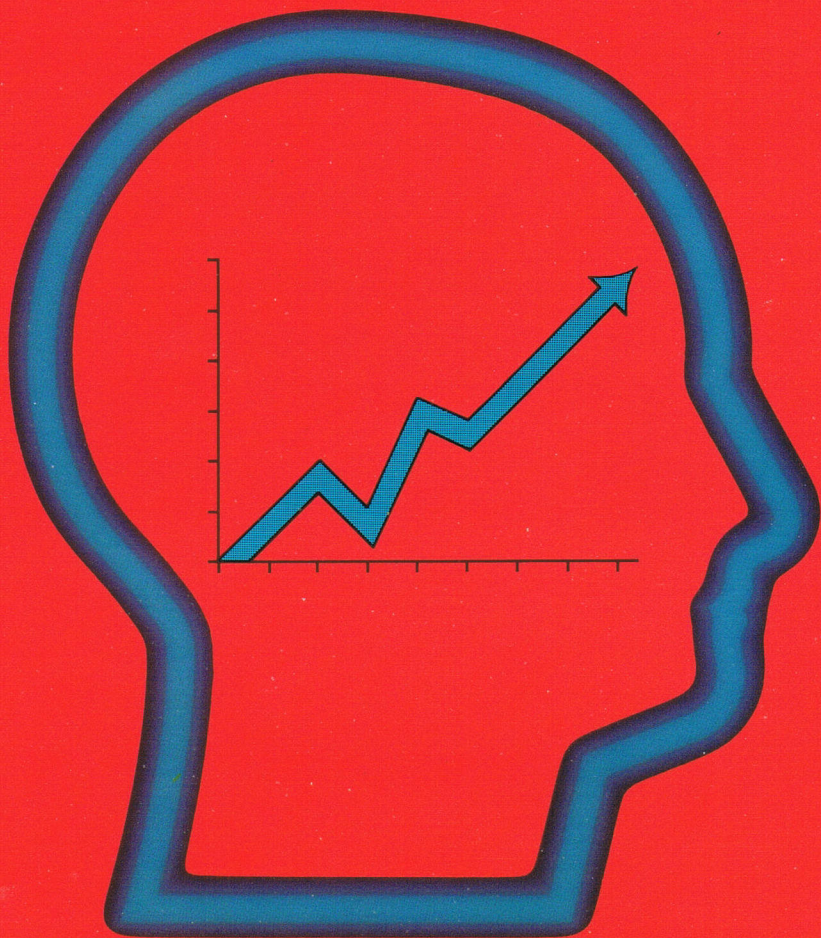
BRAINPOWER

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ENTREPRENEUR

The complete business start-up kit



BRAINPOWER

Application through learning

ENTREPRENEUR

The complete business start-up kit

Text book by David Juster
and Stuart Armstrong

Programs by Nikhil Sen
and Stuart Armstrong



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Getting started

Entrepreneur has been designed to be used by people with a wide range of backgrounds and skills. Many of you will therefore not need to work through the Teaching Program from start to finish in order to make use of the Applications Program to analyse your business idea. At this stage, you have a choice of the following courses of action available to you:

The Leisurely Approach

We suggest that the most appropriate use of **Entrepreneur** is to read through this Text Book from Chapter 1. As well as explaining the technical terms you will need to know in order to apply and understand the Applications Program, the book provides a comprehensive checklist of the many aspects and issues involved in starting a new business venture.

Straight Down to Business

The primary intention of **Entrepreneur** is to provide you with the facilities to perform a detailed financial analysis of your business plans. If you are familiar with the terminology and processes of accounting and book-keeping, you may wish to go straight into the analysis. In this case, turn to Chapter 10 of this Text Book, where you will find a detailed explanation of how the Applications Program operates.

Note

If you are not familiar with the procedures required to load the Teaching or Applications Program onto your computer, please refer to Appendix 5, where you will find specific instructions for using the different versions of **Entrepreneur**.

Contents

The book is laid out in a way which allows you to stand it upright in the box lid alongside your computer. For this reason, the pages are in an unusual sequence. Pages 1 to 50 start from the front of the book, whilst to use pages 51 to 100, just turn the book around and start from the back.

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Introduction

Welcome

Titles in the **BRAINPOWER** series are uniquely designed to harness the power of your computer to enable you to learn new skills in a simpler and more enjoyable way. The sophisticated interactive approach ensures that you can work at your own pace and, once you have mastered the topic, the Applications Program will continue to serve your needs. We have made every effort to create a course which is straightforward to use, but if you think that we could improve upon it, please write to us on the card included in the pack.

Entrepreneur is a complete learning and applications course designed to help you through the complex process of determining the viability of your new business venture. Your purchase consists of three elements;

- 1) The Text Book which you are now reading. Please bear in mind that you will be using it continuously in conjunction with the computer, and therefore it has been designed to stand upright in the box lid so that you can refer to it more easily.
- 2) The Teaching Program, which will be used to give you a full understanding of the concepts required to analyse a business start-up.
- 3) The Applications Program, which will perform an analysis of your own business plans.

You will find that the Teaching Program is not a simple tutorial on how to use the Applications Program. Once you gain an understanding of the material, you will feel confident to analyse start-up figures with or without your computer.

If you think that you already have a sound grasp of the accounting and finance principles required, then you may wish to try out the Applications Program immediately. If so, simply turn the book around, and find Chapter 10. There you will discover the detailed instructions for analysing your own start-up plans.

CHAPTER 1

The Teaching Program

1.1 Teaching Method

Before we move into the stage of actually learning anything about how to start a new business, we will quickly review how the computer is going to be used in conjunction with this book.

The basic information on accounting and book-keeping which you need to understand to take full advantage of the Applications Program is contained in Chapters 3 to 8. The teaching method employed uses the book to present the detailed explanations of each topic, and this is supplemented by demonstrations on the computer screen. Because of this approach, you will be referring from the book to the computer screen quite frequently. Therefore, we suggest that you stand the Text Book upright in the box lid, and arrange it alongside the computer screen. The pages have been numbered in a way to facilitate this approach. The maths used in the teaching process has been kept as simple as possible. However, if you encounter problems with it, or would like to know more business arithmetic "tricks", then another title in the **BRAINPOWER** series, **Numbers at Work**, will provide you with the answers.

1.2 Business Planning

You will find that Chapter 2 explains in some detail the various elements which must be combined to plan a business venture in a structured and rational way, and this is supplemented by the information provided in Appendices 1 and 2. We advise you to read through this chapter before you start working on the other parts of **Entrepreneur**. This is because it is essential for you to realise that the figures themselves will form just one part of a comprehensive business plan.

CHAPTER 2

Planning a Business

2.1 The Business Plan

For most people the ideas for their new venture will come together in bits and pieces. The idea for the product might come one day, its packaging another, and the marketing angle you feel will really get the message across will come on yet another day. Your idea will undoubtedly seem very attractive and full of potential. However, before you can get your project up and running, you must consolidate all of your ideas together. In doing so you will turn your business **idea** into a business **plan**, and it is this plan which you will follow to set everything in motion. The document you prepare as you assemble the ideas for your venture, your 'Business Plan', has three essential functions:

- 1) It provides a structure within which you can assemble and test all of the elements of your proposed business idea. As you develop the plan, many things will become evident during your research. Estimates of costs and timings will change. You may find that your concept of the size and shape of your market changes as you get more information. As you find out more about what your potential customers really want, you may think again about how you will sell or package the product. Don't ignore this information just because it doesn't conform to your original beliefs – use it to your advantage and be flexible enough to modify the plan as you go along. In general, the more effort you put into your plan, the easier the business will be to start and control.
- 2) You will use it to present your ideas to others, especially those people vital to your plan; particularly your bank manager and your accountant and solicitor if you have them. If you offer them a well thought out and well-presented plan in the first place, they will immediately be impressed. If you have done the background preparation thoroughly you will probably know more about your venture, its marketplace and the people who will buy your product or service than they will. Above all, if you demonstrate that you have put sufficient effort into your plan, they will have more confidence in you and your enterprise.
- 3) A good plan will enable you to monitor the business in its formative stages and as it begins to grow. You will have made many assumptions in the plan about how you expect things to happen. When you put your plan into action you will find that many of these will change, some by a little and some by a lot. A well thought out business plan will allow you to react to these changes and control your business.

Your Business Plan need not be a mammoth document, but it must be sufficiently detailed to do its job. That is to persuade people to help you get your idea in motion and your business off the ground; whether by lending you money, or giving you advice and support. The plan will have to be written out, but the supporting figures will be produced for you by **Entrepreneur's Applications Program**.

The following is a comprehensive list of elements you may wish to include in your plan. Not everything will be appropriate to your particular venture, but you should look carefully at each and check whether or not it is relevant.

2.2 The Introduction

This should be a statement of the objectives of your new venture and the background to how you arrived at your idea and why you are suited to run it. Make it short and crisp (no more than one page) to set the scene for the whole plan. The summaries in this section will be dealt with in greater detail in the body of the plan.

What is the structure?

Is it a Limited Company, or are you sole trader or in partnership with others?

Who will run the business?

- Will it just be you on your own? If so, what is your background?
- If there are others, will they help to manage the business or help to produce or sell the product or service? What are their backgrounds?

Who else has a financial interest in your venture?

- Have friends or relatives offered you financial help in setting up your business?

What is the general purpose of your business?

What specific products or services will you sell?

- Do you have more than one product to sell?
- Are you selling an existing product or service or developing something new?

Who will be your customers?

Why will people buy your products or services?

Have you identified specific customers; have you approached them, and what have been their reactions to your proposition?

What funding do you need?

How do you intend to finance the business?

- How much equity, term loan and overdraft?
- For how long?
- Do you need a 'holiday' on loan repayments?
- Will you provide any security?

2.3 The Product

You will already have a lot of confidence in your product or service. You will know what it will look like, what colour it will be and why it is going to be a world beater; others will not. They will want to know exactly what it is you are planning to sell. From your descriptions of the product and its advantages, others will form a picture of where it will fit in the marketplace and how it will perform against the competition.

What is it?

What is the product or service you intend to sell?

Are similar products or services already on the market?

- As other businesses are competition, so are other products and services.
- How many are around, how much do they cost and how are they sold?

What are the advantages of your product or service over the existing competition?

- Is it better, cheaper, faster, or with more facilities than its competitors?
- Is it filling a gap which nobody else has seen? If so, while the product may be very saleable, you may have more of a problem persuading people that they need it.

What are the disadvantages of your product or service over the existing competition?

- Knowing where your weaknesses are gives you strength because you can play up the strengths and play down the weaknesses.

What technological changes or developments will you make to your products over time?

- Will you be able to develop your product still further as you get more resources?
- A product which is technologically superior can find new markets or sell again into old ones.
- If you envisage doing this in the short term, make sure the resources needed are into your plan.

Is it yours to sell?

Are there any 'third party' rights to the product?

- Make sure, as best you can, that the 'rights' to the goods you wish to sell do not belong to someone else. They can be covered by any number of 'registrable rights' such as patents, registered designs or copyrights.

Can you protect your product with 'registrable rights'?

- The option of protecting your ideas or 'intellectual property' may be available to you as well. If you intend to market an invention or new design of your own, investigate whether or not you can secure 'rights' to it – before you start to sell it.

2.4 The Market

This section will demonstrate to you and others one of the most vital aspects of the plan; is there a market for the product, if so where is it and how large is it? As you prepare this section you will gain more and more important information which will help you to sell your products or services. You will begin to understand why some people in your business have found the recipes for success, and why others have failed. The more sound your knowledge of the market, the better you will be able to compete, and the easier you will find it to get people to buy whatever you are selling.

Where and what is your market?

Where is your market?

- Is it local, regional or national?

What is the overall size of your market? Is it growing, static or declining?

- How many potential customers are there; whether you plan to sell the product on a local, regional or national basis, try to find out how many existing customers there are in these areas and how much of your type of product is bought every year.
- information can be obtained from "trade" magazines, and from industrial research which can be found at your local or central library. Appendix 1 will give you more ideas on where to look.
- If you are concentrating on a particular part of the whole market, you should try to define your area of interest, the numbers of potential customers and their potential total purchases.

Why is the market growing, static or declining?

- The reason for the market's overall behaviour may give you further clues on how to sell your product.
- A growing market may present you with greater opportunities.
- If the market is static or declining you may have to think harder about how you will sell against your competitors who themselves are being squeezed.

Are technological developments likely to change the market?

- Is your product technologically superior to its competition?
- Are there technological developments on the horizon which may affect demand for your product or service in the foreseeable future?

Your Competitors

Who are your competitors?

- Competitors will almost certainly exist in some form or another, even if your product or service is superior; you should identify as many of them as you can.

Of all your competitors, which three pose the greatest threat to the success of your new business?

- From the total list you have defined above, decide which competitors are the greatest threat to your particular idea.
- Identifying these will help you develop a product and sales strategy which will enable you to compete more effectively.

What are the three major strengths of these competitors?

- Look at their products and the way they are sold. Decide which three factors give each of them their success.

- Do they compete by offering a better service, a lower price, or higher quality goods?

What are the three major weaknesses of these competitors?

- Which three things make them least attractive to their customers?
- Is it surly staff, higher prices, or long delays on goods which are ordered?

What are the three major strengths of your business?

- These are the reasons why people will come to you rather than your competitors; be sure they are real strengths and will attract the customers you need.
- Is your product or service filling a gap. Do you carry a better range of a certain item; do you intend to attract your customers in a different way to your competitors?
- Remember, this is a real opportunity for you to gain an edge on your rivals. You will probably have analysed all these competitive factors better than them!

What are the three major weaknesses of your business, and how will you overcome them?

- Be realistic and honest in this. You may have shabbier premises than your competitors, a less convenient site, or you may not be able to handle immediately all the work you are offered.
- Concentrate on ways of minimising these weaknesses, or turning them to your advantage.

If there seems to be an obvious gap to fill, why have others not seen it?

- Have you fallen into a trap; are things as simple as they seem?
- Beware particularly of thinking you will be successful by having a lower price – if you can undercut the prices of your competitors, why don't they use this tactic?

What are you going to do?

How will you position your product or service to take advantage of their weaknesses and your strengths?

- This is really a combination of all the above factors, but concentrate here on how you will sell your goods and how the customers will perceive yours as different and better.

How much will you charge for your product or service, and how did you arrive at this figure?

- A methodical analysis of pricing is contained in **Entrepreneur's Applications Program**.

How do others operating similar businesses arrive at their prices?

- Finding this out may not be as difficult as it seems. Asking is the easiest way. You may prefer to start by asking people in the same line of business but in a different geographical area.
- Reading trade publications and industry analyses will fill in many of the details.

What sales volumes do you need to achieve to break even?

- Discovering your break even point is easy using the Applications Program.

How sensitive is your break even point to the prices you intend to charge?

- The Applications Program will do these complex calculations for you. The answers will tell you how much any of the components of your venture will have to change before they begin to affect your profitability.

How will you sell your product or service?

- Will you sell direct to the public, through a wholesaler, or will you employ and run a sales force?
- This has important implications on the volumes you can expect to sell, the prices you have to charge, and who your customers are.

Who are the people you will be selling to?

- The people you sell to are your customers. They may not be the ultimate consumers of your service or product, but they are the people who will be placing orders with you and buying your products in the first instance.
- If you are selling direct, then the public are your customers. If you sell to wholesalers, distributors or retailers, then their buyers are your customers. If you are selling to commercial companies, then someone in their organisation will be making the buying decision and he or she will be your customer.
- Don't just think about this, compile a list of names starting from now – you will need them sooner or later anyway.

Who else has influence over these people?

- You may be able to influence the people who influence your customers. Think of everyone who may be able to promote your product and get your customers to buy it.

How will you make your potential customers aware of what you have to sell?

- This is the route to your customers.
- Will you rely on advertising, word of mouth, or personal visits?
- Whichever method you choose, make sure you can afford it in time and money – and make sure it will be effective and reach the right number of potential customers in the right timescale.
- Remember; if you don't make people aware of what you have to sell, they will never become customers.

How will you advertise the product and are you sure that this is the best way to reach your potential customers?

- Through the local press, national press, radio or TV? Think carefully about the best way to draw a potential customer's attention to your product. Beware of wasting money on inappropriate and ineffective advertising.
- Work out how many potential customers will be exposed to your advertisements. Then work out how many customers you need to break even. Now, think of how many customers will respond to your advertising and actually buy something. Is this figure at least as big as the number you need?
- Responses to advertising are a very small percentage of the number of people who will see the advertisements – usually much less than 1%.

How will you monitor your advertising to see if it is effective?

- It is no good advertising if you can't work out the effect it is having. Are the people who actually buy your goods doing so in response to your advertising?
- Which advertising produces the most customers and which the least?

Will you be able to make use of 'free' advertising through press coverage of your venture?

- Have you planned to tell the local or national newspapers about yourself or your products. This is not only 'free' advertising, but carries the 'endorsement' of the paper which prints it.
- Newspapers, radio and TV need news. Try and interest them in yours – you've nothing to lose.

How will you get your product or service to the customer?

- Will you sell your products across the counter or will you engage someone else to ship the product to the customer?
- If you are selling a service, will you travel to your customer's location to provide it?

- These are important considerations, partly because of what your customers will expect, and partly because someone will have to pay for this aspect. Have you included it in your budgeting?

What is the 'life cycle' of your product or service?

- Very few products or services become smash hits overnight. Most start off with modest sales, grow as more people become aware of them, then gradually decline. They decline either because most of the potential customers are satisfied, because someone else will sell them something similar but cheaper, or because someone comes on the scene with a newer and better project.
- The 'life cycle' of your product or service is very important as you will base your sales forecasts on it.

What sales volumes do you expect in the first three years and why?

- By applying a 'life cycle' to your product or products and deciding how many customers you can reach you will be able to estimate your likely sales volumes.
- Be as realistic as you can in this. Take into account the possibility of something failing or having less effect than you would like.

How long can you survive before you make a sale?

- The Applications Program of **Entrepreneur** will tell you when you begin to run out of cash.

How long is it before you reach your break even sales volume?

- The Applications Program will calculate the break even volume for you.

What are your legal obligations to support the product or service after you have sold it?

- You will almost certainly have some legal obligations after you have made a sale. You must know what they are.
- Will you offer after sales service? Can you cope and can you afford it?
- Investigate buying insurance to cover the more expensive aspects of this, such as consequential loss and other liabilities.
- If in doubt about this consult an expert, usually a solicitor. It may seem an extravagant waste of your scarce resources, but it could save you a lot of pain, heartache and money in the long run.

2.5 Human Resources

People are just as important as product. In this section you must work out in detail the skills you will need for all aspects of the business. You will realise in which areas you are deficient and have an opportunity to make provision for this. Your bank manager and other investors need to be convinced that you have mustered the capabilities and resources to run the business efficiently and to bring the goods to market. It is no good fudging the facts just to make the plan read well; the people may be the only concrete evidence you can produce at this stage, and your supporters will certainly wish to meet them. However good the product is, the show will grind to a halt if you don't have the right people.

What do you need?

What are the main skills you need to run your business?

- Who will manage the business?
- Who will sell the product?
- Who will answer the letters?
- Who will do the accounts?
- What skills do you need to produce the product?
- What skills do you need to advertise your wares?
- There will probably be many more than this short list. Write down all the skills you will need – in detail. You may not have to employ people with them, but if they are on the list you will surely need to find them from somewhere.

What have you got?

Do you have all the skills you have identified as necessary, and if not where will you get them?

- Write down names against the skills.
- Will the people you have named do the job well enough? Are they trained or competent for the jobs you have allocated?
- Learning "on the job" may be alright if you have the resources to "carry" someone for a while, but if the job is critical they may have to earn their keep straight away.
- It may not be necessary to take on employees to access certain skills. It may be cheaper and more effective to contract out some of the jobs.
- Do you really need to employ someone to type or someone to drive the van? Think hard about this; carrying excess labour can be as harmful as not employing a vital skill.

How will you recruit people with the skills you need?

- Have you planned how to get them? Do they live in the area?
- Have you set aside time to interview applicants until you find the right ones?

What are your skills and those of your business partners?

- If you are working with others, check that your skills are complementary.

2.6 The Implementation Timetable

Having decided all the things you need to do to start your business and begin to sell your products, now you must allocate times to the various activities you have planned. It will get you to think in more detail about how long each activity will take to organise, which activities can be performed concurrently, and what the various "milestones" along the way will be. You may find another title in the **BRAINPOWER** series, **Project Planner** will help you do this more quickly and efficiently.

What is the timetable between now and the time you intend to be in business?

- Take as much time and care to prepare this as you spend on your sales forecasts and budget estimates.
- List all the activities you know must be complete before you can start trading; then investigate how long it will take you to achieve them.
- This is not as difficult as it may appear and the best way of finding out quickly and accurately is to ask. Ask people who have set up similar businesses from scratch. How long did it take them to find their offices or factories? Having found them, how long was it before they could move in and begin to operate? How long will it really take you to get your telephone installed?
- Remember; you have to survive the set up period before you start to trade. And time is money.

Which elements in the timetable are critical, and what will happen if they take longer than you imagined?

- Take into account the things which are most likely to go wrong and work out how this would affect your plan in the worst case.
- Do you have the resources to cope if these things happen? What will you need and where can you get it?

Are there any recognisable stages at which you can abort your venture if events do not work out as you plan them?

- You should set targets for certain things to happen. Make them realistic and monitor them as you go along – but have them written in the plan.
- It may be unrealistic to expect to sell, say, 100 items in your first week. If you have sold none you should persevere and work out why not.
- If you have sold none by, say, the fourth month of operation and have tried your best to sell, it may be time to cut your losses and try your hand at something else.
- These targets will come in many shapes and sizes. But only if you know what to expect will you be able to react effectively.

2.7 Finance

You may have thought at the start that all that was needed to get your business going was to get some money and then get on with things. You should now realise that getting finance for your project is just one of the steps, albeit an important one. If you have organised the rest of the plan in depth and can present it with confidence you will stand a much better chance of finding the money you need. **Entrepreneur's** Teaching Program has been designed by experts to show you the importance of all the elements of the financial jigsaw and how to use them to your advantage. The Applications Program will take most of the hard work out of preparing this section of the plan, as well as answering many of the questions raised in other sections.

How much money do you need to start the business?

From which sources will it come?

- How much from you?
- How much from friends?
- How much from the bank – as overdraft or term loan?
- Will you provide security for the loan?
- Do you need a 'holiday' on loan repayments?

How much money do you need to keep the business going until money starts to come in?

- Use the Applications Program to calculate your cash flow, month by month for your first year and a half of trading.

How much money do you want and need from the business?

- This is never an easy question to answer, and your backers will be just as interested as you.
- Make sure you pay yourself enough. The bank manager and the other investors want you to concentrate on making the business a success; they will be concerned if they feel that you will be worrying about making ends meet at home.
- Don't take too much out. This will worry people as well; they may imagine that you are only borrowing to satisfy your personal requirements, and that you regard the business as a secondary interest.
- Remember, if you make the business into the success you believe it will be, then your rewards will come in time.

What are the assumptions you have made about your various costs?

- List them in this section so that others can tell at a glance how you have arrived at your final budgets and forecasts.

How sensitive is your profitability to changes in the various elements of your plan?

- **Entrepreneur** will calculate this for you.

What are the major risks you and your backers will have to accept if you proceed?

- You will be able to pick out the major risks from the financial data.

How can you minimise these risks?

- You should consider various ways of keeping these risks as low as possible.

What is the upside potential of your business?

- You should know what might happen if things go much better than expected. This is not as simple as it may appear. Growth can be difficult to manage and many small businesses get into trouble because they have not foreseen this and planned how to cope with it.

How will you control your financial position when the venture is running?

- By this stage you will probably have produced a very good plan. But you will need to implement certain systems to control your business once it is running.
- Another title in the **BRAINPOWER** series, **Cash Controller** has been written to make much of the internal controls you will require fast and simple.

2.8 Have you been honest?

On many occasions in this list you have been invited to set target dates, sales volumes and likely profits. You have been asked to look on the bleak side and work out what might go wrong. Many things can go wrong as you get your venture under way, and many will. Realising what they might be is a big step in being able to tackle and overcome them when they do crop up. Much of the satisfaction of running your own business and watching it grow is knowing that you have recognised problems and resolved them when others have been blind to them or have given up. Identifying these potential problems will not frighten your colleagues or the bank manager; quite the opposite. They will have far more confidence in your ability to run the business and keep it pointing in the right direction if they see that you are honest in recognising and admitting the risks.

Remember, the harder you plan, the luckier you get!

CHAPTER 3

Using Numbers

3.1 Keeping Track

You are planning to start a business with the ultimate objective of earning yourself money. Even if you see other benefits in being your own boss, if the business does not pay its way, you will not be your own boss for very long! Therefore, the most important task must be to keep track of the money; where it is and where it isn't; where it's coming from and where it's going to.

Keeping track effectively means writing the numbers down, and over many centuries, accountants have worked out some fairly efficient, if rather involved, ways of doing just that. The way we are going to record the numbers is to keep a continuous record of where the money has come from, and what it has been used for. This involves writing each amount down twice, because every sum of money comes from somewhere, and is used for something. The records we are going to keep are usually called "the accounts" or "the books", and because we are going to write everything down twice, the technique is called "double entry" book-keeping.

3.2 Double Entry

To demonstrate just how simple double entry book-keeping is, we will use the computer to show an example. Before we go any further, you will have to load the Teaching Program. You can do this by following the instructions for loading a program on your particular type of computer. If you have any problems, then refer to the program loading advice in Appendix 5 for assistance. Once the program is loaded, return to this text to find out what will happen next.

Let us imagine a new small business:

Joe Jackson lives in a coastal town which still has a fishing fleet. He has discovered that he can buy lobsters from the fishermen when they land for £6 each. He can then take them around the pubs in the town and sell them for £8 each; quite a handsome profit. However, he must buy a minimum of 20 lobsters before the fishermen will sell to him, and even then it is on a cash only basis. Therefore, he must have at least £120 in his pocket before he can do business.

To start the business, at least £120 is required. Fortunately, Joe has £150, which he contributes to the business. The money provided to the business by the owner or owners of a business is called the **equity**, and the business ultimately owes this money back to Joe. Initially, before trading

with the fisherman, the money is held by the business as cash. Therefore we can display the financial situation of the business as follows:

Money provided by the owner (Joe)	£150
Cash available to the business	£150

This is a double entry in the books of the business; it explains where the money came from and what has been done with the money (so far, nothing). Now press U and N on the computer keyboard to display this position.

You will see that the cash is shown on the top half of the screen under the heading of **ASSETS**. Assets are things that belong to the business. The money provided by Joe is listed as **Equity** under the heading of **LIABILITIES** on the bottom half of the screen. Liabilities are things that the business owes to other people, in this case, money provided by the person who started the business, Joe.

The business is now about to enter into its first transaction. Joe goes down to the quayside and buys 20 lobsters for £6 each, a total of £120. What does this look like in the books? Well, the business now owns 20 lobsters, which cost £120, and £120 of the cash is gone. Press 1 on the keyboard to see this transaction. You can see that £120 is subtracted from cash, and £120 is added to a new row on the screen called **Stock**. Stock is the name for things which the business has bought which it intends to sell. Press 2 to see the effect of the transaction in the figures. The right hand column displays the results; cash is reduced, and stock is increased.

3.3 Profit

If we are optimistic about Joe's business opportunity, we will expect that he is about to make a profit. But first we must recognise to whom this profit belongs – it belongs to the owner of the business. Thus if a business makes a profit, this money belongs to the owner; it is owed to the owner, in this case, Joe. Keep this in mind as we analyse the next transaction.

Joe sells his first lobster; he supplies the lobster in exchange for a payment of £8 cash. Press 3 to display this on the screen; £8 is received as cash, which is now owed to the owner as profit. However, this is not quite the end of the transaction; the stock of lobsters is reduced by 1, which cost £6. The stock is reduced by this amount, and so is the profit figure, because the profit only represents the extra money earned over the amount paid for the lobster. Press 4 to see the effect of this. You can see from this that each time an item is sold, there are two entries into the profit line; firstly the **revenue**, the money earned in the transaction, and secondly the original cost of the item. This will be studied in more detail in a later chapter.

The transaction can be summarised as follows:

Revenue from the sale of the lobster;	£8
Less the cost of the lobster;	<u>£6</u>
Profit on the transaction;	£2

3.4 The Balance Sheet

The display you see on the computer screen shows you the financial position of the business at any point in time. At the current instant, the business has assets of £38 cash and £114 worth of lobsters, and liabilities of £150 equity and £2 profits. The display on the screen is called a **balance sheet**. The balance sheet is a picture of the assets and liabilities of a business at any point in time.

CHAPTER 4

The Balance Sheet

4.1 Familiarity

We hope that by now you can see that a **balance sheet** is a fairly simple presentation of where the money is in a business at any point in time. It shows where the money has been used, and where it has come from. What we will do now is explain the common categories of **assets** and **liabilities** you are likely to come across. So far we have seen **cash** and **stock** as assets and **equity** and **profit** as liabilities. Profits may not appear at first sight to be a liability, but you must remember the context. If you own a business which is making a profit, you would quite correctly think of those profits as your personal asset. However, if the business is expected to pay those profits to you, from the point of view of the business, the profits must be a liability; money that the business owes to you. If it is an asset to you, it must be a liability to whoever owes it to you. What is an asset to the owner, is a liability to the business itself.

4.2 The Assets

We have already recognised **cash** and **stock** as assets; there are two other important types of assets which we should consider at this point. If Joe, the lobster merchant, finds that he needs a barrow to carry the lobsters around the town, he will have to spend some of the cash to buy one. Press B S to redisplay the balance sheet just after the sale of the first lobster. Now suppose that the next person Joe meets has a barrow for sale for £20. He buys the barrow. Press 1 to show this transaction. Joe spends another £20 of the cash, and the business now owns a **fixed asset** of a barrow which cost £20. It is called a fixed asset because it is an asset (something owned by the business) which it is intended to keep for a long time, for its own use, rather than to sell.

Now let us assume that Joe approaches the owner of a hotel, who wishes to buy 10 lobsters for a total sum of £80. However, he wants Joe to send him the bill, and he will not pay for two weeks. This is a common type of transaction between businesses, known as selling on **credit terms**. The £80 can be added to profit, because the lobsters have definitely been sold. The cost of the lobsters (£60) can also be deducted from the profit figure. However, Joe has not yet been paid. Instead, the business is owed £80. A new type of asset is invented to cover this situation. It is called a **debtor**. A debtor is someone who owes the business money. This is an asset because the £80 belongs to the business, even though it has not yet been paid. Press 2 to display this transaction on the computer screen. If we were to move forward in time to the day the hotel pays the

money, the transaction to enter is quite simple; the debtor entry is reduced to zero, and the cash is increased by £80. Press 3 to see the effect of this. However, this is some time in the future, so press 4 to change the figures back to the way they were.

4.3 Liabilities

Equity and **profit** have already been recognised as liabilities. There are two other important types of liability which we must consider. Later in the evening, Joe returns to the quayside, to discover that one of the fishing boats has arrived late. The fisherman has 10 lobsters, but there are no other customers to buy them. Joe offers to take them for £6 each, but says that he will not pay for them for 7 days. They are added to the stock of lobsters at a value of £60, but the cash does not have to be reduced to pay for them yet. Instead, we invent a new kind of liability, called **creditors**. A creditor is a supplier to whom the business owes money. The business owes the fisherman £60. Press 5 to show this transaction. At some time in the future, the money owed to the fisherman will be paid. When this happens, the creditors will be reduced, but so will the cash. There are always two changes for every transaction. Just think in each particular situation what the two entries must be.

The next day, Joe recognises that the business has opportunity for growth. He discovers that he can buy and sell a much greater number of lobsters each evening and make a far larger profit. Unfortunately, he does not have enough money to buy many more lobsters. Therefore, he goes to see his bank manager, to ask for a loan. The manager agrees, and lends the business £200 for one year at an interest rate of 12%, with monthly interest payments. This money increases the amount of cash in the business, but also increases the liabilities. The new liability is called a **term loan**, because it is lent for an agreed "term", or period of time. Press 6 to see the effect of this injection of cash.

4.4 Summary

The balance sheet is a picture of where the funds of a business are invested at any point in time (assets), and where the money came from (liabilities). We have divided assets and liabilities into the following key categories which will arise in almost all businesses:

ASSETS

Fixed Assets
Stock
Debtors
Cash

LIABILITIES

Equity
Profits
Term Loans
Creditors

There is one step remaining to complete the presentation of the balance sheet; we must add up the totals of the assets and liabilities. Press 7 to see the totals – note that they are equal; they **balance**. In fact, whatever transaction is added to the balance sheet, it will always balance, because every transaction has two entries, and the entries balance each other.

To check that you understand how it works, here is a series of further transactions to record on Joe's balance sheet. Consider how you think each one should be handled, then press the appropriate key to see the result:

- 1) Joe buys 20 more lobsters on credit at £6 each for a total sum of £120. Press 1.
- 2) He sells 25 lobsters at £8 cash each, a total of £200. Press 2.
- 3) Now he makes a cash purchase of another 20 lobsters at £6. Press 3.
- 4) Next, he sells 16 at £8 each on credit. Press 4.
- 5) The time has come to pay for the 10 lobsters he bought on credit for £60 (refer to section 4.3). Press 5.
- 6) The hotel owner who bought 10 lobsters for £80 (refer to section 4.2) now pays his bill. Press 6.
- 7) Finally, the first interest payment on the loan falls due (refer to section 4.3). Press 7.

CHAPTER 5

Making a Profit

5.1 What is Profit?

Profit is the amount by which the value of a business increases in a given period of time. In its simplest form, it is measured by subtracting the money spent by the business from the money earned by the business, and it is usually calculated on an annual basis. There are some complications to overcome before the profit can be calculated; and there are also a few more concepts to discuss. Press M P to redisplay Joe's balance sheet.

5.2 Expenses

So far, in Joe Jackson's business, we have reviewed two types of things on which he has spent money; **stock**, which are things he intends to sell, and **fixed assets**, which are things he plans to keep. There is a third group of things on which he must spend money, called **expenses**. Expenses are things which you do not actually sell, but which still get used up as the business continues to operate. For instance, Joe finds that he can sell more lobsters to the hotels and restaurants in the town, but to get their business, he must ring the managers on the phone each day to receive their orders. Eventually, he is going to get a telephone bill, which the business will have to pay. This is payment for something which he can neither keep nor sell; it is an **expense**. Similarly, Joe intends to pay himself a salary for running the business. This, too, is an expense item for the business.

Any purchase which gets used up by the business in a way which cannot be specifically related to individual sales is also treated as an expense. This includes administration costs, such as salaries and stationery; and marketing costs, including advertising and promotions.

When expenses are paid, they are deducted directly from the profits of the business. Press 1 to see how Joe's phone bill of £48 is handled on the balance sheet.

5.3 Depreciation

We have defined **fixed assets** as the things that the business buys to keep; Joe's barrow, for example. However, even the things we keep do not last forever. The barrow will wear out one day. Let us assume that the barrow will last 5 years, therefore it will be worth nothing after that time, and hence it must be worth a little less each year. The barrow cost £20. If we reduce its value by £4 each year, it will be worth nothing after five years. The amount by which we estimate that the value of a fixed asset reduces by each year is called **depreciation**. Usually, depreciation is expressed in the form of a percentage of the value of the asset; if we depreciate a £20 item by £4 per year, this represents 20% depreciation.

Take note that there is no cash involved in this reduction in value; Joe paid for the barrow in a lump sum when he bought it. However, it is the depreciation which we charge against the profits of the business, and not the original purchase price. This is because it would be unfair to reduce the profits in the first year by the full cost of the barrow, when it will be used to earn money for the business for five years. Depreciation is a way of spreading out the value of a fixed asset over all of the years it will be used in the business. In the same way that expenses are handled, depreciation is simply subtracted from the profit figure. Press 2 to make the first year depreciation adjustment on Joe's balance sheet.

Finally, before you start to list out the fixed assets of your new business, take note that whilst depreciation is a very fair way of spreading the value of an item over a number of years, it also involves some effort maintaining the records. Therefore do not bother to handle small items which could be classified as fixed assets in this way. Treat them as expenses instead.

5.4 Overheads

Expenses and depreciation are the main components of the **overheads** of the business. Overheads are the costs of the business which are not part of the product. Typically, they do not change when the level of sales of the business increases or declines. Just because sales are low in one month, you still get phone bills, rent is still due, the assets continue to depreciate. Hence, overheads are better described as **fixed costs**. They remain at a fixed level, regardless of the changes in sales volumes.

5.5 Direct Cost & Contribution

In Joe's business, each lobster costs him £6, and he sells it for £8. The £6 relates directly to the lobster he sells, and thus it is called the **direct cost** of the sale. If Joe wants to sell 10 lobsters, he buys 10; to sell 20, he buys 20. Thus the amount Joe must spend on lobsters depends upon how many he wants to sell; it varies with the sales volume, and thus the direct cost is also known as the **variable cost** of the business.

The difference between what Joe pays for each lobster and what he receives for each is the amount he earns for the business. We have called it **profit** in the previous chapters, but it is not true profit, because there are other costs to deduct first. Some texts will refer to the difference between what a business earns from sales and the direct cost of those sales as **gross profit**. However, it is better to think of it as a **contribution** towards the profits of the business. The contribution from the sale of a single item is usually called the **unit contribution**, whilst the contribution from total sales is called **total contribution**, or often simply **contribution**.

5.6 Raw Materials & Work In Progress

Joe Jackson now has a plan to expand his business:

As a result of discussions with restaurant owners, Joe has discovered a market for processed lobster meat. He sends some of his lobsters to a friend, who boils them for him, and then shells them and packs the meat into plastic containers. He charges Joe 50p for packing each container supplied by Joe. A lobster provides enough meat for two containers. Joe buys the containers for £5 per hundred, and sells the finished product for £6. The cost situation per container is thus as follows:

Cost of Lobster; $\frac{1}{2}$ of £6	=	£3.00
Cost of boiling & packing	=	0.50
Cost of container; $\frac{£5}{100}$	=	<u>0.05</u>
Total Direct Cost	=	£3.55
Selling Price	=	£6.00
Contribution	=	<u>£2.45</u>

Now Joe has different types of stock to account for. First, there are the uncooked lobsters, and the containers. These are **raw materials**. Then, there are the lobsters that are being cooked, shelled, and packed. These represent **work in progress**. Finally, there are the unsold cartons of lobster meat, called **finished goods**. Each time something is purchased for stock, or money is spent on processing it, that amount is added to the **stock** account. Each time a container of meat is sold, the amount of money spent on that container is deducted from stock. In this way, the stock account always represents the total amount invested in raw materials, work in progress and finished goods at any one time.

Let us examine some transactions in practice. Consider each one carefully, then press the key to see the change on the balance sheet:

- 1) 200 containers are purchased on credit for a price of £5 per hundred, a total of £10. Press 3.
- 2) 15 lobsters are boiled and shelled, and the meat is packed into 30 containers. Joe pays £15 cash for this to be done. Press 4.
- 3) Joe sells 20 containers of meat on credit for a total of £120. Remember to take account of the direct costs involved. Press 5.

Now, the balance sheet should appear as follows:

BALANCE SHEET	Init Figs	Change By	New Figs
ASSETS			
Fixed Assets	20		20
Depreciation	-4		-4
Stock	133	-71	62
Debtors	120	120	240
Cash	253		253
SUB TOTAL	530	49	579
LIABILITIES			
Equity	150		150
Profit	50	49	99
Term Loans	200		200
Creditors	130		130
SUB TOTAL	530	49	579

5.7 The Profit & Loss Account

Well, now we have defined enough components to explain to you how to write out a **profit and loss account**. Here are the 7 simple steps involved:

- 1) Calculate the total revenue – all the money paid, or owed to the business by customers.
- 2) Calculate the direct cost of the goods sold to raise the revenue found in step (1).
- 3) Subtract (2) from (1) to determine the contribution from sales.
- 4) Determine the expenses and depreciation for the period of trading.
- 5) Subtract expenses and depreciation from the contribution.
- 6) Subtract any interest payments made from the figure found in step (5).

- 1) Subtract any tax which will be due on the figure found in step (6). The result of this is the **profit** for the period.

There are two important points to note:

- 1) The cost of fixed assets is not mentioned at all. They only appear as a percentage of their cost via the depreciation entry.
- 2) Money spent on stock is only included as a cost on the profit and loss account if the stock is sold. A business can spend large sums of money building up stock which remains unsold, but it will not show here.

However, even though fixed assets and unsold stock do not affect the profit figure, both do appear on the balance sheet.

How would a profit & loss account of Joe's business appear at this point? Press 6 to display an empty account on the screen. Now we can work through each of the steps listed above;

- 1) Total revenue = $£8 + £80 + £200 + £128 + £120 = £536$; press 1.
- 2) Total direct costs = $£6 + £60 + £150 + £96 + £71 = £383$; notice that there is a direct cost associated with each revenue item. Press 2.
- 3) Contribution equals $£536$ minus $£383 = £153$; press 3.
- 4) Expenses; only the phone bill of $£48$; press 4.
- 5) Depreciation; $£4$; press 5.
- 6) Interest payments; $£2$; press 6.
- 7) There is no tax to pay yet, so just press 7 to get the final figure. Note that $£99$ is the same figure that we had on the balance sheet under "profit".

In fact, the profit & loss account is simply a summary of all of the changes made to the profit line on the balance sheet during the trading period. If you have a record of the changes made to the balance sheet, the profit & loss account is already prepared.

5.8 Break Even Analysis

From the explanation above, you will recognise that the profit of the business is calculated by subtracting the fixed costs of the business from the contribution achieved by selling the product. If the contribution is greater than the fixed costs, you have made a profit. If, on the other hand, the contribution is less than the fixed costs, you have made a loss. Between these two extremes lies the point where the contribution exactly equals fixed costs. If a business achieves this point, where it makes no loss and no profit, it is said to **break even**. It is very important for you to know the point at which your business will break even.

Let us examine the relationship between these two elements; fixed costs and contribution. They determine profit thus:

$$\text{Profit} = \text{Contribution} - \text{Fixed costs}$$

and hence profit is zero when:

$$\text{Fixed costs} = \text{Contribution}$$

We can imagine this relationship in the form of an old-fashioned scale balance – press 1 to display one on the computer screen. If we calculate our fixed costs, we can load them on to one of the scale pans. Press 2. The balance now tips down to the left, and the indicator points into the **loss** zone. As we sell units of our product, each unit produces some amount of contribution. We sell more and more, adding the contribution to the right hand scale pan. Press 3. If we sell enough, the scales balance exactly, and the indicator shows that the **break even** point has been reached. As more product units are sold beyond this point, the contribution is added to the pan – press 4, and the indicator moves into the **profit** zone.

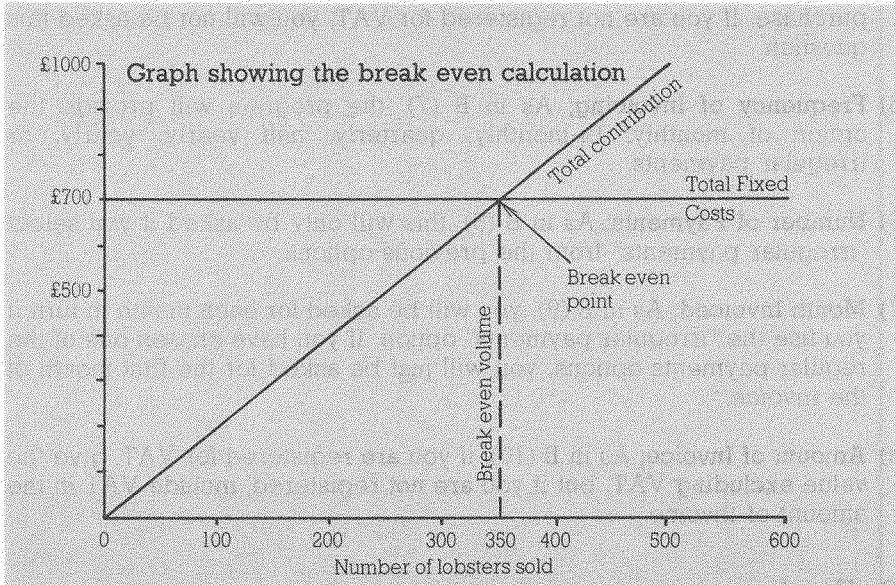
For a particular business situation, where the fixed costs and the unit contribution are known, there can be only one point where the scales will balance – only one break even point. This occurs when:

$$\text{Number of Product Units Sold} = \frac{\text{Total Fixed Costs}}{\text{Unit Contribution}}$$

If, for instance Joe's lobster business has fixed costs of £700 per year, and the unit contribution per lobster is £2, then break even occurs when:

$$\text{Number of Lobsters Sold} = \frac{£700}{£2} = 350 \text{ Lobsters}$$

If he sells 349 lobsters, he makes a loss, but if he sells 351 lobsters, he makes a profit.



There are three parts of the equation, and thus three things which can be changed which will modify the profit figure. Any of the following can be applied to increase profits:

- 1) Reduce the fixed costs.
- 2) Increase the number of units sold.
- 3) Increase the unit contribution, which can be done by either increasing the selling price; or reducing the direct cost.

This may sound like common sense, but it is surprising how often a business needs to find ways of increasing profits, and forgets to check all of these alternatives. You must also take care to note the possible relationships between items. For instance, if you decide to reduce fixed costs by reducing spending on advertising, this may also cause your sales volume to decrease. If the volume reduction has less effect than the saving on advertising, this move would make sense. If it had more effect, your profit would fall.

Another option open to you could be to increase prices, thus increasing unit contribution. Sales volume would probably fall, but the total contribution could rise.

CHAPTER 6

Having Enough Cash

6.1 Back to the Balance Sheet

If Joe wants to know how much cash he has in the business, he can look at the **cash** line on the balance sheet, and he can see the answer immediately. Of course, this will only be true if Joe records every transaction on the balance sheet as it happens. This is why it will be essential for you to maintain accurate, up-to-date records when your business is established. There are a number of different ways to do this, ranging from a simple cash book to a sophisticated computerised accounting system. It is inappropriate for us to suggest the best method for your particular business; you should seek advice from your bank manager or accountant. However, whichever system you choose, the objectives will be the same; to enable you to examine the financial situation of your business at any time you wish. Press **CH** to display Joe's balance sheet on the computer screen. You can see exactly how much cash the business has, how much profit it is making, what stock it has to sell, and what the business owes to others.

6.2 Profit & Cash

Profit is not the same as **cash**. It is absolutely essential that you understand this, because it is often the failure to recognise the difference which leads new businesses into difficulty. We can demonstrate a situation where a firm is running at a loss, but still has cash, and another with profits and yet no cash. For a business to survive, it must have profits *and* cash. The movement of cash into the business and out of the business is called the **cash flow**. Consider the following situation:

Kevin Lang buys home computers for £100 each on 60 days credit, and sells them for £95 cash. He starts with £100, and buys and sells 10 in the first month, and business is so good that it expands by 2 computers each month thereafter. His overheads are £200 per month, half in cash, and half on 30 days credit. What happens?

We will examine both the profits of the business, and the cash situation. The way to analyse cash is to consider the flow of funds into the business and out of the business one period at a time. This is called the **cash flow** for obvious reasons.

First, let us look at his profits for the first year. He sells a total of 252 computers in the first year (10 + 12 + 14 + 16 + etc.):

Revenue;	$252 \times \text{£ } 95 = \text{£}23940$	
Less direct costs;	$252 \times \text{£}100 = \text{£}25200$	
Contribution;		–£ 1260
Less overheads;	$12 \times \text{£}200 = \text{£ } 2400$	
Final Result;	<u>£ 3660</u>	Loss

That doesn't look too good, but now we will work through the 12 month cash flows. Remember that he pays for half of his overheads one month later, and all of his stock two months later:

Month	Com- puters Sold	Opening Cash	Cash Sales	Cash Over- heads	Credit Over- heads	Credit Stock	Closing Cash
1	10	100	950	–100	0	0	950
2	12	950	1140	–100	–100	0	1890
3	14	1890	1330	–100	–100	–1000	2020
4	16	2020	1520	–100	–100	–1200	2140
5	18	2140	1710	–100	–100	–1400	2250
6	20	2250	1900	–100	–100	–1600	2350
7	22	2350	2090	–100	–100	–1800	2440
8	24	2440	2280	–100	–100	–2000	2520
9	26	2520	2470	–100	–100	–2200	2590
10	28	2590	2660	–100	–100	–2400	2650
11	30	2650	2850	–100	–100	–2500	2700
12	32	2700	3040	–100	–100	–2800	2740

This picture looks much better; after 12 months trading, the cash in the bank has increased from £100 to £2740. However, this type of cash situation can only be sustained by continued growth. If Kevin's sales now level off to 32 computers per month, with no growth, he will run out of cash in 9 months time. If you press 1 on the computer keyboard, the end of year balance sheet will be displayed. From this you can see both elements; profit and cash, and thus you can easily recognise the problems Kevin will encounter.

Now we will put Kevin in a different position:

He now buys computers for £75 and sells them for £95, but to get them at this price, he must pay cash. He also discovers that he must give his customers 30 days to pay. Assuming that the business grows at the same rate as before, what will happen?

Take another look at his profits for the first year. He sells a total of 252 computers, as before:

Revenue;	$252 \times \text{£ } 95 = \text{£}23940$	
Less direct costs;	$252 \times \text{£ } 75 = \text{£}18900$	
Contribution;		<u>£ 5040</u>
Less overheads;	$12 \times \text{£}200 = \text{£ } 2400$	
Final Result;		<u>£ 2640</u> Profit

This looks much healthier, but what about the cash? Take a look:

Month	Com- puters Sold	Opening Cash	Credit Sales	Cash Over- heads	Credit Over- heads	Cash Stock	Closing Cash
1	10	100	0	-100	0	-750	-750
2	12	-750	950	-100	-100	-900	-900
3	14	-900	1140	-100	-100	-1050	-1010
4	16	-1010	1330	-100	-100	-1200	-1080
5	18	-1080	1520	-100	-100	-1350	-1110
6	20	-1110	1710	-100	-100	-1500	-1100
7	22	-1100	1900	-100	-100	-1650	-1050
8	24	-1050	2090	-100	-100	-1800	-960
9	26	-960	2280	-100	-100	-1950	-830
10	28	-830	2470	-100	-100	-2100	-660
11	30	-660	2660	-100	-100	-2250	-450
12	32	-450	2850	-100	-100	-2400	-200

This profitable business has to run with an overdraft for the entire year; a much less attractive cash position than shown in the previous figures. The reason for this is that Kevin now has to pay his supplier for stock before he receives the money from selling it. The balance between creditor terms, debtor terms, and the growth rate of the business changes the relationship between profit and cash. Press 2 to see the balance sheet. This time, the profitability is clear, but there is a cash problem.

6.3 Working Capital

What Kevin's new business needs is additional cash at the beginning, until there is enough profit available to cover the daily cash requirements of the business. The cash you need on a day to day basis to cover the purchase of stock and the difference between the credit terms you get on your supplies, and the credit you give to your customers is called **working capital**. To start any business, you need enough money to cover the purchase of fixed assets and to cover the working capital requirements. To finance his business, Kevin needs more funds. If he found another £600 of his own money, and obtained a loan of £500, the balance sheet would look a lot healthier. Press 3 to take a look. A profitable business opportunity, well presented to the bank, should have no problems raising finance.

As mentioned in the last section, the relationship between profit levels and working capital is based on the balance between creditor and debtor terms, together with the need for stock and the effect of the growth rate of the business. The following table may help to explain:

When these factors are:	High	Low
No. of days credit given to debtors	Increases WC	Decreases WC
No. of days credit offered by creditors	Decreases WC	Increases WC
Amount of stock required	Increases WC	Decreases WC
Growth rate of business	Increases WC	Decreases WC

Hence, a business which gives no credit, only pays creditors in 90 days, has no stock and which is not growing will have very low working capital requirements. On the other hand, a business which has to buy everything for cash, is building up large stocks, gives credit terms to customers, and is growing rapidly, will face large working capital requirements. This latter position is usually the one in which a new business will find itself.

The Applications Program will perform a month by month cash flow analysis for you, so that you can see how much cash the business will require. However, it is important that you are honest with the credit terms you use. For instance, you may think it reasonable for suppliers to give you 30 days credit, but often they are unwilling to do this for a new business, unless guarantees or even cash advances are lodged with them. On the other hand, you may decide to offer your customers, say 45 days credit. But, just because this is what you offer does not mean that they will actually pay in this period. See if you can find out how long people in your industry have to wait for payment – it may be longer than you think!

CHAPTER 7

Value Added Tax

7.1 What is V.A.T.?

Value Added Tax (V.A.T.) is a tax levied by the Government on most purchases of goods and services by most people. It is a form of purchase tax, which at the time of writing stands at 15% of the value of the purchase. For the time being, we will ignore the fact that some items do not attract V.A.T., and we will look at how it is applied in general.

When a business sells something, it is required to add V.A.T. to the price it charges. The V.A.T. it collects in this way is then paid to Customs & Excise, who receive it on behalf of the Government. Consider the following trading situation:

Nick Potter buys TV sets from a wholesaler for £240 each, and sells them for £300, making £60 gross profit on each sale. These prices all exclude V.A.T. He must now add 15% V.A.T. to the selling price:

$$£300 + 15\% \text{ of } £300 = £300 + £45 = £345$$

He then owes the £45 to Customs & Excise.

However, this is not the end of the analysis; when the wholesaler sold the TVs to Nick, they added V.A.T. to the price they charged him:

$$£240 + 15\% \text{ of } £240 = £240 + £36 = £276$$

Nick has already paid £36 V.A.T. to the wholesaler.

Therefore, Nick claims back the V.A.T. he has already paid from Customs & Excise. He does this by subtracting what they owe him from what he owes them:

$$£45 - £36 = £9$$

Thus, he only pays £9 direct to Customs & Excise, and this happens to represent 15% of the profit he made on the deal. You could have calculated the net V.A.T. to be paid by calculating V.A.T. on his gross profit:

$$15\% \text{ of } £60 = £9$$

The profit Nick made can be considered to be the value he added to the price of the goods, and this is where the name **Value Added Tax** comes from; each trader collects the tax on the value he adds to the product.

7.2 Recording V.A.T.

The tax which Nick adds to what he sells is called **output tax**; it is the tax on his output. The tax Nick paid on the TVs when he purchased them is called **input tax**; a tax on his inputs. The tax owed to Customs & Excise is the difference between the two:

$$\text{tax owed} = \text{output tax} - \text{input tax}$$

If Nick owes money to Customs & Excise, they can be considered as being a creditor. However, they are such an important creditor, that it is appropriate to give them a line of their own on the balance sheet. We will review an example to see how this works.

We will consider Nick Potter's business situation just before he buys his first consignment of TV sets. He has invested £1000 of his own money, and has borrowed £1000 from the bank. All of the money is sitting in the company bank account. Press **V T** to display the balance sheet at this point.

Now he visits the wholesaler and purchases 6 sets for cash:

$$\begin{array}{r} 6 \times \text{£}240 = \text{£}1440 \\ \text{plus } 15\% \text{ V.A.T.} = \underline{\text{£ } 216} \\ \underline{\text{£}1656} \end{array}$$

How should this appear on the balance sheet? Press **1** to show the transaction. We could add the £1656 to stock, and deduct it from cash, but this is not quite correct; the TVs only cost £1440, the other £216 is tax. This is money now owed to Nick by Customs & Excise. They owe Nick money, and so they are a debtor. Press **2** to modify the entry. The transaction is now technically correct, but because we know that soon we are going to owe Customs & Excise money, we could deduct this from what we will owe them in anticipation. Press **3** to modify the transaction again. The V.A.T. is now listed against the V.A.T. account as a negative amount. This means that, instead of Nick owing V.A.T., he is owed some V.A.T.

Now, Nick sells 5 TV sets to a cash customer for £300 plus V.A.T. each:

$$\begin{array}{r} 5 \times \text{£}300 = \text{£}1500 \\ \text{plus } 15\% \text{ V.A.T.} = \underline{\text{£ } 225} \\ \underline{\text{£}1725} \end{array}$$

This transaction increases his cash by £1725, increases his profits by £60 per set (£300), reduces his stock by £240 per set (£1200), and increases the V.A.T. due by £225. Press 4 to add this transaction to the balance sheet. You can see that the net result is that he only owes Customs & Excise £9 at present, and he has a healthy cash balance of £2069.

7.3 Payment of V.A.T.

V.A.T. is not paid out to Customs & Excise every time you sell something. What you must do is keep track of the amount of V.A.T. you collect as output tax, and the amount you pay as input tax. Every three months, you submit a statement, confirming the totals of each, together with a cheque for the net amount owed. If they owe you money, then this is paid to you in due course.

When Nick pays his V.A.T. bill, the transaction will simply reduce cash and V.A.T. due by the same amounts – press 5 to display this.

7.4 Registering for V.A.T.

If your business is going to have a turnover of less than £18,700 per year and less than £6,200 in any one quarter, you do not have to register with Customs & Excise as a trader. If you are not registered, you do not have to charge V.A.T. on what you sell, but neither can you claim back the V.A.T. which you pay on the goods and services you buy. You do not have to register until you start selling things, but it may be in your interest to register as an **intended trader** if you are planning to spend substantial start-up sums on VATable purchases before you begin trading.

If you do not reach the turnover levels which require you to register, there can be benefits in registering. This is particularly so if you are planning a business which produces something upon which V.A.T. is not charged. You are certain to buy some supplies on which you have to pay V.A.T. and, as a registered trader, you can reclaim the V.A.T., even though you do not collect V.A.T. on your own sales.

The V.A.T. scene is very complex, so before you make too many detailed plans, it is important that you seek advice from an expert, such as an accountant, or your local business advice centre. Refer to Appendix 1 for suggestions.

7.5 Exempt & Zero-Rated Goods & Services

Many purchases do not attract V.A.T. They fall into two groups; exempt items, and zero-rated items. From a trader's point of view, there is little difference between these groups, except for the fact that it is simpler for the Government to introduce tax on the zero-rated category.

The list of goods and services on which no V.A.T. is paid is rather long and complex, and you should obtain copies of the "General Guide" and "Scope and Coverage" from Customs & Excise to check particular items; however, the following are the principal categories:

Zero-Rated	Exempt
1. Food	1. Land
2. Sewerage services & water	2. Insurance
3. Books, Periodicals, Music, Maps	3. Postal Services
4. Aids for the blind & handicapped	4. Betting, Gaming & Lotteries
5. Newspaper Advertisements	5. Finance
6. News Services	6. Education
7. Fuel & Power (except road fuel)	7. Health
8. Construction of Buildings	8. Burial & Cremation
9. International Services	9. Trade Unions & Professional Bodies
10. Transport	
11. Caravans & Houseboats	
12. Gold	
13. Bank Notes	
14. Drugs & Medicines	
15. Imports & Exports	
16. Charities	
17. Clothing & Footwear	

CHAPTER 8

Tax on Profits

8.1 Taxable Profits

All businesses are required to pay tax on the profits they earn. This tax is collected on behalf of the Government by the Inland Revenue. The analysis of the tax position of a business is a very complex science. It is essential that you seek out professional advice when you first start your business to ensure that you do not find yourself paying excessive tax bills later. Tax payments can cause a severe strain on your cash position because of the way they tend to arise in large "lumps". Therefore, you must make allowance in your cash flow forecasts to prepare for this.

Tax is charged as a percentage of the business profits. The percentage to apply will depend on the legal form of the business, and this is discussed in the following section. However, determining the tax rate is not the main problem involved in calculating how much tax you must pay. The difficult issue is deciding how much profit you have earned. Unfortunately, the way you as a businessman calculate profit, and the way Inland Revenue calculate it, are rather different. This is where your tax advisor will have to help you. It would be unwise to offer you any guidelines here, because the particular circumstances will vary significantly from one business to another.

8.2 Tax Rates

The profits of a limited company are taxed at the Corporation Tax rates. There are two rates, one for businesses with a profit less than £100,000 and one for businesses with profit greater than £500,000. Firms which fall between these figures are taxed on a sliding scale. In the 1984 budget, the tax rates for the period April 1983 to April 1986 were set as follows:

	1983	1984	1985	1986
Companies with a profit less than £100,000	40%	30%	30%	30%
Companies with a profit more than £500,000	50%	45%	40%	35%

The profits of a partnership or sole trader are taxed as the income of the individual partners or traders. Therefore, if you (and your partners) have taken out a salary from the business to arrive at a profit figure, you will have to add this back and calculate the tax on profit plus salary using the personal tax scale, but your personal allowances under the tax rules can be deducted. Following the 1984 budget, the personal tax scales were adjusted to the levels shown in the table on the following page.

Income Band £	Tax Rate	Total Tax to top of Band
1-15,400	30%	4,620
15,401-18,200	40%	5,740
18,201-23,100	45%	7,945
23,101-30,600	50%	11,695
30,601-38,100	55%	15,820
over 38,100	60%	

The figure given in the right hand column is the total tax you would pay if your income was equal to the maximum amount in that band.

CHAPTER 9

Balance Sheet Display

9.1 A Useful Aid

As you have progressed through these teaching chapters, you have been using a computer screen display which has shown you the effect of various types of transactions on the balance sheet. The last option available to you on the Teaching Program menu is the **BALANCE SHEET DISPLAY**. This gives you access to the same routine to allow you to experiment with your own figures. It is not intended to be used as a comprehensive analytical tool, but it will be of use in investigating the effects of certain decisions on your cash flows or profits, although for a complete analysis, you will have to use the Applications Program.

For instance, you can trace the transactions through the early life of your business to see the most opportune time to register for V.A.T. You can test the effect of offering a large potential customer long credit terms. You can even review situations, such as whether taking advantage of bulk buying discounts for raw materials can be handled within your cash flow constraints. You may simply wish to use it to test your own understanding of double entry book-keeping techniques.

9.2 Operation

The facility is very simple to use. When it is loaded, it will display a blank balance sheet. It will ask you to enter an opening value against each item in turn. These entries are supposed to balance. If they do not, a warning and the size of the imbalance will be given, and you will be asked to select the value you wish to change. Select an item by moving the highlight down the list using the **SPACE** bar, and pressing **ENTER** (or **RETURN**) when you reach it; then key in the revised value. This process will be repeated until the entries balance.

Once an opening balance sheet has been created, you can enter as many transactions as you wish. The process to adopt for entering a transaction is as follows:

- 1) Enter the value of the transaction as requested at the bottom of the screen.
- 2) Use **SPACE** and **ENTER** (or **RETURN**) to select the first item against which the transaction is to be entered. The value given in (1) will be displayed against this item exactly as entered, so if it is supposed to be a negative amount, be sure to enter it as such.

- 3) Use the same process to select the second item against which the transaction is to be entered. The value given in (1) will be displayed against this item, but to keep the balance sheet in balance, the sign will be changed if required.
- 4) Press **A** to add the transaction to the balance sheet figures, or **C** to cancel it if you want to change the figure.
- 5) Submit another transaction by repeating steps 1 to 4 above, or exit the program by pressing **ENTER** (or **RETURN**) before you enter any figures.

Remember that some transactions, such as sales, are entered in two parts; firstly the revenue and secondly the change in stock.

CHAPTER 10

The Applications Program Explained

10.1 Introduction

The **Entrepreneur** Applications Program will ask you for detailed information about the financial aspects of your business. From this information, it will produce monthly cash flow forecasts, year end balance sheet, profit and loss account, and an analysis of the results.

Before you begin to use the computer, you will have to know the answers to a large number of detailed financial questions. Until you know these answers, you will be unable to complete the analysis of your business plans. The questions about the way you wish to analyse the costs of your product are particularly important. This is because there are in fact two different Applications Programs; one for a detailed analysis of a single product line, and the other for a broad analysis of a multi-product line. You will have to make up your mind which you intend to use before you start the computer.

Note that the quantity of data to be provided is quite substantial, and will take you some time to enter. You should allow for a fairly long operating session, although it is possible to stop at various stages and save the data to continue at another time. You may also find it useful to try a "dummy run" just to test your understanding of the computer operation. To help you to do this, you will find sample checklists for imaginary businesses provided in Appendix 4.

10.2 Essential Preparation

In Appendix 3, you will find an extensive checklist of all of the items of data required by **Entrepreneur** to analyse your business plan. You may consider this to be excessively long, but if you cannot provide answers to all these questions, you will have great difficulty persuading other people, such as your bank manager, to support you. Therefore it is a valuable exercise because it tests your own knowledge of your plans.

The checklist incorporates detailed explanations to assist you in its completion, with advice on the format which is expected by the computer. You can also compare your proposals with the sample checklists in Appendix 4, to help you lay it out correctly.

CHAPTER 11

Using the Applications Program

11.1 Starting the Program

Load the Applications Program in accordance with the instructions for your type of computer. You will find some suggestions in Appendix 2. When the first part of the program has been loaded, you will be asked to select the type of product analysis you wish to use. This is because, as mentioned earlier, there are two different programs; one for each version of product analysis. The options will be displayed on the screen as follows:

1. SINGLE PRODUCT COST ANALYSIS
2. MULTI-PRODUCT PERCENTAGE ANALYSIS

Make your choice simply by pressing 1 or 2 on the keyboard. If you have completed the checklist in Appendix 3, you will have been advised which option is more appropriate for your situation.

When you have pressed a key, you will be asked to confirm that you have chosen correctly and, when you agree, the computer will load another program. The way this is done will vary from one computer type to another, so follow the instructions which appear on the screen.

When the program is ready, you will be asked to provide a large quantity of information in the sequence in which you completed the checklist. The computer will then perform an analysis of that data before proceeding with a month by month cash flow analysis. On completion of the analysis, you will be able to study the figures to decide what the finance requirements are going to be. Then you will be asked to define the sources of finance, and the monthly cash flow figures will be recalculated. This process can be repeated until you are satisfied with the cash position.

Finally, the computer will produce the financial summary data in the form of a year-end balance sheet and profit and loss account, together with sensitivity and ratio analysis of the results. Thus, all of the financial data for your business will have been compiled and analysed. If you have a printer, you will be able to make printed copies of all elements of the calculations.

11.2 The Main Menu

When the program is ready, the main menu will appear on the screen as follows:

OPTIONS
CONTINUE
EDITOR
CHANGE SALES
CHANGE FINANCE
END OF YEAR
SENSITIVITY ANALYSIS
RATIO ANALYSIS
LOAD/SAVE DATA
END PROGRAM

The various options can be selected by moving the highlight bar down the list. The bar moves from one item to another if you press the **SPACE** bar. Press **SPACE** enough times to move the bar onto your selection, and then press **ENTER** (or **RETURN**) to activate it. You will find that the bar may skip some lines of the menu. This will happen if the computer does not have enough data to perform those operations. Unless you wish to access a particular facility, simply select **CONTINUE** and the computer will go on to the next step in processing your data. When you use the program for the very first time, this is the only logical selection to make. If you have not entered any data, the only other options which you will be able to select are **LOAD/SAVE DATA** and **END PROGRAM**.

The items listed on the menu work in the way that their descriptions imply:

CONTINUE, proceeds with the next step in the program.

EDITOR, will take you to the data file of your choice, and call the editing facility. This is described in section 11.4.

CHANGE SALES, allows you to change the sales volumes and pricing details. Refer to section 11.5, or 11.6, depending on the version you are using.

CHANGE FINANCE, allows you to change the finance information. Refer to section 11.10.

END OF YEAR, produces the profit and loss accounts and balance sheet. Refer to section 11.11.

SENSITIVITY ANALYSIS, performs an analysis of the expenditure items to determine which has the greatest effect on profitability. Refer to section 11.12.

RATIO ANALYSIS, performs a check on debtors and creditors, and displays profit as a percentage of net assets. Refer to section 11.12.

LOAD/SAVE DATA, will allow you to save all the details you have entered, so that you can work on them at some other time, or to load in some data which you have been using on a previous occasion. Refer to section 11.13.

END PROGRAM, terminates operation of the program. A protection facility will prevent you stopping the program by accident.

11.3 Initial Data

The first screen of data comprises the basic information about the business. A series of questions will be asked on the screen. Each question will appear at the bottom left of the screen, and any comment about the way the computer expects to receive the data will be written just above it. Your response will be printed on the screen to the right of the question where you can see the flashing cursor. When you are satisfied with what you have typed, press **ENTER** (or **RETURN**), and it will appear on the main part of the screen. The questions you will be asked are all included in the checklist, where you will find advice on how to answer.

When you have answered all the initial questions, you will be asked to confirm that the information on the screen is correct before the computer moves on. If you have made a mistake which you did not notice until after you pressed **ENTER**, this is your opportunity to fix it.

HOW THE PROGRAM HANDLES DATES

You always enter the months into the computer as numbers. The first month you enter will be the month you start trading. This will be in the normal way, January = 1, February = 2, March = 3, and so on. However, after the first entry, all other months are entered *relative* to the month you start trading. So that if you give the month you start trading as say July, then thereafter, July = 1, August = 2, September = 3, etc.

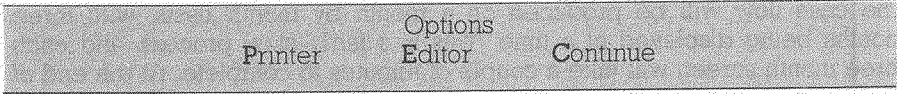
11.4 Data on Expenditure

When you have completed the initial data, the computer moves on to request information on the various items of expenditure from the following categories:

FIXED ASSETS
EXPENSES
EMPLOYEES
DIRECT COSTS

The category of expense currently being input will be shown at the top of the screen. First you must give a name to each of the items in the particular expense category until you have a complete list. To tell the computer that the list is complete, type the word **END**, instead of giving another entry. If you have no expenditures to enter into that category at all, type the word **NONE**, and you will be taken straight on to the next category.

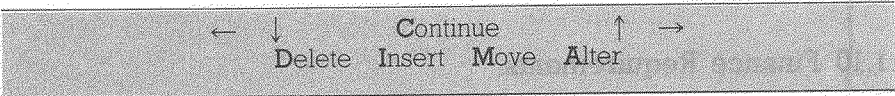
When you type **END** after listing all of the items, a panel will appear at the bottom of the screen entitled "Options",



Printer Options Editor Continue

Each of the three options can be invoked by pressing the key representing its initial letter:

- Continue Tells the computer to go on to the next stage. In this case, it will go on to ask about the expenditure details of each item on the list which you have just completed.
- Printer Sends a copy of the current screen display to the printer if you have one.
- Editor Gives you access to the manual editor by offering another option list as follows:



← ↓ Continue ↑ →
Delete Insert Move Alter

These functions are explained on the next page.

The arrows pick out the item you want:

↓	Moves the pair of arrows on the screen at each side of the list, one item down the list.
↑	Moves the pair of arrows one item up the list.
→	Moves the pair of arrows to the bottom of the list.
←	Moves the pair of arrows to the top of the list.
Continue	Ends use of the manual editor, and returns you to the previous option list.
Delete	Deletes the item indicated by the arrows on the list.
Insert	Allows you to insert a new item into the list, immediately below the item between the arrows.
Move	Allows you to move an item on the list from one line to another. Adjust the arrows to point at the item you wish to move; press M, point the arrows at the item below which you want to place your chosen item, and press M again.
Alter	Marks an item on the list so that the computer knows you wish to change its details. You will only use this when you come back to the editor from later in the program to alter some of your initial entries. If you mark an item for alteration, the symbol "*****" will appear alongside it on the list, and when you finish using the editor, you will be asked for the details of the marked items before you are returned to the main menu.

You can use these editing facilities to modify the list until you are satisfied that no items are missing, and that they are in the most appropriate order.

When you select **Continue**, the computer will ask you for the detailed information for each item on the list in turn. You will only be able to answer all of these detailed questions if you complete the checklist before you start. For each item, you will be able to confirm that you have entered the information correctly before you move on, so do not be too concerned if you make a few mistakes. Be sure that you are giving the information for the correct item – the item name will always be displayed at the top of the screen.

When all information has been provided for all items in all of the expenditure categories, you will be taken back to the main menu.

11.5 Sales Forecast (Single product version only)

The computer will lead you into this routine if you select **CONTINUE** from the menu when you have just completed entering all direct cost details, or if you select **CHANGE SALES** at any other time. The screen will list the months of your trading year, a pair of arrows pointing at the first month, and an option menu at the bottom of the screen:

Options
↓ Select End ↑

Use the arrow keys to identify a month and press **S** to select that month. You will be asked for the sales volume; key the number in and press **ENTER** to display it on the list. Repeat the process until all monthly sales volumes are defined, and then select **E** to go on to provide the remaining details of selling prices, VAT, and credit terms. These will be requested in the way they are presented in the checklist.

You will now be returned to the main menu. Unless you want to go back and change some of the expenditure information, or the sales figures you have just entered, select **CONTINUE**.

11.6 Sales Forecast & Product Costs (Multi-product version only)

The computer will lead you into this routine if you select **CONTINUE** from the menu when you have just completed entering all employee details, or if you select **CHANGE SALES** at any other time. Firstly, you will be asked to list each product by name. The program capacity is limited to a maximum of 10 products. When the list is complete, you will be given the usual "Edit Options" opportunity. This functions in the way described in section 11.4.

If you now select **Continue**, you will be asked for the details of each product, as shown in the checklist. You will also be required to submit sales volumes on a month by month basis for each product. This will be entered in the way described in section 11.5 for the single product version. When all required information has been typed into the computer, you will be returned to the main menu. Select **CONTINUE**, and you will be taken on to the next step – Break Even Analysis, section 11.8.

11.7 Inventory Check (Single product version only)

The computer will perform an automatic check to ensure that the quantities of materials you plan to purchase (as entered in the direct cost routine) are sufficient to fulfil your sales forecasts. If they are adequate, you can return to the menu and select **CONTINUE** to go on to the next step. If there is insufficient stock, a warning will be displayed, the stock shortages will be listed, and you will be returned to the main menu. You can then choose what to do about it. Either you must reduce your sales volumes, or increase your stock purchases. The warning will have told you which items ran out in which month. Select **CONTINUE** on the main menu when you have finished modifying the data, and this will run the inventory check again.

11.8 Break-Even Analysis

This is another automatic feature. When the stock position is satisfactory, the computer will check whether the contribution from the sales forecasts will be adequate to cover the overhead costs. If the sales are not adequate to break even, a warning will be given. You can go on to the end of the program if you wish, but the business will be found to be running at a loss. If you wish to modify your data to bring the business into profit, you will have to consider one or more of the following courses of action. They are listed in the order in which they are likely to have the most effect in the average business:

- 1) Increase the selling price.
- 2) Increase the sales volumes.
- 3) Reduce direct costs.
- 4) Reduce employment costs.
- 5) Reduce expenses.
- 6) Reduce on expenditure on fixed assets.

11.9 Cash Flow Calculation

The cash flow will be produced on a month by month basis, with three months being displayed at a time. This is a fairly slow process, and each three month screen will take a couple of minutes to complete. At the end of each screen, you will have the opportunity to print out a copy if you have a printer. When the cash flow is complete, you will be returned to the menu. Study the figures carefully as they appear. If the closing cash is negative at the end of any month, this will give you an idea of how much extra money you will require to fund the business in that particular month. A negative cash figure at the end of more than a couple of months will give you an idea of the longer term finance requirements. These are best covered by equity and term loans.

When the cash flow calculation is complete, select **CONTINUE** on the main menu to go on. If the business never runs out of cash, you will be taken on to the profit and loss printout, otherwise you will move on to the finance requirements. If you wish to insert finance information, even though there is no requirement to do so, then select **CHANGE LOANS** instead of **CONTINUE**.

11.10 Finance Requirements

The computer assumes that you will fund all negative cash problems with an overdraft. The screen will display the maximum and average overdraft requirements found from the previous cash flow calculation. A sustained

level of overdraft should be removed by providing equity and term loan funds to start the business trading. We suggest that you turn back to the finance section of the checklist and consider the figures you intend to submit to the computer. When you are ready, answer the computer's questions, which will be presented in the same sequence and form as they appear on the checklist.

When you have given all the data, you will be returned to the main menu. Select **CONTINUE**, and the cash flows will be recalculated. If you are satisfied with the revised figures, select **CONTINUE**, and you will be taken on to the year end accounts.

11.11 Year End Accounts

The year end figures will be presented on two screens; the profit and loss account, and the balance sheet. You will be provided with the opportunity to print out copies of each. To display the first screen, select **END OF YEAR** on the main menu. When you return to the menu, select **CONTINUE**, and the second screen will appear.

Notice that to produce these reports, the computer must calculate the tax payable for the trading period. The way this is done will depend upon whether or not the business is operated as a limited company, and the tax scales prevailing following the 1984 budget have been incorporated into the program. Company tax is based on the Corporation Tax scale, applied after capital allowances and depreciation have been taken into account.

For partnerships or sole traders, the profits are taxed on the personal tax scale, with salaries paid to the owner or owners of the business, together with their personal allowances and other taxable income taken into account.

11.12 Sensitivity & Ratios

Two screens of additional data are available to help you analyse your business proposal. The first screen demonstrates how sensitive the profitability of the business is to changes in the expected revenue and expenditure levels. The computer measures the percentage change in the after tax profit figure when each of the elements listed is increased and decreased by 10%. A positive (+) percentage figure means that profit increases, whilst a negative (-) figure indicates a decrease. You should not be too concerned about those items which change profits by less than around 5%. Those which change profits by significantly more than 10%, on the other hand, should be reviewed very carefully, because these are the ones which represent your greatest risk of failure to make a profit.

The second screen will provide just three figures; the average creditor and debtor turnover, and the percentage return on net assets. The creditor

and debtor figures represent the average number of days credit you are giving and taking. If you appear to be getting better credit terms than you think you will have to give, you should study your plans very carefully. Unless you are operating on a strictly cash sale basis only, it would be very surprising if you, as a new small business, could get better credit terms than you will have to give, and this is an area where your optimism could lead you into cash problems.

As a rule of thumb, at least half of your purchases will be for cash, and the remainder you will need to pay on time to establish a good credit rating. On this basis, your creditor turnover will be no more than 10 to 15 days. Think very hard if it gets any larger than this. On the other hand, debtors will probably take advantage of your position as a new small firm, and pay very slowly. The debtor turnover should thus be at least 50% longer than you would like it to be. For instance, if the normal terms offered in your type of business are 30 days, you should be expecting actual payment in no better than 45 days. If the figures presented at this stage in the analysis look better than that, consider very carefully changing the terms on your sales and purchases.

The final figure is simply a measure of the overall profitability of the whole business idea. If this percentage is less than you can get by putting your money in the building society, then perhaps you should do just that!

11.13 File Handling

The way in which data is saved for later use, or loaded back into the program will vary from one type of computer to another. Therefore, just select the **LOAD/SAVE DATA** option from the main menu, and follow the instructions which appear on the computer screen. You will be required to give your data files names so that the computer can tell them apart. Take care to make a note of these file names, and record them on the labels of the tapes, disks or microdrives on which they are saved.

APPENDIX 1

Sources of Assistance

You will find that one of the most frustrating things about planning your new venture will be finding information. It is beyond the scope of this Text Book to go into great detail about all the different sources of assistance available. However, we will outline the different types of assistance you may need and tell you where you can find further information.

A1.1 Direct Help and Advice

You will probably find the easiest and cheapest advice is on your doorstep. In the last few years hundreds of advisory organisations sponsored by national and local government have been started with the express intention of helping the small businessman. Advice is either free or very cheap and they will be able to answer many of your questions, provide you with literature on a multitude of subjects and guide you to further sources of information. They provide an invaluable source of advice on local resources and you are advised to make them your first port of call.

Small Firms Service

The Small Firms Service is provided by the Department of Industry. It will provide you with information on all manner of start up problems and runs a counselling service manned by experienced businessmen. To contact your local office, telephone the operator and ask for Freephone 2444.

Council for Small Industries in Rural Areas

If you plan to start your business in a rural area (defined as a central population of under 10,000) and employ less than 20 people, then this service may be able to help you. It provides counselling, training and finance assistance. To contact your local office, write to: CoSIRA, 141 Castle Street, SALISBURY, Wilts, SP1 3TP.

Local Enterprise Agencies

These agencies are primarily designed to encourage new businesses to start up in specific local areas. They are sponsored and supported by local firms from the major sectors of the business and financial world. They will help you to set up your venture and give "aftercare" and advice once you have become established. Contact your local Chamber of Commerce (listed in your Yellow Pages) or visit your local library to find out where your Local Enterprise Agency is.

A1.2 Market Information

You will need information about the shape and size of your market, its profitability and growth in order to complete your Business Plan and forecast your sales figures. You will continue to need this information when your business is up and running. It will be invaluable as an aid to making decisions about products, pricing and the competition. Whatever information you want will almost certainly be published somewhere; it's just a question of finding it. We suggest three sources from which you should be able to get most of the information you need; they are: public reference libraries, specialist business libraries and periodicals. If you require further information you will discover where to find it from at least one of the above sources.

Public Reference Libraries

As a start, visit your local public library. Ask the librarian to help you find the information you are looking for. They should be able to pinpoint the exact source you need and, if necessary, direct you to the nearest central library which holds it. The information available from public libraries is free.

Specialist Libraries

The most comprehensive list of specialist libraries is to be found in ASLIB Economic and Business Information Group Membership Directory. Over 300 libraries are listed and individual areas of interest are indexed. This book is available from: ASLIB, 3 Belgrave Square, LONDON, SW1.

Periodicals

A multitude of magazines and periodicals are available to help you. You will find that they break down into two broad categories; specialist trade publications about your particular industry, and general publications containing reviews of current marketing topics. Your best way of tracking down which titles will be of interest to you is to visit your local library and look through their directory of periodicals. General interest magazines such as "Marketing Week" can be found at larger newsagents and bookstores.

A1.3 Your Business and the Law

Whatever form or size your business is going to be it will have to operate within trading, tax, company and employment legislation. All aspects of the law are complex and are best dealt with by experts. However, it is advisable that you have a broad understanding of your responsibilities under

these various forms of legislation. Some background reading is recommended in the first instance and when you encounter problems you should consult a solicitor. When you choose a solicitor, don't be afraid to shop around. Ideally, you should try and find one who is familiar with your kinds of problems and is charging a reasonable fee. If you can find one who is sympathetic to you as well as your needs, so much the better; you may have to work closely with them on issues vital to your business. Much of the documentation you will need outlining the rules and regulations governing your actions is distributed free from Government sources. The following list deals with the most important aspects of the law applicable to running a small business.

Your Business Name

"Disclosure of Business Ownership" and "Control of Business Names".
Department of Trade, Guidance Notes Section, 55 City Road,
LONDON, EC1Y 1BB.

Registrable Rights

"Applying for a Trademark". The Register of Trademarks, 23
Southampton Buildings, LONDON, WC1A 1AY.

"Applying for a Patent", "Patents, a Source of Technical Information".
The Patent Office, 25 Southampton Buildings, LONDON, WC1A 1AY.

PAYE

"Starting in Business", "Employers Guide to PAYE" and "Employers
Guide to National Insurance Contributions". Available from the
Inspector of Taxes at your local Inland Revenue Office.

VAT

"Value Added Tax, Scope and Coverage" and "The General Guide".
Available from your local Customs and Excise Office.

Trading Laws

"Fair Deal" from The Office of Fair Trading, Breems Buildings,
LONDON, EC4. Also, the Trading Standards Department of your local
authority will give you advice on the trading laws relevant to your
business.

Employment Law

Free advice on all aspects of employment law is available from ACAS,
Page Street, LONDON, SW1.

A1.4 Raising The Money

The Applications Program allows you to juggle financing alternatives around until you find the one most suitable for your business. Your first approach to finding a source of funds will probably be to a bank manager. We will offer a few words of advice on this subject:

Go well prepared the first time. This will be the meeting which sets the relationship for your future meetings. You must present an impressive plan and act with confidence at this first meeting. If you don't, it may be your last!

Go to a big branch. The bigger the branch, the more senior the managers in it, and the greater their "in-house" lending authority will be. Choose a branch in your nearest big city.

Go to many. Present your plan to at least five different clearing banks, and do it all at the same time. Different banks will have different policies on lending to new businesses and different managers will have their own prejudices. You cannot afford the time, once you have prepared your plan, to tackle the banks one by one.

Don't be disappointed if you get turned down. Listen to the objections and, if necessary, modify the plan accordingly.

Your local branch of the Small Firms Service will give you details of the many government grants which are available. Although clearing banks are the most common source of finance, they are not the only ones. For a more comprehensive list, consult the relevant texts listed in the bibliography.

A1.5 Training for your Business

There are now many opportunities for the potential entrepreneur to get some form of training in running a business. The courses come in many shapes and sizes, and you will almost certainly find one locally to suit your capabilities and needs. For details of the courses available near you consult:

Manpower Services Commission, Training Services Division, 180 High Holborn, LONDON, WC1V 7AT, or your local Enterprise Agency.

APPENDIX 2

The Legal Form of the Business

From the very start of your planning, you must consider which legal form your business will take. We will review the three most common forms of a business; sole trader, partnership and limited company. Your choice will depend on a number of factors amongst which are; your financial requirements, your personal tax position and your commercial needs.

A2.1 Sole Trader

Advantages

There are very few formalities involved and, providing you have the resources, you can start trading immediately.

The professional fees involved in setting up the business are very low.

Unless you register for VAT, there are no rules governing the financial records you keep. You will not require an external audit of your records and therefore will not have to pay audit fees.

Your trading information does not have to be publicly disclosed.

If you run more than one business, the profits or losses from one can be offset by the profits or losses from another.

You will pay income tax under Schedule D. This will allow you much wider scope for claiming expenses in connection with your work than if you work for an employer.

Disadvantages

Your business assets are indistinguishable from your personal assets. Therefore if the business goes bankrupt your personal assets may be sold to pay your trading debts.

You will have no access to equity capital and you will have to rely on loans from individual investors or banks to finance the business.

Schedule D income tax is paid at a much higher tax rate than Corporation tax.

The business will usually die with the death of the proprietor.

A2.2 Partnership

Advantages

You are not required to make public disclosure of your trading information.

Unless you register for VAT, there are no formal requirements for your financial records nor for an audit.

You will pay income tax under Schedule D.

Disadvantages

All the partners share joint, unlimited personal liability for trading debts.

Partnership contracts can be complex and expensive.

Schedule D income tax may be higher than corporation tax.

The death of any one partner will usually dissolve the partnership.

A2.3 Limited Company

Advantages

The owners (shareholders) of a limited company are liable only for the company's debts up to the 'nominal' value of the shares.

The business can raise equity capital.

Corporation tax on a company may well be lower than income tax rates on a sole trader or partnership.

A limited company will continue to exist after the death of the founders.

Disadvantages

A limited company cannot begin to trade until it has been formally "incorporated".

There are many rules governing the way financial records are maintained, and an audit is required every financial year.

Trading information has to be disclosed in an annual report.

The directors will be employees and will pay income tax under PAYE.

APPENDIX 3

The Checklist

Introduction The objective of this checklist is to assist you in collecting all of the data required to run an analysis of your business proposal. You will find that the list spans a number of pages. The amount of information you will need to collect will depend to a large extent on the complexity of your business. The value of the information produced by the program will only be as good as the information you provide. We therefore suggest that you take time and care to assemble the data which you will require to complete this checklist.

You should also consider the guidance offered in Chapter 2 in relation to preparing a business plan. Much of the planning will have to be complete before you can make reasoned decisions about the data you are collecting. In particular, as you work through the tables, you will discover that many of the entries require information about the timing of various activities. Therefore it is essential that you develop a timetable for the implementation of your ideas so that you can make realistic estimates of when each activity will occur.

This appendix is divided into two components; the explanatory notes about the meaning of each item and the form in which the data is required, and a series of tables in which the data can be recorded. The notes and tables are cross referenced to assist you. Each group of notes is identified by a section heading, and a letter, A, B, C, etc. Within each group, the notes are numbered in sequence. This combination of heading, reference letter and note number is duplicated in the tables. For instance, if you are completing the part of the table about "Wage Related Costs", you will see that you should refer to note (7) in section D of these notes for an explanation of what is required.

We suggest that you enter data into the tables in pencil, to enable you to make changes later. A better solution is to take photocopies of the table pages, and then you can run a range of alternative figures without spoiling the book. Triptych Publishing Limited will not consider taking photocopies of the table pages of this book as a breach of the copyright agreement, providing they are only for your own use.

Alternative Approaches

There are two different Applications Programs. One allows you to analyse a business based upon a single product, giving you the opportunity to build up the exact cost of the product by costing the individual components. The other will analyse a business based on up to ten separate products, with a less detailed analysis of the product costs. In this second program, the cost of the product is entered as a percentage of the

selling price. Before you go any further, you must decide which program you will use.

In fact, this two program option opens up a wide range of alternative ways of performing an analysis. The number of different approaches available is as great as the number of different types of business that could be conceived by you as the user. For this reason, we cannot offer precise instructions on how to handle your particular idea, but we can offer the following general guidelines. Read through the general description of each of the business concepts which follow, and try the approach suggested for the one which most closely resembles your own plans.

Before you look through the descriptions, take note that deciding which approach is suitable for you depends upon the way in which the **direct cost** of your product is determined. Direct cost is explained in Chapter 5. When calculating the direct cost of the product, you do not include any of the costs which you consider to be **fixed assets, expenses, or employees.**

CONCEPT 1 Many businesses operate with virtually no direct costs at all. That is, they sell a service to their customers which does not use any materials, or where the cost of materials is tiny compared to the price they charge. In this case, use the multi-product program, enter the small amounts of direct cost involved as expenses, and when asked for direct costs as a percentage of sales (question F(2)), answer 0%, then enter all other items normally.

CONCEPT 2 The typical new manufacturing enterprise is usually based on a single product type being sold at a single price. The single product program is designed to suit this type of business. However, if you produce more than one product, or sell it at more than one price, the program will still be applicable, providing you can define a single "average product" and "average price". If this is not possible, or convenient, then you should look at **CONCEPT 3.**

CONCEPT 3 If the business is handling between two and ten products, then the multi product program is designed to analyse this situation. Remember, that for the purpose of this program, the same product sold at two different prices (e.g.; a merchant selling at one price to the trade, and at another to the general public) would count as two products.

CONCEPT 4 Many businesses will find themselves trading with more than ten product/price combinations. The multi product program can still be used, but the products must be formed into groups, and each group handled as if it is a single product. Thus, up to 10 groups can be analysed. The simplest way of grouping product is by combining all of one type, but you will have to work out the average values for each group for the various questions on the checklist; cost, price, days of stock, VAT, and so on.

CONCEPT 5 Although **CONCEPT 4** sounds simple, the maths involved in calculating the "average" answers can become quite complex. Another approach to the multi product situation is to group products with common characteristics in terms of the questions on the checklist, e.g., all products with the same percentage cost, VAT rate and credit terms could form a single group. In this way the maths is much simpler.

Sales Revenue or Sales Volume

Sales revenue is the amount of money you receive from your customers. **Sales volume** is the number of product units which you sell them. The program is designed to handle an analysis using sales volumes, but the multi product program is equally suited to analyse sales revenue. To use the sales volume approach, you will simply need to know how many of each product you plan to sell, and what price you will sell them for. If you prefer to use sales revenue figures, simply enter the revenues when asked for volumes, then give the selling price of the product unit as £1. This merely tells the program that each pound's worth of product sold is sold for one pound!

A. Initial Data

This is the basic information required about the business as a whole.

- 1) **Company Name;** Any name can be used to identify the company, up to a maximum of 20 characters in length (including spaces).
- 2) **Month to Start trading;** The program handles all months as numbers. To identify the first month of trading, use a month number in the traditional way; January = 1, February = 2, and so on. Do not give the year or day, **just the month number**.
The month you choose will be the first month that the business is involved in **any** transaction; be it buying or selling. Often, there is an interval between when you start preparing to trade, and when you actually start to sell. For instance, you may start receiving invoices for goods in May, even though you do not sell anything until July. In this case, you would give the starting month as May (5), not July (7). Remember, you just have to provide the number, the program will confirm by replying with the name of the month in full.
- 3) **Trade of Business;** A business can be in one of three forms, a sole trader, a partnership, or a limited company. You must decide which form your business will take, because each is treated differently for tax purposes. The program will offer you the three alternatives from which

to select. Refer to the notes in Appendix 2 for further advice on how to choose. You could also try running the program more than once, selecting a different legal form each time to see how this affects the cash flows. For instance, a sole trader draws his income net of tax, and no tax is paid by the business until after the financial year end.

- 4) **Analysis Period;** The program will analyse a period of between 6 and 18 months trading. The usual selection will be 12 months, although an 18 month analysis is more appropriate if there is a long period of development before you begin to sell. The computer will expect a number between 6 and 18.
- 5) **Registered For VAT;** Answer yes or no. If the business is going to have sales of more than £18,000 in a year, or more than £6,200 in any three month period, then it must be registered for VAT. If you do not have to register, there may still be benefits in doing so. Refer to Chapter 7 for further information. Note, that if you choose not to register at this stage, and the program reveals that your turnover exceeds the limits, you will be forced back to register.
- 6) **First Month VAT Due;** This month is again given as a number, but this time (and at **all** subsequent points at which a month is to be defined), it is given as a number relative to the first month selected in note (2). For instance, if you chose May as the starting month in note (2), and you wish to nominate August as the first month that VAT is due, simply count May as 1, June as 2, July as 3, and August as 4. Hence you would enter August as 4. The name of the month will appear on the screen in full for confirmation. It will help you if you write down for yourself a calendar with the actual months numbered from 1 as the month you have chosen to start trading.

HOW THE PROGRAM HANDLES DATES

You always enter the months into the computer as numbers. The first month you enter will be the month you start trading. This will be in the normal way, January = 1, February = 2, March = 3, and so on. However, after the first entry, all other months are entered *relative* to the month you start trading. So that if you give the month you start trading as say July, then thereafter, July = 1, August = 2, September = 3, etc.

Usually, the first net VAT payment occurs three months after you register. If you start selling from the very start, and are registered from then, this will be month 3. If, however, you have, say, a three month period setting up the business before you register, and you have included this start up time in the analysis period, then it would be another three months before VAT falls due; i.e., in month 6.

B. Fixed Assets

Chapter 4 explained that **fixed assets** are things which the business buys with the intention of keeping them for a long time. Purchases of property, vehicles, machinery and office furniture are all examples of fixed assets. The program will allow you to define up to 20 items. If this is not enough, we suggest that you group a number of similar items as a single fixed asset. For instance, a photo copier, some typewriters and a coffee machine could be grouped as a single item called "office equipment". Remember the warning in Chapter 4 that very small items which could technically be described as fixed assets may be better treated as expense items, and included in section C. All of the following questions will have to be answered for every fixed asset item.

WORKING OUT PERCENTAGES

A number of the entries in the table are required in the form of a percentage. The process of calculating such a percentage is very simple if you have a pocket calculator handy.

Assume that the item you wish to express as a percentage is called **part**, and the item that it is a percentage of is called **whole**, then the percentage is found by dividing **part** by **whole**, and then multiplying the result by 100. This can be expressed as:

$$\text{percentage} = \frac{\text{part}}{\text{whole}} \times 100$$

For instance:

$$\text{Direct Cost as a \% of Selling Price} = \frac{\text{Direct Cost}}{\text{Selling Price}} \times 100$$

- 1) **Item;** Each item you list must be given a name of up to 20 characters.
- 2) **Depreciation Rate;** Depreciation is explained briefly in Chapter 5. It is the amount by which the asset reduces in value each year. It is expressed as a percentage of the new value, and could vary from 5% to 50% per year depending upon the durability of the item.
- 3) **Capital Allowance;** This is the proportion of the purchase price of the fixed asset which can be claimed against tax, expressed as a percentage of the purchase price. Not all assets have a capital allowance, but those eligible will attract the following allowances:

	Purchase Date			
	until 13/03/84	14/03/84 to 31/03/85	01/04/85 to 31/03/86	after 31/03/86
Plant & Machinery	100%	75%	50%	0%
Industrial Buildings & Assured Tenancy Property	75%	50%	25%	0%

- 4) **Cash or Credit;** Cash payments include payment by cheque or bank draft. Anything paid for on or before delivery is classified as cash. Credit describes any transaction where payment is made at some time after delivery.
- 5) **Credit Terms;** The number of days between delivery of the item and payment being made. Take care! New businesses will often find that they will be asked to pay cash for items which established firms can buy on credit.
- 6) **VAT Rate;** The percentage VAT paid on the purchase. If you are not registered for VAT, you will not be asked this question. Remember that not all purchases attract VAT. When applicable, VAT is charged at the rate of 15% (current in 1984), but you should refer to Chapter 7 for a guide to when it does apply.
- 7) **Frequency of Invoicing;** Fixed assets are usually paid for in a single payment. If this is not the case, the program will provide the option of monthly, bi-monthly, quarterly, half yearly, yearly, or irregular payments. The irregular payments option allows you to enter a series of payments in a sequence of months not covered by the other options.
- 8) **Number of Payments;** This will only be asked if you select "irregular payments" from the previous options.

FREQUENCY OF INVOICING

The following standard expressions are used by the program to describe how frequently invoices are received.

Monthly; The item is invoiced every month for the same amount.

Bi-monthly; The item is invoiced every two months for the same amount.

Quarterly; The item is invoiced every three months for the same amount.

Half Yearly; The item is invoiced every six months for the same amount.

Yearly; The item is invoiced once a year for the same amount.

Irregular; This entry is used for any situation which does not fit one of the alternatives listed above. For instance, if you arrange to be invoiced for an item in September, October and January; use the irregular payments option to enter this information. It can also be used if the invoices arise on a regular basis, but the value of each is different.

- 9) **Month Invoiced;** You will be asked for each month in turn if you use the "irregular payments" option. If you have chosen one of the regular payments options, you will just be asked for the first month of the invoice. Remember that the month must be entered as a number, with the first month of the analysis taken as month 1; and note that the month required is the month of invoice, **not** the month of payment.
- 10) **Amount of Invoice;** The amount you use depends upon whether or not you are registered for VAT. If you **are** registered, give the value **excluding** VAT, but if you **are not** registered, **include** VAT in the amount of invoice. The program requires that the value of the invoice be entered in whole pounds (any of the options other than "irregular payments" will assume that the invoice will be the same for each month).

C. Expenses

Chapter 5 explains that **expenses** are items which are used up by the business, but which cannot be attributed to individual sales. As with fixed assets, the program allows up to 20 items.

- 1) **Item;** Each item you list must be given a name of up to 20 characters.
- 2) **Cash or Credit;** As in B (4), anything paid for on or before delivery is classified as cash.

- 3) **Credit Terms;** As in B (5), this is expressed as the number of days between delivery of the item and payment being made.
- 4) **VAT Rate;** As in B (6), this is the percentage VAT paid on the purchase. If you are not registered for VAT, you will not be asked this question.
- 5) **Frequency of Invoicing;** As in B (7), the program will provide the option of monthly, bi-monthly, quarterly, half yearly, yearly, or irregular payments.
- 6) **Number of Payments;** As in B (8), this will only be asked if you select "irregular payments" from the previous options.
- 7) **Month Invoiced;** As in B (9), you will be asked for each month in turn if you use the "irregular payments" option. If you have chosen one of the regular payments options, you will just be asked for the first month of the invoice.
- 8) **Amount of Invoice;** As in B (10), if you **are** registered for VAT, give the value **excluding** VAT, but if you **are not** registered, **include** VAT in the amount of invoice.

D. Employees

You can enter the names of up to 20 employees, including the owners of the business (if they draw a salary from the business). If you do not know the names of the people involved, define each employee by the name of the role he or she will perform. If your business is some type of employment agency, it may be appropriate to consider the people you hire out as "stock". In this case, do not enter these people as employees. Handle the payments you make to them as **direct costs** instead (see sections E and F).

- 1) **Name or Role;** Each employee you list must be given a name up to 20 characters long.
- 2) **Owner or Partner;** If the business has the legal form of a sole trader or a partnership, you will be asked which employees own the business, because the money paid to them is treated differently when analysing the tax position of the business. Simply answer yes or no for each person.
- 3) **Tax Allowance;** This question is only asked for those people for whom question (2) was answered "yes". For the business owners, individual personal tax allowances must be entered so that they can be taken

into account in calculating the tax position of the business. If you are unsure of your personal allowance, you should consult your local Inland Revenue office or an accountant. Note that a sole trader or partner will have to apply for Schedule D tax rating.

- 4) **Other Income;** Once again, only asked for the owners of a partnership or for a sole trader, so that the tax position can be modified accordingly. If the "other income" has already been taxed, it need not be included.
- 5) **Payment Interval;** Employees can be paid weekly or monthly. A third option, irregular, is offered to provide for seasonal or casual workers, or for workers who are not employed for the entire period being analysed.
- 6) **Payment Amount;** The amount (in whole pounds) paid to the employee at each payment interval. For employees, this amount must include income tax and employee's national insurance contribution, but excludes the national insurance contribution paid by the employer. For the sole trader or partner in a business (i.e., for those marked "yes" in question (2)), the amount excludes income tax as well, because this is not paid until the end of the financial year.
- 7) **Wage Related Costs;** These are included as a percentage of the payment amount. Costs include the employer's national insurance contribution, holiday pay allowance, health insurance and any other "perks" which are not included in the general expenses of the business. As a "rule of thumb", this figure should be around 25% for employees, or around 10% for the owners of a partnership or a sole trader.

E. Direct Costs – Single Product

This section only applies if you are analysing a business on the single product program, in which the direct costs are analysed on an itemised basis. Do not continue unless you have read the notes on **Alternative Approaches** at the start of this Appendix.

Chapter 5 explained that **direct costs** are the costs directly related to the sale of the product. They are also called the **variable costs** of the business, because they vary depending upon the amount of the product sold. In this section, the direct costs of the product can be divided into up to 20 components.

- 1) **Cost Item;** Each item you list must be given a name up to 20 characters long.

- 2) **Cash or Credit;** As in B (4), anything paid for on or before delivery is classified as cash.
- 3) **Credit Terms;** As in B (5), this is expressed as the number of days between delivery of the item and payment being made.
- 4) **VAT Rate;** As in B (6), this is the percentage VAT paid on the purchase. If you are not registered for VAT, you will not be asked this question.
- 5) **Frequency of Invoicing;** As in B (7), the program will provide the option of monthly, bi-monthly, quarterly, half yearly, yearly, or irregular payments.
- 6) **Number of Payments;** As in B (8), this will only be asked if you select "irregular payments" from the previous options.
- 7) **Month Invoiced;** As in B (9), if you use the "irregular payments" option, you will be asked for each month in turn. If you have chosen one of the regular payment options, you will just be asked for the first month of the invoice.
- 8) **Amount of Invoice;** As in B (10), if you **are** registered for VAT, give the value **excluding** VAT, but if you **are not** registered, **include** VAT in the amount of invoice.
- 9) **Cost Per Unit;** So that the program knows whether you have purchased enough of each item to make the volume of product you wish to sell, you must state how much of the item is used up in each product unit. For instance, if you buy £700 worth of cartons on one invoice, which are sufficient to pack 2000 product units, the cost per unit you must enter is:

$$\frac{\pounds 700}{2000} = 0.35\text{p per unit}$$
- 10) **Sales Volume;** For each month of the analysis period, you will have to estimate the amount of the product you intend to sell. You must estimate the number of units sold, **not** the amount of money received.
- 11) **Price per Unit;** How much will you earn for each product unit you sell? This will be the price which **you** sell it for, taking into account any discount you may have to offer your customers. If you are registered for VAT, **do not include VAT** in the price. If you are not registered, you will not charge your customers any VAT.

- 12) **VAT Rate on Sales;** If you are registered, which rate of VAT will your product attract? This will usually be 15%, but refer to Chapter 7 for more information.
- 13) **Percentage Credit Sales;** What percentage of your product will you sell on credit? For instance, if you expect that half of your product will be sold on credit terms, you would enter 50%. If you can, you should talk to other people already trading in your proposed line of business to find out what proportion of their customers expect credit.
- 14) **Credit Terms;** For those items sold on credit, what terms will apply? You must discover the terms which your customers will take in your particular industry, trade or profession. For instance, if you ask for payment in 30 days, but you think your customers may not pay in less than 40 days, you should enter the longer period of credit. Again, you should ask others in your business how long customers actually take to pay.

F. Direct Costs – Multi Product

This section applies to any business which it is inappropriate to analyse by the single product program. Do not continue unless you have read the notes on **Alternative Approaches** at the start of this Appendix.

Chapter 5 explained that **direct costs** are the costs directly related to the sale of the product. They are also called the **variable costs** of the business, because they vary depending upon the amount of the product sold. In this section, the direct cost of the product must be expressed as a percentage of the selling price (exclusive of VAT if you are registered). Up to 10 different products can be entered, and all of the questions must be answered for each product.

- 1) **Product Names;** Each product must be given a name of up to 20 characters.
- 2) **Cost as a Percentage of Selling Price;** Express the direct cost of the product as a percentage of the price at which you sell the product. Do not include any fixed costs (i.e. expenses, employees or fixed assets) in the calculation.
- 3) **Purchased for Cash or Credit;** As in B (4), anything paid for on or before delivery is classified as cash.
- 4) **Credit Terms;** As in B (5), this is expressed as the number of days between delivery of the item and payment being made.

- 5) **VAT Rate on Purchases;** As in B (6), this is the percentage VAT paid on the purchase. If you are not registered for VAT, you will not be asked this question.
- 6) **Days of Stock Held;** To calculate the expenditure on the product, the program needs to know how much stock you will be keeping on hand. This will vary a great deal from one business to another. A greengrocer, for example, may buy at daily intervals and would thus only have stock for a few days' sales in his shop. A hardware store, on the other hand, may buy far less frequently and have stock which lasts up to 6 months; that is, 180 days. Some service businesses will have no stock at all – the "product" will only exist when it is sold to the customer.
- 7) **Percentage Credit Sales;** As in E (13), what percentage of your product will you sell on credit?
- 8) **Credit Terms;** For those items sold on credit, what terms will apply? As in E (14), you must discover the terms which your customers will actually take.
- 9) **VAT Rate on Sales;** As in E (12), if you are registered, which rate of VAT will this product attract?
- 10) **Unit Price;** How much will you earn for each product until you sell? This will be the price which you sell it for, taking into account any discount you may have to offer your customers. If you are registered for VAT, **do not include VAT** in the price. If you are not registered, you will not charge any VAT.
- 11) **Sales Volume;** For each month of the analysis period, you will have to estimate the amount of each product you intend to sell. Remember that you must estimate the number of units sold, **not** the amount of money received. However, if you are selling something which is much easier to define in monetary terms (such as a service where the costs varies significantly from one customer to another), you can use revenue instead. In this case, set the unit price in (10) to £1. In this way, the program will handle the figures correctly.

G. Initial Finance Plan

We have used the term "initial" finance plan because your ideas about the way you finance your business will probably change as you run the program. **Entrepreneur** will first run through the cash flows for your business idea without taking a finance plan into account. This will show

clearly how much money the business actually needs. You can then review the plan and decide how to fund it accordingly.

- 1) **Equity Funds;** Chapter 3 explained that "equity" is the total money supplied to the business by the owners of the business.
- 2) **Term Loans;** Chapter 4 describes a term loan as money which is borrowed for an agreed period, at an agreed interest rate.
- 3) **Interest Rate;** Check with your bank manager to discover the current rate for term loans. Remember if you borrow money via certain Government schemes, such as the Small Firms Guarantee Scheme, there may be a premium charge in excess of the basic interest rate.
- 4) **Repayment Interval;** Loan and interest payments are usually made quarterly, although the frequency of repayment can vary. Again, check with your bank to determine the terms that are likely to apply to your type of business.
- 5) **Interest only or Interest & Principal;** The amount of money you borrow is called the "principal". A term loan can be handled in one of two ways. You may borrow, say, £5,000 for 5 years, paying the interest every quarter, but not repaying any of the principal until the end of the period, at which time it is all repaid at once. This is an "interest only" arrangement. It is equivalent to the "bridging loan" sometimes used in house purchases, but for a much longer period.

The second alternative is to pay the interest on the £5,000 every quarter and also pay back portions of the principal at regular intervals until after, say, 5 years, you have repaid the entire loan. In this case, the principal repayment would be £250 per quarter. This is an "interest and principal" arrangement.

Sometimes, you can secure a loan arrangement which combines both types of repayment terms. For instance, you could borrow for 5 years, pay interest only for the first 2 years and then pay interest and principal for the latter 3 years. This is often referred to as a repayment "holiday". For the purposes of this program, you can treat this type as an "interest only" loan.

- 6) **Principal Repaid;** If you select "interest & principal" in the previous question you must nominate how much principal is repaid in each payment. In the earlier example, repaying £5,000 over 5 years at quarterly intervals, the answer to this question will be £250.

7) **Overdraft Interest Rate;** Any cash shortfall in the business will be treated as an overdraft, and thus the overdraft interest rate must be provided. The interest charge for each month will be automatically deducted from the following month's cash flow.

A. Initial Data

Company Name (1)	
Month to start trading? (2)	
Type of business? (3) (legal form)	
Analysis period? (4) (months 1-18)	
Registered for VAT? (5) (Yes or No)	
First month VAT due? (6)	

C. Expenses

ITEM (1)	Cash or Credit (2)	Credit terms (days) (3)	VAT rate (%) (4)	Frequency of invoicing (5)	Number of payments - If Irregular (6)	First month invoiced (7)	Amount (€) (8)
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
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16.							
17.							
18.							
19.							
20.							

D. Employees

NAME (1)	Sole Trader or Partner (Y/N) (2)	Tax Allowance (£) (if sole trader or partner) (3)	Other taxable income (£) (if sole trader or partner) (4)	Payment interval (weekly, monthly or irregularly) (5)	Weekly or monthly payment amount (£) (6)	Irregular payments no. of payments, month, amount (7)	Wage-related costs (as % of wage) (8)
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							

F. Direct Costs – Multi Product (ctd)

1. _____	Product Name	Month	Sales Volume	Month	Sales Volume	Month	Sales Volume
		1		7		13	
		2		8		14	
		3		9		15	
		4		10		16	
		5		11		17	
		6		12		18	

2. _____	Month	Sales Volume	Month	Sales Volume	Month	Sales Volume
	1		7		13	
	2		8		14	
	3		9		15	
	4		10		16	
	5		11		17	
	6		12		18	

3. _____	Month	Sales Volume	Month	Sales Volume	Month	Sales Volume
	1		7		13	
	2		8		14	
	3		9		15	
	4		10		16	
	5		11		17	
	6		12		18	

4. _____	Month	Sales Volume	Month	Sales Volume	Month	Sales Volume
	1		7		13	
	2		8		14	
	3		9		15	
	4		10		16	
	5		11		17	
	6		12		18	

5. _____	Month	Sales Volume	Month	Sales Volume	Month	Sales Volume
	1		7		13	
	2		8		14	
	3		9		15	
	4		10		16	
	5		11		17	
	6		12		18	

F. Direct Costs – Multi product (ctd)

Product Name

6.

Month	Sales Volume
1	
2	
3	
4	
5	
6	

Month	Sales Volume
7	
8	
9	
10	
11	
12	

Month	Sales Volume
13	
14	
15	
16	
17	
18	

7.

Month	Sales Volume
1	
2	
3	
4	
5	
6	

Month	Sales Volume
7	
8	
9	
10	
11	
12	

Month	Sales Volume
13	
14	
15	
16	
17	
18	

8.

Month	Sales Volume
1	
2	
3	
4	
5	
6	

Month	Sales Volume
7	
8	
9	
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12	

Month	Sales Volume
13	
14	
15	
16	
17	
18	

9.

Month	Sales Volume
1	
2	
3	
4	
5	
6	

Month	Sales Volume
7	
8	
9	
10	
11	
12	

Month	Sales Volume
13	
14	
15	
16	
17	
18	

10.

Month	Sales Volume
1	
2	
3	
4	
5	
6	

Month	Sales Volume
7	
8	
9	
10	
11	
12	

Month	Sales Volume
13	
14	
15	
16	
17	
18	

C. Initial Finance Plan

(1) Equity Funds	£	
(2) Term Loans	£	
(3) Interest Rate		%
(4) Repayment Interval		months
(5) Interest only or Interest and Principal		
(6) Principal repaid	£	
(7) Overdraft Interest Rate		%

APPENDIX 4

Sample Businesses

Sample data for single product program

A. Initial Data

Company Name (1)	Oasis Desert Boots
Month to start trading? (2)	March (3)
Type of business? (3) (legal form)	Sole Trader
Analysis period? (4) (months 1-18)	12
Registered for VAT? (5) (Yes or No)	Yes
First month VAT due? (6)	3

C. Expenses

ITEM (1)	Cash or Credit (2)	Credit terms (days) (3)	VAT rate (%) (4)	Frequency of Invoicing (5)	Number of payments - if Irregular (6)	First month invoiced (7)	Amount (£) (8)
1. Rent	Cash	-	0%	Q	-	1	£500
2. Rates	Cash	-	0%	Q	-	3	£80
3. Heat & light	Cash	-	0%	Q	-	3	£75
4. Professional fees	Credit	30	15%	Ir.	1	1	£152
5. Insurances	Credit	30	0%	A	-	1	£250
6. Stationery	Cash	-	15%	Q	-	1	£26
7. Postage	Cash	-	0%	M	-	2	£15
8. Phone Bills	Cash	-	15%	Q	-	3	£57
9. Travel Expenses	Cash	-	15%	M	-	1	£30
10. Deliveries	Cash	-	0%	M	-	2	£25
11.							

12. Note: M = monthly A = Annually

13. Q = Quarterly Ir = Irregularly

14. All £ amounts exclude V.A.T.

15.

16.

17.

18.

19.

20.

D. Employees

NAME (1)	Sole Trader or Partner (Y/N) (2)	Tax Allowance (£) (if sole trader or partner) (3)	Other taxable income (£) (if sole trader or partner) (4)	Payment interval (weekly, monthly or irregularly) (5)	Weekly or monthly payment amount (£) (6)	Irregular payments no. of payments, month amount (7)	Wage-related costs (as % of wage) (8)
1. NIK James	S.T.	£2005	£0	M	£480	-	10%
2. Assistant	-	-	-	W	£75	-	20%
3.							

4. Notes: NIK James is the owner - so include
5. tax allowance and taxable income.

6. W = Weekly M = Monthly

7.

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E. Direct Costs – Single Product

ITEM (1)	Cash or Credit (2)	Credit Terms (Days) (3)	VAT rate (%) (4)	Frequency of invoicing (5)	Number of payments - if irregular (6)	First month invoiced (7)	Amount (£) (8)	Costs per unit (£) (9)
1. Suede	Cash	-	15%	M	-	1	£500	£2.76
2. Composite soles	Credit	30	15%	M	-	1	£470	£2.55
3. Thread	Cash	-	15%	M	-	1	£18	£0.10
4. Glue	Cash	-	15%	M	-	1	£45	£0.24
5. Eyelets	Cash	-	15%	Q	-	1	£87	£0.16
6. Laces	Credit	30	15%	Q	-	1	£200	£0.32
7. Labels	Cash	-	15%	Q	-	1	£40	£0.06
8. Packaging	Credit	14	15%	M	-	1	£180	£0.47
9.								
10.								

11. Note: All £ amounts exclude V.A.T.

12. M = Monthly Q = Quarterly

13.

14.

15.

16.

17.

18.

19.

20.

E. Direct Costs – Single product (ctd)

Month	Sales Volume (10)
1	0
2	50
3	125
4	200
5	200
6	250

Month	Sales Volume (10)
7	225
8	175
9	150
10	250
11	75
12	100

Month	Sales Volume (10)
13	
14	
15	
16	
17	
18	

Selling price per unit (11)	(£)	16
VAT rate on sales (12)	(%)	15%
Percentage of credit sales (13)	(%)	50%
Credit terms (14)	(days)	30 days

G. Initial Finance Plan

(1) Equity Funds	£	4500	
(2) Term Loans	£	2500	
(3) Interest Rate		16	%
(4) Repayment Interval		Annual	months
(5) Interest only Interest and Principal			
(6) Principal repaid	£	2500	
(7) Overdraft Interest Rate		13	%

Sample data for multi product program

A. Initial Data

Company Name (1)	L.K.S. Micromart Ltd.
Month to start trading? (2)	September (9)
Type of business? (3) (legal form)	Limited Company
Analysis period? (4) (months 1-18)	18 Months
Registered for VAT? (5) (Yes or No)	Yes
First month VAT due? (6)	3

C. Expenses

ITEM (1)	Cash or Credit (2)	Credit terms (days) (3)	VAT rate (%) (4)	Frequency of invoicing (5)	Number of payments - if irregular (6)	First month invoiced (7)	Amount (£) (8)
1. Rent	Cash	-	0%	Q	-	1	£2100
2. Rates	Cash	-	0%	H-Y	-	6	£374
3. Heat & light	Cash	-	0%	Q	-	3	£350
4. Car (lease)	Cash	-	15%	M	-	1	£167
5. Van (lease)	Cash	-	15%	M	-	3	£183
6. Phone system (lease)	Cash	-	15%	Q	-	1	£93
7. Phone installation	Cash	-	15%	lrr.	1	1	£157
8. Office sundries	Credit	30	15%	lrr.	2	$\frac{3}{4}$	£45 £20
9. Professional fees	Credit	30	15%	lrr.	2	$\frac{1}{2}$	£348 £1304
10. Accountants' fees	Cash	-	15%	M	-	1	£115
11. Insurances	Credit	30	15%	A	-	1	£1521
12. Stationery	Credit	30	15%	Bi-M	-	2	£104
13. Postage	Cash	-	0%	M	-	1	£40
14. Phone Bills	Cash	-	15%	Q	-	4	£217
15. Travel Expenses	Cash	-	15%	M	-	1	£522
16. Advertising copy	Credit	30	0%	H-Y	-	2	£900
17. Advertising space	Credit	30	0%	M	-	3	£700
18. Catalogues	Cash	-	15%	lrr.	2	$\frac{5}{14}$	£870 £438

19. Notes: All £ amounts exclude V.A.T.

20. M=Monthly A=Annually H-Y=Half Yearly Bi-M=Bi-Monthly

D. Employees

NAME (1)	Sole Trader or Partner (Y/N)	Tax Allowance (£) (if sole trader or partner)	Other taxable income (£) (if sole trader or partner)	Payment interval (weekly, monthly or irregularly)	Weekly or monthly payment amount (£)	Irregular payments no. of payments, month amount	Wage-related costs (as % of wage)
1. Duncan King	-	-	-	M	£1250	-	23%
2. Colin Hutchins	-	-	-	M	£1250	-	23%
3. Salesman	-	-	-	M	£600	-	15%
4. Technician	-	-	-	M	£675	-	19%
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							

F. Direct Costs – Multi Product

PRODUCT NAME (1)	Cost as % of selling price (2)	Cash or Credit (3)	Credit terms (days) (4)	VAT rate on stock (%) (5)	Number of days stock held (days) (6)	% of sales on credit (7)	Sales credit terms (days) (8)	VAT rate on sales (%) (9)	Unit price (£) (10)
1. Hardware sales	68%	Credit	30	15%	45	75%	45	15%	£2174
2. Software sales	55%	Credit	30	15%	90	20%	45	15%	£350
3. Repairs	10%	Cash	—	15%	0	20%	45	15%	£61
4.									
5. Note: All unit prices exclude V.A.T.									
6.									
7.									
8.									
9.									
10.									

G. Initial Finance Plan

(1) Equity Funds	£ 50,000
(2) Term Loans	£ 30,000
(3) Interest Rate	16 %
(4) Repayment Interval	3 months
(5) Interest only or Interest and Principal	
(6) Principal repaid	£ 1500
(7) Overdraft Interest Rate	13 %

F. Direct Costs – Multi Product (ctd)

Product Name

Month	Sales Volume
1	0
2	0
3	3
4	5
5	7
6	7

Month	Sales Volume
7	10
8	10
9	12
10	15
11	15
12	17

Month	Sales Volume
13	20
14	20
15	20
16	20
17	20
18	20

1. Hardware sales

Month	Sales Volume
1	0
2	0
3	5
4	8
5	11
6	15

Month	Sales Volume
7	15
8	18
9	18
10	20
11	20
12	25

Month	Sales Volume
13	25
14	30
15	30
16	35
17	35
18	35

2. Software sales

Month	Sales Volume
1	0
2	0
3	0
4	5
5	7
6	10

Month	Sales Volume
7	10
8	15
9	15
10	18
11	18
12	20

Month	Sales Volume
13	20
14	25
15	25
16	30
17	30
18	30

3. Repairs

Month	Sales Volume
1	
2	
3	
4	
5	
6	

Month	Sales Volume
7	
8	
9	
10	
11	
12	

Month	Sales Volume
13	
14	
15	
16	
17	
18	

4.

Month	Sales Volume
1	
2	
3	
4	
5	
6	

Month	Sales Volume
7	
8	
9	
10	
11	
12	

Month	Sales Volume
13	
14	
15	
16	
17	
18	

5.

APPENDIX 5

Loading Procedures

A5.1 Spectrum Cassette Version

The Teaching Program is on Cassette No. 1 and the Applications Program is on Cassette No. 2. Both programs load and auto run by typing **LOAD ""** and **ENTER**.

A5.2 Spectrum Microdrive Version

The Teaching and Applications Programs both start on Cartridge No. 1. Simply insert Cartridge No. 1 in the Microdrive and key **NEW ENTER RUN ENTER**. An option to run the Teaching or Applications Program will then soon appear on the screen. However, the program menu routine may ask you to insert Cartridge No. 2 in the Microdrive to load certain parts of the program. Please obey the instructions which you see on the screen.

A5.3 Commodore 64 Cassette Version

The Teaching Program is on Cassette No. 1 and the Applications Program is on Cassette No. 2. Both programs load and auto run simply by pressing **SHIFT** and **RUN/STOP** at the same time.

A5.4 Commodore 64 Disk Version

The Teaching Program operates by typing **LOAD "TEACH", 8 RETURN**. When the program has loaded, a **READY** message will appear on the screen. You must then type **RUN** and **RETURN** to operate the program. The Applications Program is loaded in the same way. Type **LOAD "APPLY", 8 RETURN** and then **RUN RETURN** when the **READY** message appears.

A5.5 BBC Model B Cassette Version

The Teaching Program is on Cassette No. 1 and the Applications Program is on Cassette No. 2. Both programs load and auto run simply by typing **CHAIN ""** and **RETURN**.

A5.6 BBC Model B Disk Version

Load the teaching program by typing **CHAIN "TEACH" RETURN**, and the program will run automatically. Similarly, load the Applications Program by typing **CHAIN "APPLY" RETURN**.

Glossary

- Accounts**, the financial records of the business. Also referred to as the **books**.
- Assets**, anything which is owned by the business which has a measurable value.
- Balance Sheet**, an itemised summary of the **assets** and **liabilities** of a business at a particular date.
- Books**, see **accounts**.
- Break Even Point**, the point at which **revenues** equal costs; **profits** begin to be made as revenues increase beyond this point.
- Business Plan**, the document describing in detail how and why a business will be started; used to support the raising of finance.
- Capital Assets**, see **fixed assets**.
- Cash Flow**, the analysis, over a period, of the cash coming into a business and the cash going out.
- Contribution**, the difference between the **selling price** and the **direct cost** of production; this "contributes" firstly to your **fixed costs** and then, when they are covered, to your **profits**.
- Corporation Tax**, the tax levied on the **profits** of a **limited company** by the Government.
- Cost of Goods Sold (COGS)**, the expenditure attributable to producing the goods you have actually sold in a particular period; in its simplest form this is the same as **direct costs**.
- Credit Terms**, the length of time, usually in days, occurring between delivery of goods to a person or business and payment for them.
- Creditor**, a person or business to which a business owes money for goods or services bought on **credit terms**.
- Debtor**, a person or business which owes your business money for goods or services sold on **credit terms** by you.
- Depreciation**, the rate at which your **fixed assets** wear out.
- Double Entry Book-keeping**, the method of preparing accounts where each transaction shows the source of funds as one entry and the use of those funds as another.
- Direct Costs**, any cost, such as raw materials and packaging, which varies "directly" with the number of goods being produced.
- Equity**, the amount of cash put into the business by its owners.
- Expenses**, any expenditure by the business which is not directly attributable to the product.
- Fixed Assets**, **assets** acquired for long term use in the business, such as land, buildings, plant and equipment and vehicles.
- Fixed Costs**, expenditure which remains the same irrespective of the level of production; also known as **overheads**.

Gross Profit, the difference between **revenue** and **cost of goods sold** in any particular period, representing the total profit made from sales before expenses are deducted; in its simplest form it is equivalent to **contribution**.

Input Tax, the **Value Added Tax** which a registered business pays (and can reclaim) on goods or services purchased for the use of the business.

Intended Trader, a discretionary classification from Customs & Excise which allows a business to obtain **VAT** registration when it is not yet making taxable supplies but intends to do so.

Interest, the charge levied or paid on the lending of money.

Liabilities, those funds in a business which are owed to others.

Limited Company, a business with a legal identity of its own, separate from the people who own it.

Net Profit, see **profit**.

Output Tax, the **Value Added Tax** that a registered business charges its customers on the goods and services it sells, and which it pays to Customs & Excise.

Overdraft, a form of short term loan usually agreed up to a certain amount; interest is paid on the amount outstanding, which is repayable on demand.

Overheads, see **fixed costs**.

Partnership, a business (which is not a **Limited Company**) carried on by two or more people who intend to share the profits.

Profit, the excess of sales **revenue** over sales costs and expenses during an accounting period; although earned by the business, it belongs to the owners of the business; also known as **net profit**.

Profit and Loss Account, a summary of the **revenues** and **expenses** of the business during an accounting period.

Revenue, the income a business earns from its sales; also known as **turnover**.

Sole Trader, a business in which a single person trades under his or her own name.

Stock, the components of the product held by a business, including raw materials, **work in progress** and finished goods.

Term Loan (short, medium and long), loans for 0–3, 3–10 and 10–20 years respectively, usually secured against a **fixed asset**; interest is paid on the total amount, which is usually not repayable until the end of the term.

Turnover, see **revenue**.

Value Added Tax (VAT), a charge levied by Customs & Excise on the sale of most goods and services.

Variable Costs, see **direct costs**.

Working Capital, the capital used in the day to day running of the business, calculated as the difference between **current assets** and **current liabilities**.

Work in Progress, the category of **stock** in a business on which the conversion to finished goods has begun but is not yet complete.

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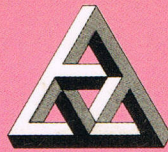
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