5 Assessing risks in trade credit

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Credit assessment overview; Marketing and risk assessment; Customer identity – types of customer; Trade credit information and its sources; Financial statements; Interpretation of accounts; Summary

CREDIT ASSESSMENT OVERVIEW

The credit manager is often seen as something of a cynic, never believing anything he is told until it can be verified. The embossed notepaper, the fashionable address and the imposing façade do not impress in themselves – actual facts and experience count for much more. The tag of 'cynic' may appear to apply because the credit manager is trained not to accept everything at face value, not to judge solely on appearances and certainly not to risk the company's wealth without having weighed up all the factors.

Hundreds of businesses close down every day in the UK, more often than not due to insolvency, leaving suppliers and others unpaid. Suppliers are often in a state of denial about the possibilities of 'their' customers failing, and can be quite surprised when it happens. Well-organized suppliers see the end coming and, depending on the speed of the collapse, reduce their supply and collect most of the outstanding debt before the doors are locked for good. The credit manager in such supplier companies has not been gazing into a crystal ball, but has simply kept in touch with all his bigger customers and has regularly reviewed the accounts with up-to-date filed information and credit reports. He has therefore been able to assess the ongoing risk and to act promptly when customers' circumstances have taken a turn for the worse.

So why do so many firms send their wealth off to customers, regardless of their ability to pay? Principally because they are as keen as mustard to sell as much volume as possible without regard to actual *net* profit and in the strange and almost invincible belief that 'the customer is always right'. For them, ensuring customer satisfaction takes preference over cost. All the evidence shows, however, that the customer is *not* always right, nor are all customers worthy of the same credit facilities. Customers are always important, of course, and the assessment

process is there to sort the wheat quickly from the chaff. Some customers will not be as profitable as others if they pay late, and no profit will exist at all if they never pay!

However keen the supplier may be to sell, the purpose of any business is to make a surplus. To that end, the astute supplier will always keep his eye on the ball – the ball being net profit, that tiny percentage of sales value that is left when the customer has paid. Until payment has been banked, the sale has not been completed and the supplier has only increased his costs (by the interest cost of waiting), and so reducing the net profit, the longer the sale remains unpaid. Unpaid sales are always dangerous, costly and risky, and the Golden Rule (the longer a sale is unpaid, the greater the chance it will never be paid) is what guides credit management. Cash is King, and the customer only wears the crown when he can show that he is worthy of so doing. To be truly cynical, the easiest way to increase 'sales' volume would be to advertise: 'buy from us and don't bother to pay'.

Successful companies know the value of cash inflow but, critically, they also know that monitoring customers' ability to pay must not hinder sales growth. Good risk assessment methods not only increase profits by avoiding the costs of waiting and bad debts, but also increase sales opportunities by directing competitive selling efforts away from failing customers to those with good prospects for growth. An obvious question would be: if you knew a customer was going bust next week, would you supply goods today, payable 30 days later? The answer is just as obvious, of course, but the trick is to *know* that the customer is going broke next week. The real skill is in knowing the customer's ability to pay on time, and in recognizing the signs and the trends which indicate growth, or decline and failure.

There will always be business failures and modern economics suggests there will always be peaks and troughs in business activities, with global effects and consequences. In a recession (and there have been many recessions both in the UK and globally since the end of the Second World War), large numbers of businesses fail, leaving creditors with bad debt losses. Slow payment is a worldwide phenomenon with even the one-time boom economies of Japan and Germany experiencing severe problems at the beginning of the twenty-first century. As a result, the squeeze on profits everywhere has intensified, which means that pressures to sell and grow market share have intensified, and with it all the risks associated with the granting of credit.

To sell at any cost is clearly bad practice, and since both credit and sales staff should always sing from the same hymn sheet, they have to cooperate at every level to ensure *good* business. This means that both credit and sales staff recognize that no customer stands still – they either grow larger or smaller, become more cash rich or less, borrow more or borrow less, and so on. For profit reasons (the effect of delays or losses) or for sales reasons (the ability of customers to buy), someone has to assess the credit ability of customers. Though this is usually the specialist task of the credit manager, the sales manager needs to know all about it as well.

To put all this into a bite-sized chunk for all to understand, sales staff should remember:

- not all customers are entitled to credit
- volume does not take care of minor losses
- late payment is hugely costly
- not all customers pay in the end
- the customer is always potentially important, but not always right.

If that can be accepted, the next fundamental for everybody, from the Chief Executive downwards, is to remember that credit means *trust.* Trust has to be based on *knowledge* for it to have any real meaning. Knowledge covers everything you need to make the informed decision, simply broken down into three basic credit questions:

1 is the customer about to fail? (the *solvency* risk)
2 can the customer pay our account on time? (the *liquidity* risk)
3 is the customer growing or declining? (the *volume* risk)

Risk assessment is not a haphazard affair, nor should it be anything other than structured and logical. For a business relationship to grow from a sound base, a well-defined sequence of events should be established at the outset, which can be followed by both credit and sales staff in order to define, from the earliest point, the manner in which the customer relationship will be conducted. A simple but reliable sequence is:

- *Credit Application Form:* This is the customer's request to borrow our money. Just as a bank wants to know all about us before lending to us, so we should need to know more about our prospective credit customer.
- *Check on creditworthiness:* Thorough or brief, according to order value or projected volumes.
- *Credit rating (limit) and/or risk category:* The application form and the credit report have provided information on which to base a decision as to how much we can allow, and what the perceived level of risk is likely to be.
- *Credit terms:* Standard or special, according to the buyer's status.
- *Allocation of account number:* No deliveries until this is done. The allocation of an account number signals the decision that credit may now be allowed.
- *'Welcome letter' to customer (to their payment person):* The important first contact with the person responsible for payment.
- *Special ledger section for three months:* This allows close monitoring of a new account, and to make extra contact in the initial stages to help the customer avoid bad payment habits.

Some of the above actions would be equally applicable to existing customers, both as regular review and as continuous monitoring – it is just as important to

keep accounts under scrutinized control as it is to set them up correctly in the first place.

In addition to an obvious logical sequence, there should be an equally obvious line of responsibility for risk assessment and credit decisions.

Many a credit manager has the motto 'a sale is not a sale until it is paid for' engraved on a plaque on the desk as well as on the heart. That could be seen as negative – better would be 'a sale is only a cost to us until it is paid for'. Even if they both mean the same thing, the latter has a more positive ring to appeal to sales managers. The really positive motto for all professional credit managers should be: 'my job is to look for a way to take every possible order'.

This highlights the true role of the credit manager – to help achieve the highest volume of *profitable* sales over the shortest period of time.

The correct credit structure in any business is to have the three basic credit functions – risk assessment, sales ledger and cash collection – under the control of the credit manager. They are intimately related, along with an integrated computer system to support all the procedures involved. Many companies separate the staff involved in the three functions – for example, someone doing risk assessment does not deal with cash postings. There may be sound auditing reasons for this, but companies should not make the mistake of removing the overall authority of the credit manager from any of these tasks. If, for example, the credit manager directly controls risk assessment, he should also have an overview of sales ledger maintenance and cash collection, even if it is not under his direct control. It is easy to understand the mistakes and expense incurred when the functions are completely separated, and when responsibility is equally segregated, such as orders still being taken from customers who are being sued for non-payment of previous supplies, or cash postings being two weeks behind because of other accounting priorities, or collection requests being ignored by regional sales offices and depots. The credit manager's role is to protect the company's investment in accounts receivable, and by definition that must include the risk, the invoiced sale, the collection of cash and the correct and prompt allocation of that cash. If the credit manager only has control, or responsibility, for one of the three basic areas, then any staff weakness or inefficiency in either of the other two can seriously impair performance, and there is nothing directly that the credit manager can do about it. By any definition, this must be unacceptable.

Credit management, therefore, is as much concerned with identifying good sales prospects and cultivating strong relationships as it is with standard collection actions and ledger-keeping. The credit manager should be seen by other staff as responsible for the credit policy being carried out, applying commercial sense to resolving customer problems. Risk control does not mean saying 'no' to poor risks, just because the policy allows this. It means looking for ways of saying 'yes' – in other words, a constructive attitude coupled with sufficient seniority to be able to make agreements with customers. This may include variations on a theme, such as part deliveries, special credit terms, instalments, discounts, deposits, etc.

If a company is large enough to have both a sales manager and a credit manager, they must be at the same management level. Both are then able to argue

their respective cases in a constructive and healthy manner, with any serious disagreement being referred to, and resolved at, sales director and finance director level. It makes no sense for the company's credit policy to be operated at too junior a level, when the real manager of credit is the credit manager's boss. It is unlikely that the boss will have the time for day-to-day operational control, not to mention the depth of knowledge and accumulated experience of the credit manager himself. In smaller companies, the credit controller is often the person responsible for day-to-day running of the sales ledger, and his or her boss is in effect the credit manager, with the time and the skills necessary to set credit levels, monitor them against debts and take prompt action to resolve high risk problems. Where resources allow, it pays for the larger operations to have a credit risk specialist, reporting directly to the credit manager, who will have overall responsibility for all aspects of the credit function.

Where accounts are both home and export, the credit checking task should either have separate people, or at the very least separate time allocated for home and export. It takes time to build experience in overseas trade and spreading the job between several people can seriously hinder that experience building process.

MARKETING AND RISK ASSESSMENT

Marketing is defined as the commercial activity prior to selling, that is, identifying markets for products, finding the substantial customers for those products, advertising and promotion plans, seeing how the competition operates, including their credit terms, and early discussions with prospective customers. Selling is best defined as persuading customers to buy products and the whole process of taking and servicing orders.

At various early stages, well-organized companies assess the viability of prospective customers, as well as deciding what investment will be needed for the possible volume of sales and their credit periods. For example, planned sales of £100 000 per month to customers enjoying 60 days' credit will mean an investment in unpaid sales of £200 000 plus, for an element of overdues and disputes of say 20%, a further £40 000, making a total of £240 000. If any contracts need special, or non-standard terms, the invested amount will alter.

It pays, therefore, to identify prospective customers for, say, 80% of planned sales and have them credit-checked:

1 *Early warning:* As possible prospects are identified by sales or marketing staff, their names are passed to the credit manager to assess for credit. The expense and effort may be wasted if orders do not materialize, but delays are avoided when they do. In addition, the company feels better equipped for strong sales when it knows the good, average and poor risk accounts up front. It is also less likely that the poor risk accounts will place orders anyway.

2 *Sales planning meetings:* The credit manager attends when names of prospective customers are being bandied about. He may already know them, and in any event is in a position to move quickly to check them. This involvement can help direct sales plans to the right customers.
3 *Visiting prospective customers:* A joint visit with the sales or marketing person, before the business becomes firm, provides a good opportunity of assessing the people and the premises. This can help in two ways: it adds depth to the written credit reports; and it is the chance to start building strong personal contacts for future collections.

It is of the utmost importance for customers to see sales and credit as a united and money-conscious team, and it is equally important for personnel throughout the selling company to recognize that too. When this team approach is not promoted, the wrong kind of customer can easily play off one function against the other in future negotiations, for example, alleging concessions and 'old' agreements.

Actually opening new accounts should begin with the requirement for new customers to complete an 'application for credit' (see Figure 5.1 and accompanying notes). Apart from providing more accurate details than those given verbally, or on orders, the customer is reminded of the terms of payment and his commitment to paying them. The form should also provide the name of a contact for payments. If the business is deemed to be too fast-moving to wait for form-filling, a first order can be taken up to an agreed maximum – that is to say a value that, if lost, would not be too painful for the seller, say £1000. The credit application form should then be completed before a second order is taken.

The decision to open the account should be communicated with enthusiasm to the customer's financial contact by a credit person. This is a good opportunity to firm up the relationship and restate the payment terms. As a control for this step, it is beneficial if only the credit department is authorized to allocate new account numbers, without which the business cannot go ahead.

Newly opened accounts should be placed in a special section of the sales ledger for a period of three months or so. Then, regardless of value or the standard collection system, every new customer should be telephoned and followed up personally for that period in order to try to ensure that no bad habits develop.

It is extremely valuable to make immediate contact with the customer's payment person by sending a *new account letter,* a friendly version of which is illustrated in Figure 5.2. The letter should always be signed personally, and should of course look like an individually prepared letter for that customer only, rather than what appears to be a standard computer print-out. A good tip is to make a follow-up call a few days later, as the customer's reaction may indicate their attitude to prompt payment.

Name and address of applicant

State FULL trading style, if any:

_____
_____
_____
_____
_____ Postcode _____

State FULL name of proprietors/ partners and home addresses

Address for invoices/statements if different from above:

_____
_____
_____
_____ Postcode _____

Ltd Company Registration No.

Registered Office address:

How long business established: _____
Name of payment contact: _____
Phone number and extension: _____
Email address: _____
(Please attach a copy of your letter heading)

Credit references:
1 Bank Name _____Sort Code_____
Address: _____
2 Trade Ref.* Name: _____
Address: _____
3 Trade Ref.* Name: _____
Address: _____
4 Trade Ref.* Name: _____
Address: _____
** Not to be completed by customer – names to be supplied by salesperson*
[seller company name] will make a search with a credit reference agency, which will keep a record of that search and will share that information with other businesses. In some instances we may also make a search on the personal credit file of principal directors. Should it become necessary to review the account, a credit reference may be used and a record kept. We will monitor and record information relating to your trade performance and such records will be made available to credit reference agencies who will share that information with other businesses when assessing applications for credit and fraud prevention.

I/we agree that this information may be used to support a request for credit facilities with [seller company name], and associated companies (a list is available upon request) in accordance with their credit vetting procedures.
Customer signature_____
Position_____
Estimated purchases £_____ per month. Credit rating required £_____
(e.g. 2 x monthly purchases).
We note your Standard Conditions of Sale, and agree to all clauses and will pay for any goods/services supplied by you on the stated terms, i.e. ALL invoices are payable 30 days from invoice date. In addition, our attention has been drawn to the clause relating to Retention of Title, which we have duly noted.
Customer signature_____
Position_____

Figure 5.1 Application form to open a credit account

Notes for the credit risk assessor on the Credit Application Form (Figure 5.1)

- *Name of applicant:* This defines the type of customer (person, sole trader, partnership, limited company or non-standard), which is essential to decide the risk, the type of collection approach and to capture the precise name and style for possible need.
- *Address for invoices and statements:* Sometimes the payment address is different from that for deliveries. Invoices sent to the delivery address may suffer delays before they are passed to the payment office.
- *Full name(s) of proprietor or partner(s) and home address:* The customer should know that anything less than limited liability means personal liability of owners or partners for debts. There is every reason to contact home addresses if no satisfaction is achieved at the place of business. In credit checking, the home premises may well represent wealth for future recovery if needed. With partnerships, unless limited by deed between the partners, or by limited liability statute, there is joint and several (that is, separate) liability on the part of all partners.
- *Limited company registration number and office:* This is needed for legal action, where writs and summonses are required to be served on the official address. Registered numbers are unique and useful when requesting credit reports, to avoid confusing similar but different firms.
- *Length of time established:* Firms less than two years old have a high failure rate – possibly 50% of businesses fail within the first two years. Good policy is to restrict credit until a relationship has matured, or obtain third party guarantees for higher credit. Longer established firms have track records which can be checked.
- *Name of payments contact:* This is extremely useful for future collection efforts, but may not be obvious at this early stage involving salesperson and buyer.
- *Letterheading request:* This is a useful check on the name, address and style data given. Customers can be inaccurate when completing forms, and salesperson may use abbreviations.
- *Credit references:* Bank details and trade references are often undervalued, but as a quick and cheap source they can help to establish basic details. Data protection legislation now makes it imperative to be clear as to what will, or will not, be done in respect of credit enquiries; sellers should ensure that their intentions are clear to the customer and accepted by him or her.
- *Estimated purchases:* This must be the customer's estimate, not the salesperson's, which may be optimistically higher and frustrate the real credit rating needed.
- *Credit rating requested:* This must be a multiple of monthly sales, since the second month will be delivered before the first month is paid.
- *Acceptance:* It is important to give the customer sight of the conditions of sale (even on the reverse of this form), and get agreement to them here – in particular the credit terms, but also any specific special terms which it will be the seller's intention to enforce.

For the attention of Mr/Mrs/Ms xxxx (payment contacts person named on credit application)
XYZ LTD
etc
etc.

New Account Number _____

Dear Mr/Mrs/Ms xxxx,

I am very pleased to tell you that we have opened a credit account for your company with the above account number.

A credit rating of £_____ has been applied to your account. Please let me know if this will be sufficient for your needs – I shall be happy to discuss it with you.

Our credit terms of ____ days from invoice date were agreed by your authorized person on the Credit Application Form, and I look forward to your payments to these terms. Prompt settlement of accounts will be much appreciated and to our mutual benefit, and will avoid any difficulties with supplies.

We strive for accuracy in our invoices and statements. Please do not hesitate to let me know at once of any errors or queries. As the person looking after your account, I shall undertake to give any such matters my prompt attention.

I shall telephone you in a few days to make sure that you are quite happy with the credit arrangements and look forward to talking to you.

Yours sincerely,

Credit Controller
Direct Phone/Ext.
Email:

Figure 5.2 Specimen new account letter

On receipt of the credit application form, the credit manager should organize the required credit checks (their depth according to value) and, if acceptable, allocate an account number.

CUSTOMER IDENTITY – TYPES OF CUSTOMER

Every sales ledger almost certainly contains errors of name, address, postcode or some other combination. Sometimes these are of minor importance, perhaps an incomplete postcode or a spelling mistake in the address. It is easy, for example, to confuse 'row' with 'roe' or 'plane' with 'plain' in verbal orders, and some errors may not be significant in day-to-day dealings with the customer. However,

accuracy is indicative of good practice and professionalism, and customer data should always be correct.

What is dangerous, however, is inaccuracy in customer name. Not only does it display a haphazard approach, it can have a significant impact on collection and litigation activity. Many organizations have computer systems which integrate throughout the order, sale, delivery, invoice, statement and ledger process, so that the wrong name at the front end of the operation is repeated throughout. Some organizations even use systems which put a constraint on name and address fields. For example, to include long names and addresses, some 'editing' is required. Such constraints should be remedied at the earliest opportunity. The customer name is sacrosanct and should never be 'amended' to suit computer needs. This should be less of a problem to us in the twenty-first century than it was to our Victorian forebears – we like short, snappy company names these days, whereas the Victorians would try to encompass in the name the activities of the company as well as its title. It is possible that, even today, a company may have a long name but be well known by its initials, such as GNER, meaning Great North Eastern Railway Ltd. Therein, however, lies the heart of the problem of name, and therefore customer identity.

Establishing the customer identity establishes the legal status of the customer. It is important to capture *exactly* the correct legal identity, because the seller should know precisely who is responsible for the debt incurred. The difference between:

Smiths
John Smith
John Smith & Sons
John Smith & Sons Ltd

is acute. Well-known trading names are valuable but a customer known to all as 'Smiths' may legally be owned by Bubblesqueak Ltd, or John Smith & Sons, or possibly just Mr Smith.

The sole trader, or proprietor, is an individual and is a legal entity in his or her own right. A sole trader is personally liable for all debts incurred up to the full extent of their personal wealth. In other words, in the event of business failure, personal insolvency means bankruptcy. Sole traders are not obliged to lodge annual accounts or any details of their business for public scrutiny, though they are required to make tax returns and, if registered, VAT returns. These are not publicly available. It can be said that, with no company 'screen' to hide behind, the sole trader has everything to lose in the event of business failure, and thus has every incentive to pay his debts and avoid being closed down by an unpaid supplier. For the sole trader, there is no legal difference between business debts and personal debts, and therefore the personal lifestyle of the sole trader is as significant as the business itself. The sole trader's home address is perfectly suitable for debt recovery, as are his personal assets. For credit checking purposes, the sole trader is as much a consumer as any other.

A partnership business is a partnership of proprietors or sole traders, each liable for the debts of the business up to the full extent of their personal wealth. Each individual in the partnership is equally liable, jointly and severally (separately) and it is up to each partner to be aware of the activities of their colleagues. They cannot avoid liability simply by saying they personally did not order the goods, or they personally did not know what was going on.

To cater for large partnerships, such as the big accountancy and solicitors' practices, and others, there can be a limited liability partnership, which sets out restrictions on personal liability in the event of failure. LLPs are more common where partnerships cover a wide scale of operation, both geographically and physically, and where it would be deemed unreasonable to hold each individual personally liable.

A limited liability company exists as a legal entity in its own right, able to own property, sign contracts and engage in trade. The concept of limited liability was designed to restrict the liability of the shareholders, as owners of the company, to only the extent of their shareholding. As such, creditors have no claim on them as individuals (unless it can be shown that they acted fraudulently).

A public limited company (PLC) is one where shares can be bought by the public. Liability is limited in the same way as with the private limited company – to no more than the value of the shareholding. Public companies have the advantage of being able to raise capital quickly by the sale of shares. Limited liability therefore offers a degree of protection to its shareholders, whether private or public, and restricts creditors to pursuing only the legal entity itself, and not its shareholders, for recovery of debts.

Sellers will thus appreciate that knowing *'who owes us the money'* depends on knowing the exact customer name. That exact customer name should exist on all the seller's documentation throughout his computer system. Distorting a name to fit a computer field radically alters the whole picture – in the event of litigation it would be an expensive failure to issue a writ against John Smith & Sons Ltd. when the actual customer was Bubblesqueak Ltd, trading as John Smith & Sons.

Apart from the above principal business entities, there are many other types of customer where it is important to identify correctly the names and organizations. Examples are Friendly Societies, Clubs and professional bodies and, increasingly in recent years, organisations ostensibly in the public sector – schools, hospitals, universities, etc. These are usually self-funding and expected to operate in much the same way, financially and legally, as businesses. They bring their own special problems for both the risk assessor and the collector, especially when they retain their previous bureaucratic style of management. It is as vital as ever to establish where the responsibility for payment lies, and certainly not to assume they are risk-free.

Shakespeare's Juliet may well have asked: 'What's in a name?' The modern answer in business is: 'Everything!'

TRADE CREDIT INFORMATION AND ITS SOURCES

It is worth reiterating that credit is always a risk, but should never be a gamble. Risk is determined by assessing the likelihood of prompt, slow or non-payment from as much information as it is both possible and feasible to obtain. If knowledge is king, then information is the power behind the throne. The level of potential exposure will dictate the extent to which information is sought, but a wide range of information is available, ranging from free(ish) to quite expensive.

Company sales force

Sales staff are not always appreciated by some credit people, but they should be the good credit manager's first insight into the potential customer, and also a source of information about the existing customers. Sales staff talk to, and visit, customers regularly, are aware of industry developments, and keep their ears to the ground for information which could be useful to them in the competitive environment, but also useful to the credit manager. Naturally, they prefer not to waste their time with declining customers, or those going bust – but do they know who these are? Sales people are constantly learning about their customers and it is this which helps them to sell successfully. Their input of data to the credit area should be reliably organized, and the credit manager should expect sales personnel to contribute in the following areas:

- *Outward impressions:* What is it like to deal with the customer? Are they well organized? Do they reply promptly to phone calls, letters and emails? Are the premises and plant in good order? Does it feel like a hive of activity, or are people standing about looking aimless? Do staff look cheerful or morose? Bad impressions can be a warning sign.
- *Customer's product:* Is it attractive? What is the quality? Does it use latest technology? Is it in demand? The fortunes of a customer depend on their product sales.
- *Product demand:* Is the market expanding or contracting? Is it seasonal? These factors help show how easily the customer can earn his own money.
- *Market competition:* How is the customer placed vis-à-vis their own competitors? The strength of the competition is a prime factor in company survival. Where demand is limited, only the strongest survive.
- *End customers:* Is your customer's product aimed at the best companies or is it budget quality for the bottom (and riskiest) end of the market?
- *Management ability:* Is their management experienced and of good repute? Or is there an autocrat in charge? Does every large payment have to be referred to the board, perhaps because a shortage of cash has forced tight controls? Are the directors' parking spaces occupied by expensive cars when the business would not appear to warrant opulence?

The sales force should be involved in gathering customer intelligence because the more they do, the more they will be able to understand those factors which precede slow payments and insolvency. Sales information is free – no bad thing in a cost-conscious environment.

Account experience

Monitoring by credit staff of the payment performance of existing customers reveals trends and gives early warning of trouble ahead. Payments getting later every month, calls not answered or the named contact becoming increasingly difficult to contact are all signs of a deteriorating situation. The ledger shows valuable trends in payment performance, sales value and disputes, getting either worse or better.

If payments are made more slowly as sales increase, this may indicate stretched resources. Customers who begin to raise an undue proportion of disputes and queries may be trying to delay payment. If there is no reason for a high level of dispute from an existing customer as far as the seller is concerned, the reason may lie with a customer's need to play for time.

Industry credit circles

Industry credit circles often form part of trade associations and can be extremely useful grapevines. Many credit managers find it productive to join the relevant credit circle for his industry, but the approach and use must be professional. The benefits depend upon input; and it should be treated as an opportunity to *exchange* accurate customer information and keep up to date with industry practice. Legislation covering both data protection and competition has made some companies wary about allowing their credit managers to join credit circles in recent times, but there is nothing illegal about credit circles. They are in fact no more than a form of personal trade reference, provided discussion is restricted to past facts and there is no collaboration, intended or implied, to restrict future trade. It is recommended that credit application forms include an acceptance section for completion by customers relating to shared information, as illustrated in Figure 5.1.

Press reports

Press reports contain useful interim company results of publicly quoted companies, and reports of resignations and appointments of key people. The financial pages of the quality broadsheets, and in particular the *Financial Times*, should be standard reading for all involved in credit management, together with those industry magazines and journals relevant to their own particular market sector. The great benefit of the press is that information is highly topical, and 'local' press

may be even more topical in respect of plant closures or 'downsizing'. Sales staff will no doubt also read the trade publications, as well as local and national press, and they should be encouraged to pass on any pertinent data on existing or prospective customers to credit staff.

Customer visits

For many credit managers, customer visits are more common after problems have occurred (and are often seen as collection visits), but it is extremely valuable to visit large accounts on a planned and regular basis. An on-site customer meeting is a very effective way to evaluate creditworthiness, with the credit manager looking out for all those signs mentioned above under 'Company sales force'. A visit to sort out payment problems may be a good way in, and can lead to more detailed financial matters. Quite often, the customer is keen to show the credit manager round the whole operation to encourage confidence and to facilitate a satisfactory outcome from his standpoint. No credit manager should ever turn down such an opportunity. It can set his mind at rest or confirm his worst fears – either way, some of the uncertainty will have been dispelled. The first visit may be with the salesperson, to ease introductions and allow him to find out more about his customer, but out of both courtesy and professional integrity credit should always both inform sales of the intention to visit and give sales the opportunity to accompany or not.

Credit agency reports

Credit agency reports are the most comprehensive form of data. Either the stated credit ratings can be accepted, or the data used by the credit manager to calculate his own ratings. Reports vary in form and content, ranging from a brief summary of main details to a full-blown financial analysis of the customer and industry, with a recommended credit limit. Agency reports are still available by post, phone or fax, but most are now delivered on-line direct to the credit manager's desktop PC, and as such information on prospective customers can be delivered in seconds rather than days. (Note: some agencies' products and services are shown in the Appendix).

Typical sections of agency reports are:

- *Full name and address:* Including trading names and styles.
- *Legal status of the business:* Sole trader, partnership, limited company. Information on sole traders and partnerships may well be less available than in respect of limited companies, who are required to file accounts at Companies House (within ten months of the financial year end for private companies, and within seven months of the financial year end for public companies).

- *Ownership of the business:* The names of the shareholders and the extent of their shareholding may be significant. Limited companies are subsidiaries when owning companies hold over 50% of the shares; a parent company is not obliged to pay the debts of a subsidiary. Further, few parent companies are willing to give guarantees in respect of their subsidiaries. Often the only connection is in a group overdraft facility, which may have a cross-guarantee to the bank from all the members of the group.
- *Time in business:* This is also significant, and a good report will show the customer's previous trading activities, perhaps as a proprietor or partnership, or as a company with different owners. If there is a year in the company title, for example, XYZ (1998) Ltd, this may indicate the revival of a previously failed business, often with the same owners or directors.
- *Activities and industrial sector:* The company's financing will differ according to its activity, as manufacturer, distributor (wholesale or retail), services or a mixture of all three. The customer's industrial sector affects the credit risk. Some are highly competitive (for example, engineering), or have high failure rates (for example, construction, motor trade), or have many new and small companies (for example, computer software, electronics), or have good or dated high street positions, such as department stores and retailers generally. Some industry sectors have tiny profit margins (for example, commercial vehicle makers), while others need very high margins to survive (for example, fashion retailers). It is useful also to know if the customer exports to risky markets, which may indicate sluggish cash inflow.
- *Financial information:* Good reports provide three years of balance sheet and profit and loss information, allowing simple comparisons and trends to be seen. Some reports provide ratios already calculated, explained, and sometimes compared with industry norms.
- *Background information:* Number of employees, size and ownership of premises, trade marks and product names, associated companies and directors' other directorships can be useful.
- *Legal action and collection information:* Many agencies have their own collection divisions, so are aware of accounts passed by clients to them on the subject of enquiry. Any county court judgments show that other suppliers have had to sue to obtain payment. There may also be comments on major court cases, such as expensive product liability claims in process or pending.
- *Payment experience:* Some reports give calculations of the payment times experienced by suppliers to the subject company, with an average of the delay for all payments.

Bank references

Bank references have been around for a long time. In the dim and distant past, requests for bank references were usually for people, rather than companies, and banks were far more outspoken. Here are a few illustrative old references:

'Thou may'st trust them'.

Given by the Bank of Liverpool in 1831

'His connections are not very considerable, nor his fortune, but he is represented to me as an industrious, careful man, and worthy of any reasonable credit. As to his religion, I can learn nothing.' (This was an enquiry as to whether a Liverpool merchant was a person of good moral character and suitable to pay 'his addresses' to a young lady with a large fortune.)

Given by Smith, Payne and Smith in 1777

'The party named in your favour of yesterday has only recently compromised with his creditors, and I must leave you to draw your own inferences.'

Royal Bank of Liverpool in 1844

'They are shady. No reliance should be placed upon their name.'

Bedfordshire Leighton Buzzard Bank in 1854

'One of the most dangerous men you can have to deal with, utterly unscrupulous and extremely plausible. The creditor will get a dose he little expects, and richly deserves it for associating himself with such a notorious gambler.'

Cumberland Union Banking Company in 1857

In the twentieth century, bank references matured into brief and cryptic replies to status enquiries, usually needing interpretation, depending on the actual words or their context. Until 1994, it was common practice for the supplier to ask the prospective new customer for his bank details and then to approach his own bank to obtain a reference from the customer's bank, usually via a simple format, for example:

'Bubblesqueak Ltd, £10 000 monthly on 30 days terms. (Customer) Bank – Sort Code xx-xx-xx. Reference please.'

It was even possible to approach the customer's bank direct, but either way, the reply would be brief, for example, 'B Ltd considered good for your figures and purpose'. There was usually no fee for this, or it was nominal only.

This method of credit checking was used for many years and, for many suppliers, was often the only form of credit check undertaken. The view was that bank references were quick, were standard business practice and were inexpensive. Their usefulness and reliability were, however, the subject of lively argument between credit managers, ranging from 'wouldn't move without them' to 'waste of time'. They were confidential between the supplier and the banks and no authority was required from the customer for the potential seller to undertake such an enquiry.

There was a major overhaul by the banks of the whole reference process, which came into effect in 1994, as follows:

- Express written consent must be obtained from the subject of the enquiry. This must be signed by an authorized signatory under the bank mandate.
- Normally, the authority of the customer is specific to a particular enquiry, known as 'specific authority'. However, the customer could also give his bank 'blanket authority', which is his consent for his bank to reply to each and every enquiry, from whatever source, without further reference by the bank back to the customer.
- The customer can also give his bank 'continuing specific authority'. This is where the relationship between supplier and customer is likely to be ongoing, and the supplier may require further bank opinions as business grows and where credit reviews are carried out regularly. The bank is able to reply under this authority without further reference to the customer.
- If so desired, the subject of the bank enquiry can receive a copy of the reference supplied by his bank.
- The request for a bank reference is sent to the supplier's bank on a standard form supplied by his bank and recognized by all clearing banks. The bank receiving the enquiry will reply directly to the enquirer.
- The fee (which varies from bank to bank and includes VAT at the standard rate) should accompany the request for the reference, and the replying bank should issue a VAT receipt with the reference.
- If the subject of the enquiry refuses to consent to his bank supplying a reference, the fee is returned to the enquirer, together with a note of explanation. (It will be for the enquiring credit manager to form his own opinion as to the significance of such a refusal.)

Some concessions followed the introduction of these new procedures in 1994, including allowing the use of credit cards to purchase references. It was long held that banks did not actually like providing references, the new rules being seen as a way of deterring reference requests, and certainly the decline in bank references since 1994 has been dramatic. As bank references were never popular with many credit managers in the first place, the end result may not seem to be of much importance to the business community. However, bank references are still available as a positive credit check action and it is useful to understand the meaning of bank responses:

- *'Undoubted':* Highly unusual, and means that the company is an excellent risk for the amount.
- *'Good for your figures and purpose':* Means 'probably good' (the bank has not said undoubted!).
- *'Would not enter into a commitment they could not see their way clear to fulfil':* This probably means that the amount enquired about is higher than the bank normally sees going through the account.

- *'Unable to speak for your figure':* This means the figure *is* too high, and should be taken very much as a warning.
- *'Resources appear fully committed':* About as bad as you can get, implying an inability to meet obligations and the bank would not lend them any more.

The bank may add *'There is a charge/debenture registered'*, which is a useful indication that the bank has a first claim on assets, registered at Companies House.

Often, in the past, experienced credit managers could evaluate bank replies by noting what the bank did not say, or by the actual words used. Some variations (such as 'would', 'should' and 'could') may well have altered the meaning. Late in 1998, banks appeared to change wording further (an example was the use of 'likely' where hitherto it had been 'would' or 'should'), arguing that they were trying to 'modernize' the language used in references. Confusion abounded, compounded by the fact that individual banks appeared to be making up their own form of wording, but some degree of commonality did return over the ensuing years.

It must always be remembered that a bank reference is only an opinion and only the opinion of the customer's bank, based on its account records. The bank does not look elsewhere for information to give to a supplier. The subject may well have substantial funds elsewhere, about which the bank knows nothing, and it is not unusual in these days of high bank charges for customers to maintain in their current accounts only that which is needed to fund day-to-day trading activities, with funds not immediately needed deposited elsewhere earning interest.

Trade references

Trade references were once as common as bank references, and again thought by many to be inexpensive and quick, using the telephone or fax. Like bank references, however, they have long been considered to be of limited use, and not recommended if supplied by the customer himself – it is hard to imagine a customer providing names of dissatisfied suppliers. There is also a great danger of 'cultivated' suppliers always being quoted for trade reference purposes – those suppliers which the customer pays well at the expense of the majority of his other suppliers.

Referees are busy and have no obligation to an enquirer, but most credit managers act professionally and respond to each other. It can also be a useful way of making contact with others in the industry where, for example, there is no established credit circle. It can save time and avoid inaccuracy if the enquirer makes it easy for the referee to respond by using tick-boxes, as shown in Figure 5.3. Enquiry by telephone may produce more detailed information, on a confidential basis.

Enquiry for a credit reference
(please tick the appropriate box and return to us in the prepaid envelope – we shall be happy to reciprocate at any time)

Subject of enquiry.....

How long known?	only recently..... less than one year..... several years.....
What credit terms?	30 days..... longer (details?).....
How much sold per month?	up to £1000..... £1000 – £5000..... more than £5000.....
Payment experience	prompt..... up to 60 days slow..... more than 60 days slow.....

Name of collection contact:.....
Other useful information:.....

Figure 5.3 Credit reference enquiry form

FINANCIAL STATEMENTS

Balance sheets for all limited companies registered in England and Wales are required by law to be filed at Companies House, Cardiff and are available for public scrutiny. The balance sheet is the company's financial statement and can be obtained from Companies House, credit reference agencies or directly from the customer. Even non-limited companies have probably produced accounts (for tax and VAT purposes), so it is possible to ask the customer for copies so that credit terms and amounts can be assessed.

The set of financial statements is a very readable picture of the health of a company, giving the credit manager the opportunity to calculate credit levels by the use of ratios. However, a balance sheet is an historical snapshot of a company at a moment in time which is now well past. They may have been given some 'window dressing' and may show some 'qualification' by the auditors. Nevertheless, the vast majority of accounts are straightforward, and analysts can develop experience in studying their customers' accounts, spotting inconsistencies or identifying misleading parts. Except when the actual page called the 'balance sheet' is being discussed, the term 'balance sheet' covers the complete set of financial statements as required by the Companies Act 1985 to be filed annually at Companies House (within ten months of the financial year end for private companies, and within seven months of the financial year end for public companies).

The statutory set of documents is submitted in a wide variety of style and quality, from glossy publications with photographs from large corporations wishing to impress the market and investors, to typed pages from accountants representing small companies. Whatever the style and presentation, the content still consists of the key documents listed below:

1 cover page (showing name of company and date of balance sheet)
2 list of directors, registered office, auditors and bankers
3 report of the directors to the shareholders
4 auditor's report to the shareholders
5 profit and loss account, for the year (usually) up to the balance sheet date
6 balance sheet, as at the date shown
7 source and application of funds statement (or 'funds flow' statement)
8 notes to the accounts.

Before going on to look at ratios, and their use in interpretation of accounts, there are useful points for credit managers to look at when assessing potential credit:

- *Report of the directors:* This presents the accounts to the shareholders and shows the principal activities and a review of the year. It also states:
  - the export component of the turnover
  - whether dividends are being paid or not
  - directors' interests as shareholders and in any holding company
  - the arrival or departure of any directors
  - a table of fixed assets (or refers to its being in the notes to the accounts)
  - the auditors and whether or not they are to be reappointed.
- Analysts should note the tone of the report for any optimism. It is reasonable to pay dividends to reward shareholders, but not if large losses have been sustained, or if the company is less than three years old, when profits are better retained to strengthen the new business. Resignation of directors may be significant – they may have advance knowledge of bad news which only becomes public later. Auditors normally continue, so not reappointing them may indicate a serious disagreement over the true results, or simply over audit fees. In the wake of the Enron scandal, and the involvement of Arthur Andersen, the question of auditors, their relationship with the client company, and their reappointment or otherwise is now the subject of intense review. Directors' connections with other companies may be interesting.
- *Auditor's report:* This should simply state that the figures add up and are legally correct ('give a true and fair view' and 'comply with the Companies Act'). Often there is a qualification, where the auditors are not totally happy (for example, ' where complete figures were not available to us, we have accepted the assurances of the directors'). A more serious qualification would be 'the company has not complied with the Companies Act, Section xxx'. Where auditors say that the 'going concern basis depends upon continuing finance from XYZ Ltd' or that 'new finance is being sought', this is a distinct warning of credit risk and deserves clarification.

- *Notes to the accounts:* These refer to numbered items in the accounts and those of particular interest to credit managers are details of the parent company and 'contingent liabilities' which show possible debts which may hit the company later. For example, cross-guarantees may bring down the subject company if the bank calls on all group members to repay a loan to one of the group's companies in trouble.
- *The profit and loss account:* Sales less costs equal the profit for a stated period up to the date of the accounts, normally the financial year end. Four different stages of profit are shown: *gross profit*, *operating profit*, *net profit before tax* and *net profit after tax*.
  - *Gross profit* is the difference between total sales and the cost of raw materials, wages and overheads in producing the sales (Sales less cost of sales = Gross profit).
  - *Operating profit* is what is left from gross profit after operational expenses, such as office costs, sales commission, etc. (Gross profit less operating expense = Operating profit).
  - *Profit before tax* includes items after the operating profit level, for example, interest paid on loans or received on deposits, non-standard profits or losses such as sale of investments or fixed assets (Operating profit less non-operating expenses = Net profit before tax, or NPBT).
  - *Net profit after tax:* Tax must be paid on final profits, reducing the total available for dividends or to be retained in the business (Net profit before tax less income tax = Net profit after tax).
- A further calculation normally shows the retained profits from previous periods plus the net profit after tax for the year, less any dividends paid. The balance is the new retained profit figure carried forward on the balance sheet (as shareholders' funds in the net worth section).
- *The balance sheet:* This is a statement of the assets and liabilities of a business at a certain date, usually the financial year end. Larger companies produce, for their own purposes, half-yearly, quarterly or even monthly balance sheets.
  - Assets are all items owned by the business.
  - Liabilities are what the business owes.
  - The total assets must always equal the total liabilities (hence 'balance').
- Another way of looking at liabilities is that they indicate the money made available to the business and not repaid at the date shown, such as the bank overdraft and trade creditors. Similarly, the assets show how the business has used the money made available to it, such as by carrying stocks and allowing credit to debtors. (See Figure 5.4 for a table of assets.)
- *Group accounts:* A company with subsidiaries (owning more than half their share capital) is required to produce accounts covering the whole of the group, usually comprising a consolidated Profit and Loss account and balance sheet. Associated companies are usually those in which the investing company holds between 20% and 50% of the shares in a company (that is, which is not a subsidiary).

- *Types of liabilities:* There are three groups of liabilities: current liabilities, fixed liabilities and shareholders' funds (or equity). Current and fixed liabilities are referred to as 'outside' or 'external'. Fixed liabilities represent long-term finance and normally carry interest charges. Current liabilities represent short-term finance, repayable within 12 months, for example, bank overdrafts, short-term loans and accounts payable (or trade creditors).
- Shareholders' funds (equity): When a company is formed, part of its funding is provided by investors, who buy shares. In return, the shareholders expect to receive dividends each year from the profits made. The balance sheet also shows profits retained in the business and not paid out as dividends. Every limited company is authorized to issue a stated amount of shares, called the authorized capital. Until it requires all of it, it only invites shareholders to subscribe the amount needed. Thus the issued capital cannot exceed the authorized capital. Many companies are formed with £100 authorized capital and operate for years with only £2 issued capital. The company itself has a liability to shareholders for the capital subscribed, only repaid when a company is wound up, and only then if there are sufficient funds when all other debts have been paid. As both the investment by shareholders and the retained profits are owed by the business to the shareholders, they are known together as 'shareholders' funds', or 'equity'. Profits earned and kept in the business are called 'retained earnings', or 'earned surplus'. Increased value from revaluing assets is called 'capital surplus'. Earned surplus and capital surplus on the balance sheet are cumulative totals built up over the past years up to the balance sheet date.
- *Net worth:* The worth of a business is said to be the stated value of its assets (short-term or current plus long-term or fixed) minus all external liabilities (short- and long-term). The result is the total shown for shareholders' funds. In other words, the net worth of a business is the amount owed to its internal lenders, that is, its shareholders. It should be noted, however, that in a situation such as insolvency or acquisition, assets are rarely found to be worth their balance sheet figure, whereas liabilities always are!
- *Funds flow statement:* This compares the current balance sheet with the previous one and uses data from the profit and loss account to show the changes in funds available to the business and how they were used, that is, where new money (sources) has come from and where it has gone (uses). Sources of new money include net profit (after depreciation), depreciation, new issued share capital, sale of fixed assets and new loans (including increases). Depreciation itself may not be actual new money, but since it has reduced profits without funds physically leaving the business, it is not unreasonable to add it back as a source of funds. Uses of funds, on the other hand, include an increase in working capital (more debtors/stocks and less overdraft, creditors, etc.), purchase of fixed assets, payment of dividends, and repayment of loans. As sources must equal uses (back to 'balance' again), funds not used for the aforementioned will produce changes to working capital. Not too many analysts use the funds flow statement, as the most useful ratios are available from the balance sheet and the profit and loss account.

As previously stated, private and public limited companies are required to file statutory documents at Companies House. At one time, there were few exemptions granted to companies but, in recent years, exemptions have been granted by UK governments to small and medium-sized companies. These are currently as below:

	Small companies	*Medium-sized companies*
Balance sheet	Abbreviated content	No concession
P&L account	Not required	Can start with gross profit
Notes to accounts	Very limited requirement	No need to show turnover or profit by activities or market
Directors' report	Not required	No concession

The definition of small and medium-sized companies, who therefore qualify for exemption, is any two of the following three factors:

	Small companies	*Medium-sized companies*
Turnover not exceeding	£2.8m	£11.2m
Balance sheet total not exceeding	£1.4m	£5.6m
Average employees not exceeding	50	250

The most difficult of these exemptions for the credit manager is the absence of a profit and loss account for a small company. If the risk assessment is important enough, it is worth asking the customer directly for the data in order to decide on the credit level.

The above definitions are an increase on previous qualifications for exemption and there are currently proposals to increase these further. It is proposed that small company turnover be increased from £2.8 million to £4.8 million, and the balance sheet total from £1.4 million to £2.4 million. It is also proposed to increase the medium-sized company exemption qualification accordingly – turnover from £11.2 million to £19.2 million and balance sheet total from £5.6 million to £9.6 million. The Institute of Credit Management has consistently opposed exemptions on the grounds that limited liability is a privilege, protecting directors and shareholders in a way not accorded to sole traders and proprietors. The ICM has also vigorously contended that exemptions equate to restrictions, available to creditors, of information necessary to reach sensible credit decisions. It is stated that the latest proposals are to bring the UK into line with EC law, but opponents, led by the ICM, have strongly argued that a turnover of £4.8 million and a balance sheet total of £2.4 million is hardly 'small' by any reasonable definition and that such an increase will have a negative impact on the whole credit granting process, and hence on business growth. The UK government also

Asset	How valued
Quick assets (most liquid)	
Cash at bank	actual
Cash in hand	actual
Marketable investments	at lower of cost or market value
Other current assets	
Deposits paid	actual
Prepaid expenses (e.g. rent)	actual
Accounts receivable	at full value less doubtful debt provision
Employee accounts	at full value less doubtful debt provision
Other debts	at full value less doubtful debt provision
Stocks (inventory), i.e.	
Finished goods	at lower of cost or current value less depreciation
Work in progress	at lower of cost or current value less depreciation
Raw materials	at lower of cost or current value less depreciation
Fixed assets (least liquid), i.e.	
Land	at cost or valuation
Buildings	at cost less depreciation
Plant	at cost less depreciation
Machinery	at cost less depreciation
Fixtures and fittings	at cost less depreciation
Motor vehicles	at cost less depreciation

Figure 5.4 Table of assets (and their valuation method)

began a consultation exercise early in 2003 as to the desirability of raising the audit threshold for small companies from £350 000 to £1 million (White Paper – 'Modernising Company Law'). The same objections apply, but it remains to be seen whether all these proposals become inevitable under pressure from the European Commission.

INTERPRETATION OF ACCOUNTS

It is worth deciding a 'pain' level – an amount which would really hurt if it were lost – and then regularly review the financial status of all debtors above this level, using an analysis of key balance sheet items. Even when analysis is not made in depth, most credit managers would at least check the basic solvency and liquidity of customers with significant exposures. Much time and expense can then be saved by not giving as much deep analysis to small value (that is, not too painful if lost) accounts.

Solvency

Solvency is calculated as a percentage or a number of 'times'. It indicates the proportion of shareholders' funds in the total liabilities and is sometimes called the *creditors' protection ratio*. The higher the proportion of shareholders' funds, compared to external debts, the more comfort is provided for creditors.

The expression *gearing* has different definitions and can be misleading. For credit analysis, it is best used to show assets financed by shareholders' funds versus interest-bearing borrowed funds. A high solvency ratio (a plentiful proportion of shareholders' funds) represents low gearing, low risk and the customer's capacity for borrowing more external finance, or credit. A low solvency ratio indicates high gearing, high risk and less scope for further borrowing in the event of credit difficulties.

Liquidity

Current ratio = current assets divided by current liabilities
Quick ratio = current assets less stock divided by current liabilities.

There should be sufficient current assets to turn into cash with which to settle current debts. A current ratio below 1 indicates a credit risk because of insufficient cash-producing assets, depending on the due dates of liabilities. A very high ratio, over say 3, although comfortable for creditors, indicates inefficient use of assets.

The quick ratio, also called the *acid test*, measures the more immediate liquidity (that is, cash and debtors) to meet current liabilities. A quick ratio of 1 or above is good, although many companies these days survive with a quick ratio of about 0.8.

Sales comparison

This is sales for the current year compared to previous years. A reduction leads the analyst to see how other ratios have been managed in a decline.

Profit comparison

This is the profit for the current year compared to previous years. The percentage should match or exceed the percentage of sales growth or decline. Lower growth in profits than sales indicates lack of management control and is a warning.

Sales compared to net assets

This refers to the use of assets to produce sales. An increased ratio year on year is desirable as long as profit growth keep pace.

Sales compared to working capital (net current assets)

This shows the efficiency in use of working capital to produce sales. An excessively high ratio, or sudden increase, may indicate overtrading, where profits are not retained in the business. Where sales race ahead of liquidity, the company may have to delay payment to suppliers.

The following ratios are also widely used in credit analysis:

- *Net profit before tax as a percentage of sales:* Shows overall efficiency and control of costs. It is difficult when sales decline to reduce costs in the same proportion, and serious trouble can follow.
- *Net profit before tax as a percentage of net assets (current and long-term):* Shows the efficiency in using assets to produce profits.

Sales compared to stocks

Shows how long stocks take to be sold, for example, a ratio of three times means that it takes four months to achieve sales. A higher ratio than the average for a particular industry indicates competitive success. Slow-moving stocks can be a major reason for slow payments.

Stocks compared to working capital (net current assets)

Shows how much of the working capital is tied up by raw material, work in progress and finished goods. It should be steady in relation to sales growth, subject to seasonal trade. An increasing level may indicate obsolete stocks or weak stock control.

Current liabilities compared to net worth

If short-term debts are well covered by net worth, there is a good chance of creditors being paid. Secured creditors are paid before unsecured creditors receive any payment at all; so more information is needed on the proportion of the debtor's secured outstandings.

Sales compared to trade debtors

Shows the average time taken by the company to collect debts from customers. A ratio of 3:1 indicates one-third of a year's sales unpaid, or 120 days. If terms are 30 days, this is excessive and indicates a lack of credit control and a shortage of liquidity to pay creditors.

Current assets cover for current liabilities

Shows the assets available to produce cash to meet current debts. A ratio of 2:1 may be regarded as comfortable, but it has to be said that in recent years a ratio of 1:1 has been seen and regarded as not abnormal. Some current assets are not very liquid and a high stock figure can mean excessive stocks, whether raw materials, slow-moving finished goods or work-in-progress which is blocked for technical or customer reasons. Current liabilities differ also in their urgency. Most trade creditors expect to be paid within 60 days but a bank overdraft, although repayable on demand, may be allowed to run on without pressure to repay or reduce it.

Quick assets cover for current liabilities

Known as the 'acid test', this is the most useful guide to the customer's ability to pay its way in the short term. It excludes stocks from current assets and assumes that the customer's own trade debtors will soon become cash.

The following is a recommended set of ratios for risk assessment:

1. *Current ratio:* Current assets cover for current liabilities. This shows the ability to meet debts from assets becoming cash in the short term.
2. *Acid test:* The more available cover for debts after excluding stocks. A company should be able to meet most of its debts without selling more stocks.
3. *Stock turnover:* Stocks × 360 days divided by annual sales gives the rate at which stocks are sold. This is especially useful when added to DSO to show how long the purchase-to-cash process takes.
4. *DSO (days sales outstanding or collection period):* Debtors × 360 divided by sales, to show how long sales are unpaid.
5. *External debt/net worth:* Either all debt, current and long-term, divided by net assets, or just the current liabilities. This shows how reliant the customer is on lenders (trade and bank) compared to its own investment.
6. *Interest burden:* Interest payable as a proportion of profit before tax and interest. Obviously, interest expense should not exceed profit. Even 50% is a warning sign. When a bank sees its income (that is, interest charges) not being covered by earnings, it tends to mention receivership.

7 *Profit on sales:* NPBT (net profit before tax, often referred to as the 'bottom line') as a percentage of total sales. This shows how much is left from sales after total costs, and is thus available to pay out as dividends or retain in the business; 5% is typical for many industry sectors, with firm varying within them.

Ratios alone can be misleading. It is always better to compare any one ratio with the same ratio for the previous year, or better, two years. Three successive years of financial ratios are a reliable indicator of the progress of a company.

To this end, it is worth devising a standard worksheet to record a customer's ratios and trends. The worksheet is then available at a glance, instead of having to remember the basis for previous credit decisions. Key ratios for a simple credit assessment worksheet follow:

Liquidity

1	Current ratio (times)	=	$\frac{\text{Current assets}}{\text{Current liabilities}}$
2	Quick ratio or 'Acid test' (times)	=	$\frac{\text{Current assets less stocks}}{\text{Current liabilities}}$
3	Stock turnover (days)	=	$\frac{\text{Stock} \times 365}{\text{Sales}}$
4	Collection period – DSO (days)	=	$\frac{\text{Debtors} \times 365}{\text{Sales}}$

Debt

5	Creditor protection ratio (%)	=	$\frac{\text{Net worth} \times 100}{\text{Current liabilities}}$
6	Interest burden ratio (%)	=	$\frac{\text{Interest expense} \times 100}{\text{Profit before tax + interest}}$
7	Net margin (%)	=	$\frac{\text{Profit before tax} \times 100}{\text{Sales}}$
8	Net worth growth (%)	=	$\frac{\text{Net worth current year less previous year} \times 100}{\text{Net worth previous year}}$
9	Sales growth (%)	=	$\frac{\text{Sales current year less previous year} \times 100}{\text{Sales previous year}}$
10	Profit growth (%)	=	$\frac{\text{NPBT current year less previous year} \times 100}{\text{NPBT previous year}}$

A pro forma worksheet with these ratios is given in Figure 5.5.

RATIO ANALYSIS WORKSHEET

Customer: Date:

	Latest year	Previous year	Year before	Comments
Liquidity				
1 Current ratio (times)				
2 Quick ratio (times)				
3 Stock ratio (days)				
4 Collection period (days)				
Debt				
5 Creditor protection ratio (%)				
6 Interest burden ratio (%)				
Profit and growth				
7 Net margin (%)				
8 Net worth growth (%)				
9 Sales growth (%)				
10 Profit growth (%)				

OVERALL OPINION (including credit rating if needed)

Figure 5.5 Blank worksheet for risk assessment

There are computer-assisted methods available for risk assessment, which include both self-designed and proprietary PC spreadsheet programs, using balance sheet data loaded by the user. With a self-designed system, the credit manager can produce ratios as devised in-house, which may also give credit ratings and risk codes. It is possible to purchase proprietory PC programs, where the user can specify the data to be loaded, with some leeway for weighting preferred ratios. Solvency model programs enable the user to load specific data, obtain ratios and scores, and compare them to average industry performance, sometimes with prediction of insolvency risk, based upon scores recorded by the designers for past failures.

Using the example financial accounts of Bubblesqueak Ltd (Figure 5.6) and the pro forma worksheet for risk assessment (Figure 5.5), Figure 5.7 shows a completed ratio analysis worksheet.

BUBBLESQUEAK LIMITED
FINANCIAL STATEMENTS
YEAR ENDED 31 MAY 2002
BUBBLESQUEAK LIMITED

DIRECTORS, SECRETARY AND ADVISERS

DIRECTORS: (Chairman)
(Managing Director)
(Finance Director)

SECRETARY:

REGISTERED OFFICE:

AUDITORS: & Co
Chartered Accountants

BANKERS: Bank Plc

BUBBLESQUEAK LIMITED

REPORT OF THE DIRECTORS

The directors present their report with the accounts of the company for the year ended 31 May 2002.

PRINCIPAL ACTIVITY

The principal activity of the company in the year under review was the manufacture and provision of PVC doors and windows.

REVIEW OF BUSINESS

A summary of the results for the year's trading is given on page 5 of the accounts.

DIVIDENDS

The directors do not propose any payment of a dividend for the year.

DIRECTORS' INTERESTS

The directors in office during the year held no interests in the issued ordinary share capital of the company.

The directors' interests in the company's holding company are shown in the accounts of that company.

FIXED ASSETS

Acquisitions and disposals of the tangible fixed assets in the year are shown under Note 8 in the notes to the accounts.

AUDITORS

The auditors, Messrs. & Company will be proposed for re-appointment in accordance with Section 384 of the Companies Act 1985.

BY ORDER OF THE BOARD

SECRETARY

DATED:

REPORT OF THE AUDITORS TO THE MEMBERS OF
BUBBLESQUEAK LIMITED

We have audited the accounts set out on pages 5–12 in accordance with approved auditing standards.

In our opinion the accounts, which have been prepared under the historical cost convention, give a true and fair view of the state of the company's affairs as at 31 May 2002 and of the profit and source and application of funds for the year ended on that date and comply with the Companies Act 1985.

& COMPANY
CHARTERED ACCOUNTANTS

DATED:

BUBBLESQUEAK LTD
PROFIT AND LOSS ACCOUNT
FOR THE YEAR ENDED 31 MAY 2002

	Note	£	2002 £	£	2001 £
TURNOVER	2		3 361 275		2 784 760
Cost of sales			2 031 824		1 610 520
GROSS PROFIT			1 329 451		1 174 240
Distribution expenses		82 715		56 103	
Administrative expenses		355 214		329 363	
Other operating charges		780 283		679 784	
			1 218 212		1 065 250
			111 239		108 990
OTHER INCOME					
Commissions received		29 535		32 939	
Discounts received		38 414		3440	
Regional Development Grant		1270		1500	
Interest received		1048		1091	
			70 267		38 970
OPERATING PROFIT	3		181 506		147 960
INTEREST PAYABLE	6		6085		7880
PROFIT on ordinary activities before taxation			175 421		140 080
TAXATION	7		48 023		46 330
PROFIT on ordinary activities after taxation			127 398		93 750
RETAINED PROFIT at 1 June 2001			93 751		–
RETAINED PROFIT at 31 May 2002			221 149		93 750

BUBBLESQUEAK LTD
BALANCE SHEET
FOR THE YEAR ENDED 31 MAY 2002

		2002		2001	
	Note	£	£	£	£
FIXED ASSETS					
Tangible assets	8		113 334		142 353
CURRENT ASSETS					
Stocks	9	150 072		154 772	
Debtors	10	343 934		333 384	
Cash at bank and in hand		128 177		97 754	
		622 183		585 910	
CREDITORS: Amounts falling due within one year	11	511 664		626 339	
NET CURRENT ASSETS (LIABILITIES)			110 519		(40 429)
TOTAL ASSETS LESS CURRENT LIABILITIES			223 853		101 924
CREDITORS: Amounts falling due after more than one year	12		2702		8171
NET ASSETS			221 151		93 753
CAPITAL AND RESERVES					
Called up Share Capital	13		2		2
Profit and Loss Account			221 149		93 751
			221 151		93 753

DIRECTOR:
DIRECTOR:

THESE ACCOUNTS WERE APPROVED BY THE BOARD ON:

BUBBLESQUEAK LTD
SOURCE AND APPLICATION OF FUNDS
FOR THE YEAR ENDED 31 MAY 2002

	Note	£	2002 £	£	2001 £
SOURCE OF FUNDS					
Funds generated from operations					
Profit/Loss on ordinary activities before taxation		175421		140088	
Adjustment for items not involving the movement of funds:					
Depreciation		36894		36025	
Loss/Profit on disposal of fixed assets		73		(2857)	
			212388		173256
Funds from other sources:					
Disposal of fixed assets		12722		79146	
Hire purchase – amount falling due after more than one year		–		8171	
			12722		87317
APPLICATION OF FUNDS					
Purchase of tangible fixed Assets		26070		254667	
Decrease in creditors falling due after more than one year		5469		–	
Purchase of tax losses		48023		–	
			74162		254667
			150948		5096
Called up share capital	13		2		2
Profit and loss account			221149		93751
			221151		93753
MOVEMENT IN WORKING CAPITAL					
Stocks:					
Increase (Decrease)		(4070)		154772	
Debtors:					
Increase (Decrease)		10550		333384	
Creditors:					
Increase (Decrease)		114675		(580002)	
			120525		(91846)
MOVEMENT IN NET LIQUID FUNDS					
Cash:					
Increase (Decrease)		30350		527	
Cash at bank:					
Increase (Decrease)		73		97225	
			30423		97752
			150948		5906

BUBBLESQUEAK LTD
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31 MAY 2002

1. Accounting policies

a) Basis of Accounting:
The Accounts have been prepared under The Historical Cost Convention.
b) Turnover:
Turnover represents net invoiced sales of goods, excluding value added tax.
c) Tangible Fixed Assets:
Depreciation is provided at the following annual rates in order to write off each asset over its estimated useful life:-

Plant and machinery	10% on cost
Fixtures and fittings	12.5% on cost
Motor vehicles	25% on cost

d) Stocks:
Stock and work in progress are valued at the lower of cost and net realisable value, cost includes all direct expenditure and a proportion of factory and other overheads.
e) Deferred Taxation:
Deferred taxation is provided wherever a liability is expected to arise in the foreseeable future.

2. Turnover

The turnover and Profit before taxation is attributed to the one principal activity of the company.

3. Operating profit

	2002 £	2001 £
is stated after charging:		
Depreciation of tangible fixed assets	36 894	36 025
Hire of plant and equipment	16 355	22 014
Directors remuneration (Notes 4 & 5)	37 384	46 136
Staff costs (Note 5)	273 622	213 256
Auditors remuneration	5 000	5 000
and crediting other operating income		
Commissions received	29 535	32 939
Discounts received	38 414	3 440
Grant	1 270	1 500
Interest received	1 048	1 097

4. Directors emoluments

	2002 £	2001 £
Directors emoluments disclosed in accordance schedule 5 of the Companies Act 1985 and excluding Pension contributions are:		
a) Emoluments of the Chairman	–	11 666
b) Emoluments of the highest paid director	37 384	34 470

5. Staff costs

	2002 £	2001 £
Directors remuneration	37 384	46 136
Wages and salaries	188 592	192 503
Social security costs	20 665	20 753
Pension contributions	1 014	20 000
	247 655	279 392

The average weekly number of employees during the year was as follows:

	Number	Number
Office and management	16	16
Production, distribution and sales	10	10
	26	26

6. Interest payable

	£	£
Pension fund loan	2299	3161
Hire purchase	3786	4607
Taxation	–	111
	6085	7879

7. Taxation

Corporation tax on the adjusted results of the year	–	46 337
Group relief payment	48 023	–
	48 023	46 337

8. Tangible assets

	Leasehold Properties (short lease) £	Plant Fixtures and fittings £	Motor vehicles £	Total £
AT COST				
At 1 June 2001	20 252	112 202	82 530	214 984
Group transfer	–	–	4 750	4 750
Additions	–	8773	8 830	17 603
Disposals	–	–	(28 545)	(28 545)
At 31 May 2002	20 252	120 975	67 565	208 792
DEPRECIATION				
At 1 June 2001	–	45 988	26 343	72 161
Group transfer	–	–	1 683	1 683
Charge for the year	–	11 687	25 207	36 894
Eliminated on disposals	–	–	(15 750)	(15 750)
At 31 May 2002	–	57 675	37 783	95 458
WRITTEN DOWN VALUES				
At 31 May 2002	20 252	63 300	29 782	113 334
At 31 May 2001	20 252	66 214	55 887	142 353

9. Stocks

	2002	2001
	£	£
Raw materials	76 408	92 607
Work-in-progress	14 960	4 000
Finished goods	58 704	58 165
	150 072	154 772

10. Debtors

Accounts receivable within one year:

	2002	2001
	£	£
Trade debtors	178 811	264 416
Other debtors	–	9 502
Prepayments	65 123	59 466
	343 934	333 384

11. Creditors: amounts falling due within one year

	2002	2001
	£	£
Trade creditors	222 614	197 599
Customers deposits	75 823	103 475
Hire purchase	8 861	17 288
Social security and other taxes	52 983	58 445
Other creditors	–	16 403
Accruals	82 366	78 025
Amounts owed to group companies	22 680	82 422
Pension fund loan account	–	26 345
Corporation tax	46 337	46 337
	511 664	626 399

12. Creditors: amounts falling due after more than one year

	2002	2001
	£	£
Hire purchase	2702	8171

13. Called up share capital

	2002	2001
	£	£
Authorised:		
10 000 Ordinary Shares of £1 each	10 000	10 000
Allotted, issued and fully paid:		
2 Ordinary Shares of £1 each	2	2

14. Holding company

The company's ultimate holding company is Squeakbubble Group Ltd, a company incorporated in Great Britain and registered in England. The proportion of the company's issued ordinary capital held by the holding company is 100%.

15. Contingent liabilities

There is a contingent liability in respect of cross guarantees given to Bank plc on behalf of Squeakbubble Group Ltd and all of its subsidiaries in the normal course of business amounting to £440 718 at 31 May 2002 (2001: £nil).

Figure 5.6 Sample set of financial accounts: Bubblesqueak Ltd

RATIO ANALYSIS – WORKSHEET
CUSTOMER : Bubblesqueak Ltd Date: 22.10.02

	Latest year	Previous year	Year before	Comments
LIQUIDITY				
1 Current ratio (times)	1.2	0.9		Improved
2 Quick ratio (times)	0.9	0.7		Improved
3 Stock ratio (days)	16.3	20.3		Faster sales
4 Collection period (days)	37.3	43.6		Faster cash
DEBT				
5 Creditor protection ratio	43%	15%		More cover
6 Interest burden ratio	3%	5%		Negligible
PROFIT AND GROWTH				
7 Net margin	5.2%	5.0%		More profitable
8 Net worth growth	135%	n/avail		Excellent
9 Sales growth	21%	n/avail		Very good
10 Profit growth	25%	n/avail		Better than sales %

OVERALL OPINION (including credit rating if needed)
Only two years available – subject to this, progress has been very good.
Noted big contingent liability in notes to the accounts.
Subject to satisfaction on investigation of this, propose a credit rating of £22 000 – based on lower of 10% net worth or 20% working capital.
Risk category = 'B' (average)

Figure 5.7 Completed worksheet: Bubblesqueak Ltd

SUMMARY

Credit managers should not become obsessed with balance sheets – many factors point to credit *ability* as well as credit *worth*, but not to utilize every piece of financial data available would be like driving an expensive car with the hand brake still on. It is easy in this era of Internet access to download bucketfuls of data on to PCs, and complete worksheets such as illustrated in Figures 5.5 and 5.7 with comparative ease.

Proper risk assessment must be carried out on major accounts, say, those making up 80% of the debtors total, both at the outset and at reasonable intervals. Conversely, there is no need to do a lot of work on tiny accounts, for which brief references will do, then ledger experience and growth prospects may justify fuller reviews.

Remember, credit worth can either be calculated from data, or purchased via agency credit reports. An agreed policy is needed to decide how much time and effort it is worth to match sales values and the amounts of possible losses.

Good risk assessment means: *no expensive shocks.*

INSTITUTE OF CREDIT MANAGEMENT – JANUARY 2003

Introductory Credit Management – Certificate

Question 2
In TRADE credit there are various ways of obtaining information required for credit assessment. Describe what information may be obtained from the following sources and explain any limiting factors provided by these sources:
a) Trade references
b) Bank references
c) Companies House information
d) Credit circles.

6 Credit ratings and risk categories

Glen Bullivant

Why have credit ratings?; Calculating credit ratings; Risk categories; Identifying and dealing with high-risk accounts; Bad debt reserves; Effective credit management

WHY HAVE CREDIT RATINGS?

Life is never easy, nor perhaps was it ever meant to be. In any profession or workplace, there will always be a need to find more efficient, as well as more reliable, ways of doing things. For employers, there are cost implications and for employees, the difficult goal of job satisfaction. It might seem desirable for the credit manager to see and approve every single customer order; in most businesses, this is time-consuming and totally unnecessary. Indeed, the credit manager should only *need* to see the exceptions, or those orders where customers do not fit previously established criteria. The principle is to decide beforehand what a customer is worth, what level of exposure would be considered acceptable and what would be the likelihood of that customer meeting obligations on time. These criteria can easily be computerized. Then, orders can go whistling through without interruption, if they meet those criteria.

Many companies talk of 'credit limits' or 'credit lines'. 'Credit limit' is perhaps the most widely used expression as far as customers are concerned, but it does have a restrictive ring to it, and 'credit line' sounds more positive, especially to sales staff and customers. However, 'credit rating' is in common usage when describing countries (the USA has a higher credit rating than Argentina, for example), and the term is now increasingly understood by consumers. It follows that most sales and marketing staff, as well as customers and those not directly involved, would better appreciate 'credit rating' as a measure against which decisions can be taken quickly and easily.

Not all companies bother with specific credit ratings for customers. Some operate quite happily by running checks on customers, deciding they are a good or bad credit risk, then allowing credit accordingly, without recording any figures or codes. This approach is often decided in the sales area and usually done when

an account is opened. Fortunately, in recent years this practice has declined as more and more companies recognize that this informal approach is inherently weak, since:

- decision making is subjective, with little method or explanation
- customers' fortunes change, requiring updated reviews, when little evidence is on file for the previous credit decision
- there is no strong belief in the credit decision, put to the test when and if subsequent disagreements arise
- junior staff remain untrained in company credit decision making.

Calculating and recording credit ratings on the other hand carry benefits:

- the policy decision to allow a customer time to pay is quantified into a maximum that can be owed to a seller, based on information
- the decision-making process can be operated consistently
- the mass of data examined can be condensed into a credit figure
- there is little need to keep re-examining paperwork
- the credit rating is easily shown on computer files and screens, for example, sales ledger, order processing systems, customer lists, etc.
- staff respect the credit ratings and operate them with confidence
- credit ratings are easily justified to customers and help in negotiations
- the whole process is transparent and objective.

CALCULATING CREDIT RATINGS

Credit managers will all have individual ideas about how best to calculate credit ratings, and it must be said that there is no standard, agreed method. The bottom line, however, must always be the answer to the question, 'How much are we happy to be owed by this customer?' A variety of data input will be used by most, if not all, from financial analysis of balance sheet numbers, payment references, and local knowledge through to full-blown risk analysis carried out by specialists.

A seller can purchase an opinion from a credit reference agency, obtain a decision from a credit insurer, or simply undertake his own calculation and assessment. For those who undertake the risk assessment role themselves, and decide the credit rating to apply, there are two main approaches, either:

1. if the financials look good enough for our proposed sales, then our monthly figure (or two or three times this) shall be the credit rating; or
2. regardless of our intended sales, we shall set a maximum level we believe to be safe and are willing to be owed.

The first method may seem adequate, but is in reality a lazy approach, and certainly not forward-looking. For one thing it requires constant revision. All too

often accounts are opened with a credit limit which may appear adequate at the time, but which soon becomes out of date as sales grow and needs to be revised upwards. It can also appear restrictive, in that the message sent by credit control looks as if the figure opened as the credit rating is a 'limit' and there is no encouragement for sales to seek additional business. It can actually put sales people off, in that they know that increased business will trigger the whole credit assessment process again, and may be perceived by them to be another hurdle to jump, placed there by credit control. It is true, of course, that a rating based upon current anticipated levels of business will act as a trigger to review payments and risk if sales do increase.

Where the *maximum* debt level is used, as in the second method, a typical approach is to take a proportion of the customer's known financial worth, such as the lesser of 10% of net worth or 20% of working capital, with an overriding maximum of say 20% of total creditors (never wise to become too prominent a creditor – eggs in baskets, etc!). The great benefit of this second method is that it encourages sales staff to sell up to the published figure without the need for prior credit approval. If the *rating* is the *limit*, as perceived by sales, it is far better for that limit to be seen as both realistic and non-restrictive.

A more refined way of using a percentage of net worth or working capital is to allow a smaller or larger percentage according to risk code, namely:

Risk category	*Net worth* %	*Working capital* %
High risk ('C')	5	10
Average ('B')	10	20
Low risk ('A')	15	30

Using the Bubblesqueak Ltd example given in Chapter 5, a 'C' category may be justified because of the contingent liability. In that case, their credit rating would become £11 000, not £22 000.

The concept of 'Working Worth', invented by John Coleshaw in his book *Credit Analysis* (1989), averages working capital and net worth. As such, working worth is a good description of the capital available for further credit.

The 'proportion of worth' approach is enhanced by some with PC-based scoring systems. The credit analyst loads items from the balance sheet and profit and loss account for the last two or three years, and using pre-set parameters, the data produces a score. This score can then be applied to the net worth or working capital figure. Again using the Bubblesqueak Ltd accounts from Chapter 5, this approach is illustrated in Figure 6.1 below. It can be done manually, provided it is kept simple, but as most credit managers are now deemed to be PC-literate, it is reasonable to assume that the trusty desktop or laptop will take whatever strain there is.

Another simple way of 'scoring' is to use a combination of latest year and year-on-year figures. The case for this is that poor ratios that have improved over the last two years are better than good ratios that are deteriorating.

BUBBLESQUEAK LTD

Current assets/Current liabilities	1.2
Quick assets/Current liabilities	0.9
Net worth/Current liabilities	0.4
Net worth/Total liabilities	0.4
Score	2.9

Working worth = (£110 519 + £221,151) /2 = £165,835

Scale to produce percentage of working worth

–4.5 or worse	=	0% of Working worth	
–3.2 to –4.5	=	5% of Working worth	
–1.8 to –3.2	=	10% of Working worth	
–0.4 to –1.8	=	15% of Working worth	
+0.3 to –0.4	=	17.5% of Working worth	
+0.3 or better	=	20% of Working worth	= £33 000 rating

Figure 6.1 Credit rating using scoring from four ratios

Many companies, organizations and individual credit managers have developed their own approaches to the calculation of credit ratings.

A good example is that used for some years by a building trade association, which checked prospective members for technical performance and financial capability. Once admitted, a company was entitled to use its qualification to take deposits from the public so it was clearly important that the prospective company was seen to be able to complete orders without the risk to consumers of lost deposits. The list of parameters in Figure 6.2 was developed after analysis of 100 randomly selected companies in the building industry sector, who had been trading three years earlier. Twenty-two had since ceased trading. There was a clear distinction in the listed ratios between failed companies and survivors. The '100 company' sampling exercise, re-tested every two years, confirmed the pattern. Statistical experts agree that 100 companies existing three years ago, selected at random, are a sound basis for sampling trends of success and failure.

RISK CATEGORIES

Alongside the credit rating, which is a guide to the liquidity of a customer, there should ideally be a risk category, or risk code. This is an indication of the solvency of the customer and points to the likely survival of the company in the short, medium and longer term. Levels of solvency vary between companies (and can vary considerably between industries) and although, from a customer service standpoint, it may seem that all customers are of equal importance, it is not appropriate to treat all customers as being equally valuable when the chance of survival is less for some than for others. Why spend marketing efforts and budgets

Trade Association Risk Assessment: Bubblesqueak Builders Ltd (score = *)

		Score range
NPBT %	over 8%	0
(average 3 years)	5 – 8%	1
	2 – 5%	2
	below 2%	3*
NPBT Trend	increases years 2 & 3	0
	mixed	2*
	decreases years 2 & 3	3
Interest to NPBT %	below 50%	0*
(latest year)	50 – 90%	1
	over 90%	3
Creditors to net worth %	below 75%	0
(latest year)	75 – 100%	1
	over 100%	3*
Current ratio %	over 150%	0
(average 3 years)	100 – 150%	1
	85 – 100%	2*
	below 85%	3
Current ratio trend	increases years 2 & 3	0
	mixed	1*
	decreases years 2 & 3	3
Liquidity ratio %	over 100%	0
(latest year)	75 – 100%	1
	below 75%	3*
Collection period	below 40 days	0*
(days – latest year)	41 – 90	1
	over 90	3
Stock turnover	below 60 days	0*
(days – latest year)	60 – 110	2
	over 110	3
Stock trend	reduction years 2 & 3	0
	mixed	1*
	increase years 2 & 3	2
Personal assessment	excellent status	0
(from overall scan of data)	good status	1
	slight concern	2*
	serious concern	3

Possible score range 0 – 32
* Applicant score 17 = Fail
(Company invited to re-apply the following year if results are better, or to supply financial guarantee of third party who passes this test)
Basis for acceptance: (score 16 or less to 'pass')

Figure 6.2 Credit scoring for risk assessment

on failing customers at the expense of those much more likely to survive and buy more in the future?

Credit ratings (limits) and risk categories (codes) sit together as a guide to assist credit managers in the smooth flow of order process and account management. Some companies use only risk categories, not bothering with credit value ratings. This is in the belief that risk categories alone decide priorities for pricing, delivery and after-sales service, and that strong collection action will take care of any overdues. The contrary argument of those in favour of credit ratings is that problems and costs are avoided without friction at an early stage by selling only up to calculated limits. Combining both categories and ratings draws from the best of both – the seller can be confident in value *and* in ability, so that sales effort and collection effort are both concentrated where they are needed.

A basic system of 'A' = no risk; 'B' = average risk; and 'C' = high risk indicates the likelihood of a bad debt. It is possible to have a larger number of categories, representing several other shades of definition, but too many codes is counterproductive. If the category system becomes too complex, it becomes impossible to explain the subtle differences between a customer in category 'B1' or 'D2' to the average managing director or sales manager. On the other hand even non-credit people can clearly understand the difference between 'high risk' and 'no risk'.

Code 'A' can be allocated to government departments, official bodies and the major 'blue chip' companies extremely unlikely to fail, leaving bad debts. It is unlikely that there will be many of these!

Code 'C' should be applied to persistent slow payers, customers admitting cash flow problems and those with recent court judgments. Also in category 'C' will be those companies with declining solvency ratios and increasing interest burdens – it is quite likely that their lending bank will not remain patient for ever, and a bank's prime responsibility is to protect its own interests.

The rest – those who do not readily qualify for 'A' or 'C' – will naturally fall into category 'B'. For most companies, the bulk of their customer base will lie in the 'B' section.

Assuming that the customer base has been coded objectively, no insolvency should come as a shock, since all potentially insolvent customers should be 'C' code accounts. This knowledge gives a useful focus for risk control steps.

It is important to remember that none of the customers and their codes are immutable. Companies improve or deteriorate and it is quite likely that some accounts will be recoded from time to time, up or down. Regular credit reviews, payment experience and other events can move a previously 'No risk' into 'Average risk', and it is not unknown for customers who had initially been identified as 'High risk' to survive and prosper after some years, thus elevating themselves from 'C' to 'B'. It is also important to be aware of the fact that the seller's own collection experience will influence the coding in so far as customer X, though coded 'A' as being financially sound and unlikely to fail, is nevertheless a persistently slow payer and requiring more collection activity than most 'A' customers. Hence, code 'B' might be more appropriate for customer X.

Why should a company even bother to sell to 'C' types if they are highly risky? Probably, and quite likely, because they need the volume, and profits can be made as long as those customers survive. It is difficult to get all orders from 'A' and 'B' customers, and by identifying the 'C' types action can be taken to secure the risk or reduce it. Further, the sales force can try to get more orders from 'A' and 'B' customers and give less priority to 'C' accounts, who may not even be in business in a year's time.

Instead of defining 'no risk' and 'high risk' accounts as described above, some companies use actual ratio analysis to determine codes. Since limited companies file accounts at Companies House, available for public scrutiny, it is possible to use those accounts in a way which can identify potential risk. The following example has been used successfully by at least one major corporation and seen to be useful for commercial staff as well as being deemed reliable by credit management personnel:

	'C' *High risk*	*'B'* *Average*	*'A'* *Low risk*	*'U'* *Undoubted*
Current ratio	< 1.25	1.26–2.00	> 2.00	'A' ratios plus net worth over £10m
Quick ratio	< 0.50	0.50 – 1.00	> 1.00	
Current debt/net worth	> 1.25	1.24–0.75	< 0.75	
Total debt/net worth	> 2.00	1.99–1.25	< 1.25	

- 'C' risk is where any of the four ratios is achieved.
- 'B' risk is where there are no ratios in the high risk bracket.
- 'A' risk needs all four ratios to be achieved.

From these results, the credit manager also calculates credit ratings, as:

- 'C' are rated at 5% of working worth
- 'B' are rated at 15% of working worth
- 'C' are rated at 20% of working worth
- 'U' can have unlimited credit.

Risk categories are of great assistance to both sales and credit, being visible, reliable and understandable. For sales:

- 'A' customers:
  - more sales time spent with these than 'B' or 'C'
  - priority for phone calls and correspondence
  - priority for delivery dates
  - best prices and discounts (subject to volumes, etc.)

  - priority after-sales service
  - fast action on claims and disputes.
- 'B' customers: standard performance levels.
- 'C' customers:
  - minimal sales resource
  - no advance expense
  - no special production/procurement actions
  - observe 'stop list' action by credit departments
  - low priority on service and claims, that is, after As and Bs
  - list prices and minimal, if any, discounts
  - inform credit staff urgently of any adverse input.

Credit staff benefit from the use of risk categories:

- 'A' customers:
  - unlimited, or extra-generous credit ratings
  - never put on stop (but collection may be needed)
  - always personal contact for collections – no standard letters
  - priority action on claims and disputes
  - maximum support for sales efforts.
- 'B' customers:
  - standard credit and collection actions
  - stop supplies if accounts are x days overdue.
- 'C' customers:
  - clearly marked as high risk on listings
  - absolute control of debts to keep within ratings
  - stop supplies as soon as overdues occur
  - special actions to control risks (for example, guarantees).

The fact that all customers are different is best illustrated by the continued update and use of credit risk codes. Risk categories bring the customer profile to life, and it becomes clear to both credit and sales that the differing viabilities within the customer base can be used objectively by the seller. All customers are important while alive, but a seller's expense and future planning should vary with their customers' prospects for survival and growth.

It may be a laborious task to risk assess every single customer and potential customer in any organization, and it is not always necessary if losses up to a certain level are acceptable, even if not entirely desirable. There are therefore ways in which the risk assessment workload can be reduced:

1 *Decide a quickstart limit* value – very small, which can be allowed to any account for initial business, to get it started, *with no checking*. The quickstart limit should be a 'painless' figure, which will vary from company to company, but could be, say, £500 or £1000. The figure will be one which, if lost, would not cause undue damage to the seller. It should be made clear that this applies to one-off, first orders only and that any further orders would be

subject to the normal credit checking procedures. This approach is popular with sales (no delays, perceived or otherwise), and is good for the credit area – they can get on with more important matters and allows more time for credit checks if business develops.

2 *Use the 80/20 ratio* to identify the few accounts which buy 80% of total sales, and so provide 80% of cash. Identification is easy – list the debtors in descending order of value, drawing a line where the cumulative balance reaches 80% of the total debtors figure (even fewer for 50%!). There will usually be a large number of accounts buying only 20% of sales. A full credit check should be done on the few large accounts but lesser value customers looked at only as time permits. Below a certain value, some accounts may never be checked at all. Never start a credit checking system in alphabetical or account number order. Select the customers by size, hence value and importance, and so avoid being guilty of having had insufficient time to deal with a large exposure that has gone bust on you!

3 *Use the risk codes* to decide priorities. Since 'A' and 'B' are the most creditworthy organizations, checks can be related to payment experience and sales reports.

Any *large* 'C' category accounts justify extra credit effort, such as

- monthly review of account payment experience
- semi-annual update of agency reports and references
- regular review of opinions with sales staff
- discussions with the customers themselves.

It is worth repeating that customers can, and do, move between codes. It is more likely that a previous 'B' will move to 'C' or that it will be possible to promote a 'C' to 'B'. Experience shows that it is rare for an 'A' account to become 'C' (though it does happen) and even rarer for a 'C' to be promoted to the 'A' category. Such movements *can* take place on a temporary basis, however, if for example a cheque bounces, or acquisitions or mergers throw some doubt on a customer's status, or indeed improve a customer's status.

For those credit managers who have hitherto not used risk codes, or who would like to validate their existing process, a retrospective test can be undertaken. Make the time to go back into your records for the last ten accounts which went into administration, administrative receivership or voluntary liquidation. Pull out whatever credit reports you previously held, plus your own account experience up to the failure. Decide, objectively, if you would have made them 'A', 'B' or 'C' risk categories, if you had had such a system. Almost certainly, the failures will all have been 'C' types. If you had had a risk code system, or if your current system is correct, they would all have been subject to the special controls of the high risk group. The question then would be 'how much sales and credit effort and bad debt cost could have been saved?'

IDENTIFYING AND DEALING WITH HIGH-RISK ACCOUNTS

If credit management is restricted to working to fixed procedures, related to acceptable levels of risk, the likelihood is that supplies are stopped to late payers and accounts are dealt with in chronological order. That in itself may be enough for some to warrant the description of credit control, but is not enough to consider as effective credit management. Orders may well be rejected from those accounts judged to be risky, but bad debts and overdues will be suffered in any case, simply because of the lack of priorities.

Good credit management encompasses a commercial approach, which not only earns the respect, and hence more cooperation, from sales colleagues, but also generates extra income for the company. The commercial approach embodies 'risk awareness'. It recognizes varying levels of risk and says to sales: 'We'll get information on customers, identify the risky ones and tell you (sales) who they are. You can sell up to the limits we indicate, and in return, you will support the controls we have to exercise, because of the chances we are taking.' Credit management is calculating the risk, not gambling, and sales staff will see the end result as being in everyone's best interests.

It also means that in identifying high risk accounts, orders from all other customers can flow through quickly, uninterrupted by unnecessary controls. Some credit managers call this a 'marginal risk policy'. It demonstrates that extra sales and profit can be obtained, and does not label credit control as being the 'order prevention' department.

In good credit management, information is power. Credit information should answer three key credit questions concerning solvency, liquidity and growth:

1 *Solvency:* Is the customer highly likely to survive?
2 *Liquidity:* Can the customer pay its proposed commitments on time?
3 *Growth:* Is the customer likely to buy more from us in future?

Negative answers will mean a high risk probability, and if risk categories are in use, such customers will be 'C' accounts. Defining 'C' as marginal or high risk does not confine them to cash only, or payment before despatch, because it will be possible to control such accounts by actions such as:

- *Pre-delivery controls:* These include referring all incoming orders to compare values and dates to the existing balance and credit rating; and also updating credit data at defined intervals.
- *Collection actions:* These depend on size of account, but will require telephone contact at intervals to judge customer situations and attitudes. After a first reminder, supplies should be held until the account is straight again. Payments in advance, the larger the better, should be encouraged.
- *Risk reduction measures:* There are a number of measures that can be taken to reduce the risk of non-payment or loss. Some are more effective than others, and will depend upon the severity of the risk envisaged. Not all are either

definitive or easy to obtain, but each is worthy of consideration according to circumstances.

- *Guarantees from acceptable third parties:* a guarantee is a written promise by a third party to pay a debt if the actual debtor cannot or will not settle. Figure 6.3 gives an example. Guarantees are, however, only as good as the businesses giving them, so the creditworthiness of the guarantor must be checked. It is sensible only to accept company guarantees of trade debts, since it is almost impossible to check the ability of an individual to honour a guarantee or to establish how many other guarantees that person has given. Directors' guarantees for the debts of their own companies fall into that category, though some comfort can be derived from the fact that a director may be willing to give such a guarantee, perhaps an indication in his/her own faith in the future of the company. This may be misplaced! The essential elements of the guarantee are:
  - a consideration, for example, the seller's willingness to supply
  - a requirement to honour the guarantee on first demand, that is, not after a prescribed delay or set of actions and
  - no limitation as to expiry date or amount.
- In practice, a guarantor may insist on a time limit, for example, one year, or a limit of liability. If these elements are acceptable, the guarantee can still be worthwhile.
- It should be noted that 'a letter of comfort' – a letter from a parent company reassuring the supplier that its subsidiary is reliable – is not enforceable in law and as such may simply be some encouragement to trade. Comfort letters are sometimes offered in place of a proper guarantee of payment. Experienced credit managers know not only that parent companies are *not* responsible for the debts of their (limited company) subsidiaries, but also that the rock solid reputation of a group of companies does not guarantee that a particular member company will be a good credit risk.
- *Credit insurance:* this is covered in great detail in Chapters 15 and 16. The principle of credit insurance is that the seller pays a premium to a specialist insurer for a policy of cover against specified types and amounts of credit losses. There are many different ways of arranging cover, for which specialist brokers are available to sellers.
- *Special short payment terms:* for example, seven days' credit, allows the customer to receive the goods and turn them into profit, but keeps the risk horizon for the seller very short.
- *Cash discounts:* these are a strong incentive for prompt payment but are only worthwhile to the seller if his margin is high enough. 2% is usually the *minimum* attractive rate for early settlement, and that may exceed the margin of many sellers, thus turning a sale into a loss very quickly.
- *Offsetting payables:* High risk accounts should always be matched against payables, even for other group companies, so that no money is paid out while debts are still owed to the seller.

Dear Sirs,

In consideration of your readiness to supply goods or services to: (hereinafter referred to as 'the Buyer'), we hereby guarantee the due payment of all sums which are now or may hereafter become owing to you by the Buyer.

Our liability shall not in any way be diminished or affected by your giving time or indulgence to the Buyer, nor by any release, agreement not to sue, composition or arrangement of any description granted or entered into by you to or with the Buyer and we shall be liable to you in respect of any obligation accrued hereunder as if we were principal and not surety.

This guarantee shall be a continuing guarantee, subject to our right to give notice of revocation thereof. Any such notice shall be in writing and become effective upon its actual receipt by you at (address……..) but no revocation shall in any way diminish or affect our liability to you in respect of any indebtedness of the Buyer incurred under contract or obligation entered into between you and the Buyer prior to your receipt of such notice.

Yours faithfully,

Witness to the signature of……..
(Signed)……..
Address……..
Date……

Figure 6.3 Third party guarantee

- *Retention of title:* Where identifiable goods are being supplied, the seller's conditions of sale should always have a clause reserving title to the goods, until payment is received. Obviously services do not apply – a service provided is not recognizable as a recoverable item. The general rule under the Sale of Goods Act is that property passes *when the parties intend it to pass*, for example, at the time of contract, irrespective of the time of delivery or payment. The parties are free to agree that, although the buyer is entitled to possession of the goods, ownership does not pass until the price is paid.
- Section 19 of the Sale of Goods Act 1979 provides legal power to effect retention, and the precedent was effectively set in *Aluminium Industry v. Industrie Vassen Romalpa Aluminium Ltd (1976)*, known usually as the *Romalpa* case, which gave its name to what has become known as the Romalpa Clause in terms and conditions of sale. It was followed by other cases, but the principle remains much the same, in that the court established that the seller had the right to recover his property in the event of non-payment.
- Insolvency legislation has placed, and continues to place, limitations on the operation of Romalpa clauses. No administrative receiver, whose task is to obtain the best recovery, is keen to see the potential asset base of the company in receivership diminished by certain creditors being able to remove their property and so reduce the prospects of the best possible return on

sale of assets or disposal of the business as a going concern. Administration orders and company voluntary arrangements provide further limitations, for example, Section 15 of the Insolvency Act allows an administrator, with leave of the court, to dispose of goods which are subject to retention clauses, but maintains the priority of those particular creditors.

- A retention clause has therefore to be carefully worded to suit the particular seller's business and the practical lessons learned from experience with receivers and liquidators who are reluctant to release goods from their stock, are that:
  1 the goods being recovered must be easily identifiable, with a serial number for instance
  2 the goods being recovered must be the actual ones which are the subject of the unpaid invoice(s). It is not unusual for repeat deliveries to have taken place over a period of time, and the customer has not 'rotated' stock correctly. In other words, the goods may be on the shelf, but they are the subject of an invoice which *has* been paid, and hence the goods referred to in the unpaid invoice no longer exist and
  3 there must be evidence that the seller's ROT clause was known to the buyer before the insolvency, for example, via contractual conditions of sale. A good way to ensure this is to have a separate signature box on the original credit application documentation which the customer can sign to indicate he has read and understood the clause.

ACTION PLAN FOR HIGH RISK ACCOUNTS

1 Identify your risky customers.
2 Get information on them.
3 Sell to the risky ones – with extra controls.
4 Monitor and get involved where needed.
5 Get paid out before it all goes pear shaped!

BAD DEBT RESERVES

One sensible outcome of identifying high risk accounts is having some prior indication of debts likely to turn bad. Bad debts have a direct impact on profits, and every attempt is made to avoid them, but some bad debts may be inevitable, and seeing them coming gives the opportunity not only to reduce the ultimate exposure, but also to forecast the likely level of bad debt to be experienced. Having made that forecast, the correct procedure is to make a bad debt provision, that is, noting a reduction of booked profits.

Bad debt provisions are expensive, and deplete current profits, because such provisions come out of profits, but they are necessary. The Companies Act clearly

defines debtors as a current asset – capable of being liquidated within 12 months – and as auditors in the UK expect any doubtful debts to be fully provided for, the net balance sheet figure should reflect debtors as collectable and less than 12 months old. There is some confusion surrounding provisions, both general and specific (more on this below), not least because many credit managers in the UK work for the UK division or the UK subsidiary of a multinational corporation. The parent corporation may well operate in a different bad debt provision environment and expect their UK businesses to operate in the same way. For example, it is common practice for some US corporations to 'take the hit' as soon as a bad debt occurs, and not make any specific provision as a yearly or half-yearly exercise. The hit come straight off the bottom line, and is not taken against any provision, which in some cases does not actually exist.

Common accounting practice in the UK is to make provision on an ongoing basis for bad debts, both as those actually quite likely to happen (specific) and a figure to cover the unexpected (general). Often, in the year end rush, accountants will make provisions based on history, or as a simple percentage of total debtors. It is the credit manager, however, who has the greater knowledge as to the collectability of debts and, having identified high risk accounts, it seems reasonable to base the bad debt provision on these only.

As stated, the provision is a charge against profit, and credit managers may look at the bad debt provision from two standpoints. If the company is making a very healthy profit, and seeking to reduce its tax liability (or dividend distribution), it may well ask the credit manager to do a 'belt and braces' job on the provision. In other words, provide for all known doubtfuls, all borderline possibilities, and any other accounts which might have been particularly troublesome with payments and in the extreme could, maybe, possibly, perhaps be considered likely to fail soon! Alternatively, profits may be thin and the company looking to keep charges against the profit base to an absolute minimum. In this scenario, the credit manager is required to justify in detail each customer provision, and the slightest chance of recovery may mean that debt not being provided for. Credit managers will readily recognize either situation, but the common sense approach is to be realistic – there is always the danger that unnecessarily providing for a not particularly doubtful customer will deflect normal collection activity with that customer and actually precipitate a crisis.

Old or disputed debts should not be cleared out by writing them off against the bad debt reserve, if those customers are still trading. That should be done by a sales credit note. Real bad debt write-offs are a measurement of the effectiveness of the company's risk assessment and credit controls and should not be distorted by other kinds of write-off.

Typical bad debt reserve policies include:

1 *100% with reversal:* Each month, the *total* value of all 'C' category accounts is reserved, that is, a transfer is made from profit and loss to bad debt reserve. If accounts are paid, the value is reversed (transferred back to profit and loss). In practice, all that is needed is to keep a separate bad debt reserve for the

total of high risk accounts and adjust it each month to agree with the new total balance.

2 *Reserve according to age:* This method recognizes that risk increases with the age of 'C' risk accounts. Therefore, a reserve is made as a percentage of the age analysis of 'C' accounts, for example, 25% of balances one month overdue, 50% two months overdue, 75% three months overdue and 100% at four months. The percentages are the company's experience of the collectability of its marginal accounts. To avoid a heavy depletion of profit, this method provides an extra incentive to collect overdue 'C' accounts.

3 *Annual write-off experience:* This method recognizes a company's bad debt experience each year. It may have a policy of reserving 1% of *all* sales, but finds that its *actual* bad debts occur only in the 'C' category accounts. Of sales made to 'C' customers, the bad debt losses may be 5%. So the company gradually builds a reserve through the year of 5% of sales value to 'C' accounts. This can considerably reduce the profit reduction caused by excessive bad debt reserves.

4 *General and specific:* Something of a combination of the above methods whereby a sum is transferred each month to the bad debt reserve, based upon either a small percentage of total sales, or a larger percentage of 'C' sales (as above), *plus* accounts specifically recognized by the credit manager as being potentially doubtful. The likelihood is that these will be 'C' accounts, but losses in 'B' and even 'A' can be experienced, and their transfer to 'C' may well follow.

Many credit managers hold a 'Bad and Doubtful' section on the live sales ledger, transferring accounts to that section when liquidation or receivership occurs, or any other event leading to loss. The total value of that ledger section is provided against (it could be reduced by dividend payments, VAT bad debt relief, etc.) and the account only actually written off against the provision when the insolvency process has been completed or when the insolvency practitioner has confirmed that there are no prospects of any further dividend, or any dividend at all.

Where credit insurance cover is held, it is normal to reduce the bad debt reserve expense, so that only the *uninsured* portion of 'C' accounts is reserved. This is an obvious benefit which offsets the premium cost of the insurance against the saving in bad debt reserve.

EFFECTIVE CREDIT MANAGEMENT

Controls can only be effective if the credit manager has the authority to approve or reject orders, within the support of a proper credit policy. With that power comes the responsibility to reject the bare minimum, and accept the profitable majority, or find ways of accepting the majority which will earn profit. That power also requires the ability to communicate reasons fluently to the affected sales area when the bare minimum has been rejected and to do everything to arrange terms to be able to accept orders.

In computerized systems, orders can flow uninterrupted into the order processing drills if they meet set parameters, for example, credit rating less existing balance plus this order. Orders that fail this test or those from customers on a 'stop list' *must* be extracted for expert action. By assessing credit risks in good time for prospective customers and by keeping assessments updated for larger active accounts, almost all orders each day should flow quickly into the order-processing system.

The stop list is always regarded as a contentious document or process. Orders should not be rejected lightly, without good reason, genuinely explained, and no account should be stopped simply because an item is overdue. It is the nature of that overdue (one invoice, value £32.36 on an account in category 'A' worth £200 000 per annum!) which should be investigated *before* the stop list is produced. Only those accounts genuinely over their correctly calculated credit limits, or genuinely overdue as a matter of late payment fact, should be stopped. There is nothing more likely to demolish any trust and respect built up between sales and credit than inappropriate, indiscriminate and ill-prepared stop lists.

Building the stop list into the sales order processing system emphasizes this need for diligence even more, because in effect the 'system' has taken over and the remoteness of the decision-making process can thereby be exaggerated. There are two kinds of stop list: the *Refer* type, where the credit manager is alerted to incoming orders from listed customers because every movement on an account needs appraisal; and the *Actual Stop List*, where credit has been withdrawn because of a serious debt situation. Held orders may be a good lever to obtain payment if the customer is desperate for more product. There should be a daily review of any orders held, to identify what can be done to release them.

Cash received daily should also update the stop list – those accounts temporarily held pending payment should be cleared immediately payment is received and the amended stop list should be available, on-line and/or in print for sales and order staff.

It follows that if a *stop* list is produced, so should a *go* list. This can be supplied by the credit staff to the sales department, showing customers who are good credit risks and pay their accounts well, where further business would be welcomed as a means to faster cash.

Long Firm fraud is a commercial evil which certainly requires good credit management, controls at the order entry stage, the stop list, accurate and regular risk analysis and attention to changing patterns. These are all weapons in the fight against this kind of fraud, usually involving popular consumer goods, which involves the purchasing of substantial amounts of goods on credit with the deliberate intention of disappearing or deliberately going bust without paying for them. Large sums of money can be invested by the architects of this kind of fraud, although it is the unpaid suppliers who end up as the main source of finance. Success for the fraudster depends upon immediate acceptance of their orders, and quick disposal of the fast-moving consumer products, rather than industrial materials. The closing down of the fraudulent firm is often marked by an 'event' such as an alleged burglary or fire, which helps to justify a stock deficiency, or, better yet, the destruction of all records. The fraudsters themselves rarely appear

on the premises but may be directors of the company. It is quite common for them to resign some time before the final fraud, later claiming that the business was run properly while they were in charge.

Pre-planned frauds of the Long Firm variety fall into two types:

1 formation of a new business intended to last six months or less
2 purchase of an existing legitimate business.

In the first case, the fraudsters obtain substantial credit straight away, by offering attractive orders to greedy salespeople; or, if actually asked for references, by offering phoney ones. If the company already exists, it will have a good credit rating, bank facilities and regular suppliers. The new owners delay filing accounts at Companies House and make their quick killing before the authorities can take action.

Good credit control can restrict the losses with Long Firms, as vigilance coupled with decisive action reaps dividends. There are warning signs:

- very large orders immediately from a newly formed firm
- very large orders following satisfactory trading for a month or two at modest levels
- unusual increase in credit requested by an existing customer with new owners
- large orders placed at trade fairs
- large orders placed for 'out-of-season' goods
- orders placed with reps too easily, with price not an issue
- bank references showing account recently opened where trade references say that the account has been running for years
- trade references received from different firms with identical wordings.

The first clue often comes via a credit report from a credit reporting agency. Long Firms often seek credit from several suppliers at the same time, so producing a spate of credit enquiries. Good credit management practice, applying the standard caution to newly formed firms and changes in ownership, will keep losses to a minimum.

The risk of slow payment remains the credit management priority, followed by the risk of bad debt. Even in times of low interest rates, borrowings are expensive compared to the net margins which most businesses can generate, and strong credit management will continue to be seen as the proper safeguard against loss and failure. The future will see a growing need for a positive sales/credit relationship, and the growing demands on everyone in any organization brought about by the ever-rapid expansion of technology will require all companies to take a positive view on asset protection.

The mobile phone, email and e-commerce mean that ordinary human beings will have less time to carry out specific tasks, with more reliance on comprehensive systems and trust in the ability and the integrity of those whose function requires instant decision making.

Well organized companies should have:

- top management support for credit and collection procedures
- data on key customers (type of firm, financial status, contacts, etc.)
- good procedures for opening accounts, for example, the credit application form on-line, providing key data and customer commitment to the payment terms
- new account letters (email preferred) to make immediate contact with the payments person – followed by a friendly call, perhaps videophone, for more personal contact
- particular cultivation of key customers, to ensure priority payment treatment
- reliable data sources for fast access to credit information – on-line
- computerized methods of deciding credit ratings and risk categories
- automated credit approvals and rapid processing of 'OK' transactions.

The future of credit management is closely tied to rapid improvements in communication technology. It is now undoubtedly true that the email address on the credit application form is just as important as all the other more traditional fields which require customer completion. Most credit managers now have Internet access for credit information, and instant credit decisions are the rule rather than the exception.

The use of emails will continue to grow, and there can be little doubt that this revolution in communication technology will continue to play an increasingly important role. There will, however, be something of a backlash, already experienced in the US, whereby the effectiveness of email as an actual tool is being brought more and more into question. The subject of emails is discussed more fully in Chapter 11 – suffice it to say here that any method of communication still requires the skill and the common sense of the user to be effective.

The key to effective credit management remains, and will continue to be, support from top management. The Institute of Credit Management has witnessed remarkable growth since 1996 in the number of employees now looking for 'trained and qualified' credit managers, and the parallel growth of employers willing to invest in their employees by way of training and staff development. No organization in the future will be able to operate both effectively and profitably without company-wide agreed and implemented policies, including credit.

Credit management is about protecting the company's biggest asset and turning sales into cash as fast as commercially possible. It always has been so, but now, and in the future, it will be seen more in the context of marketing, and less in the backroom of financial services.

INSTITUTE OF CREDIT MANAGEMENT

Based on Advanced Credit Management Diploma, January 2003

As the newly appointed Credit Manager of XYZ Ltd, a builders merchant dealing mainly with trade customers, you have taken over a role previously part of the responsibility of the Chief Accountant. He used whatever staff were available to assist him in both letter writing and making telephone calls. Turnover has increased rapidly, hence your appointment.

There is minimal credit reporting, but you are aware that the debtor balances are £5.2 million and that there are about 800 customers. Front end credit controls consist of bank and trade references and credit agency reports, accounts being opened on the basis of satisfactory reports.

You intend to introduce a system of credit limits and risk categories for all new accounts, and to review existing accounts.

Write a brief initial report to the Financial Director, setting out the key points in the new credit management system you will introduce.

7 Predicting corporate insolvency by computer

Glen Bullivant

Background; Developing and using a solvency model; Credit management applications

BACKGROUND

It has often been said that credit management is an art, not a science. It is true that in consumer credit, much of the decision-making process, and the predictability of accounts being good or bad, has been increasingly performed in the last 30 years by a range of scorecard products and services. It is not difficult to see that statistical probability, the basis of consumer credit scoring, is comparatively accurate, founded as it is on definitive criteria such as age, employment, marital status, etc. – evidence of stability, in other words. It is also not difficult to see (though not always easy for us to accept!) that consumers can be 'categorized'. Men of a certain age in a certain social group are more likely to 'x', while women of the same age in the same group will most probably 'y'. Car drivers over 45 are safer than car drivers under 25, and so on. The accuracy of predictions regarding the consumer comes from the millions of items of data that can be researched and analysed, and that scientific accuracy is now well established.

For corporate entities, however, scoring techniques are less well established, not least because there has always been much less data available, and what is available is less reliable. It has always been recognized that there are many more variables in the corporate sector, and that certainty depends upon known facts, not unknown variables. Nevertheless, there are constants in the financial structure of limited companies which are capable of analysis and comparison. Features of those constants can, and do, indicate degrees of growth and slowdown, solvency and failure. Relationships between the constants also demonstrate inevitable consequences, bad or good.

DEVELOPING AND USING A SOLVENCY MODEL

There are a number of acknowledged financial ratios (20 or so), which can be used, in various groupings, to identify the strengths and weaknesses that determine the financial health of a company. Taken individually, no single one could be used to judge correctly the overall financial strength of a company, but each variable, when grouped in part or in total with others, forms a relationship of variables which do show a company's state of financial well-being, and its prospects.

For a good many years, people in business felt that financial ratios were speaking quite loudly about something, but harnessing what they were saying into a way of predicting failure proved to be elusive. At first, it was held that comparing Net Working Capital to Total Assets represented the best ratio for scrutiny. Later, the Return on Net Worth and the ratio of Net Worth to Total Debt were identified as being more specific and more reliable. Other ratios came into the picture, notably Current Ratio, Net Worth to Total Debt, Times Interest Earned and Net Profit to Sales. All had merit, and all contributed to some forecasting possibilities.

In 1968, Dr Edward I Altman, a Professor of Finance at New York University School of Business, devised the Z-Score Insolvency Predictor, publishing those most pertinent variables that statistical analysis had shown were present in insolvency. Experience soon showed that the Altman Z-Score, which was originally developed by sampling manufacturing companies, also worked well in the non-manufacturing sector. Those using Altman's Z-Score have consistently reported a 95% accuracy of bankruptcy prediction up to two years prior to failure in non-manufacturing businesses, which is on a par with the failure prediction rate in the manufacturing sector. Continually updated since 1968, the Altman Z-Score remains the foundation of corporate scoring principles. He defined the variables for both private and publicly quoted companies as being:

- Current Assets (CA)
- Total Assets (TA)
- Net Sales (SL)
- Interest (IN)
- Current Liabilities (CL)
- Market Value of Equity (VE)
- Earnings Before Taxes (ET)
- Retained Earnings (RE)

Using these variables, Altman devised 5 major components for the Z-Score formula:

1 *X1:* Working Capital/Total Assets (or CA–CL divided by TA). Perhaps not the most significant of factors, as a measure of the net liquid assets of a company in relation to its total assets, but it does indicate the direction in which a company is going in respect of its working capital. A company repeatedly

experiencing operating losses will generally suffer a reduction in working capital relative to its total assets.

2 *X2:* Retained Earnings/Total Assets (or RE divided by TA). This component provides information on the extent to which a company has been able to reinvest its earnings in itself. It is a measure of profitability over time, but has the weakness of being capable of manipulation. Older, more established companies could have had much more time to accumulate earnings, so there could be a bias towards older companies. On the other hand, deterioration in the amounts of profit retained speaks for itself.
3 *X3:* Earnings Before Tax + Interest/Total Assets (or ET + IN divided by TA). Probably the most important factor, since profit is the principal objective of any commercial enterprise, and as such is the driving force that ultimately determines the viability of a company. The ratio adjusts the earnings of the company for income tax factors which vary, and similarly adjusts for varying borrowing levels. This allows a more effective way of measuring how well the company utilizes its assets.
4 *X4:* Market Value of Equity/Total Liabilities (or VE divided by TL). This gives an indication of how much the assets of a company can decline in value before debts may exceed them. For publicly quoted companies, equity is deemed to be the market value of all outstanding common and preference stock. For private companies, assuming the company records its assets at market value, then the book value of assets is used.
5 *X5:* Net Sales/Total Assets (or SL divided by TA). Another most important component, in that it measures the ability of the company's assets to generate sales. Some analysts omit this ratio in the Z-Score of a private company.

The Z-Score calculation combines the above ratios, with each one assigned a different weighting. The resultant score is the indicator of likely failure or continued success. The formula devised by Altman is:

$$Z = 1.2\,X1 + 1.4\,X2 + 3.3\,X3 + 0.6\,X4 + 1.0\,X5 \text{ (Publicly quoted companies)}$$

$$Z = 6.56\,X1 + 3.26\,X2 + 6.72\,X3 + 1.05\,X4 \text{ (Private company)}$$

Interpretations vary between analysts, and there can be influencing factors in different industries, but broadly speaking, the following can be deduced from final scores:

- *3.0 or more:* the most likely to survive
- *2.7 to 3.0:* should survive, but bordering on a grey area, and certainly below the line for more definite chances of survival
- *1.8 to 2.7:* could well be heading for insolvency within two years. If the total 'doubtful' area is taken as 1.8 to 3.0, then this is more doubtful. To be sure of survival a company with this score may well have to take serious action
- *below 1.8:* most likely to founder. A company with this score is rarely expected to recover in time.

These are generalizations, of course, and being based upon financial data, they do not take account of other influences. For example, a 3.0+ may be defined as healthy, but is then the victim of fraud, mismanagement, recession, floods and any number of mishaps which turn a statistical success into an actual failure. By the same token, prompt and efficient action by 'turned on' management brings a 1.8–2.7 into the safer haven of 2.7–3.0.

The important point about the Z-score technique, however, is that because it is drawn from suitably weighted financial ratios, measured against known factors, and can be analysed automatically, the whole process lends itself to computerization. All the data is loaded into the program, written for the purpose, and out pops the score. By updating with new figures as they become available, the system can constantly review the score.

There are a great many insolvency prediction models commercially available, and there is no let-up in the development of more sophisticated programs. The Credit Management Research Centre at the Leeds University Business School has been studying neural networks for some years. These networks work on the principle that every factor in every situation has a connection with one or more other factors – none is in isolation. A change in one produces an effect in another. Computer models run for hours, days and even months, linking every item to every item, up and down, across and sideways, in a never-ending spider's web of interlocking causes and effects. No doubt the ultimate answer will be an all-consuming process which can identify not just major ratios which lead to doom within two years, but the more trivial which if left unattended will eventually bring the edifice crashing to the ground. The benefits may well be for corporate recovery specialists, company doctors, bankers and financiers, as well as for credit managers. However, any practical formula coming out of the Leeds research must be capable of simple understanding and explanation to all those affected by its use.

The basic Z-score, and the various modifications and enhancements which have followed, can be supplemented by additions, such as Performance Analysis. This permits a company's relative performance to be followed through time, and produces a Performance Analysis Score (or PAS). By reading the trend in a PAS-score, both below and above the risk threshold, the momentum of the decline, or indeed recovery, of the company can be seen at a glance. Early warning is evident, and even before the Z-score signals imminent doom, action can have been taken to rectify, or to protect, interests according to the score user.

In simple terms, the PAS-score is the relative ranking of a company based on its Z-score in a particular year in percentage terms on a scale of 1 to 100. For example, a PAS-score of 50 would suggest that the performance of the company in the year is average. On the other hand, a PAS-score of 10 says that only 10% of companies are performing less well on this basis, which is clearly an unsatisfactory position. Having computed a Z-score for a company, it becomes possible to transform what is an absolute measure of financial health into a relative measure of financial performance. Put another way, the Z-score tells the credit manager that the company is, or is not, at risk, and the PAS-score puts the historic trend and current performance in perspective. The PAS-score can show the risk attached to

a particular company to those who have not had financial training in a way which is clearly understandable – if only 10% of companies are performing worse than customer W, then customer W is at the lower end of the safe ladder. Combined with the Z-score, credit limits and risk categories, everyone can be aware of the need to take appropriate action.

It is useful to pick up on the point of limits and categories, because the Z-score and its successors can be factors in determining credit ratings and risk codes. Indeed, it is possible to use Z-score techniques to rate companies according to risk, and to apply this 'risk rating' to customers over and above any previous limit or risk category in place. The risk rating can be statistically determined and calculated only when the company has a negative Z-score. It is based upon the Z-score trend, the size of the negative Z-score and the number of years the company has been at risk. By using a 5 point scale, with 1 indicating 'at risk but with low probability of immediate distress' and 5 meaning 'usually beyond saving in its present form', the credit manager is provided with a ready means for assessing the overall balance of risk in the customer base. The financial model-minded among the more technically adept credit managers can develop this further by determining the actual failure probability associated with each risk rating value depending on the state of the economy. Even in a boom economy, it is unlikely that company W will survive, and when the recession bites, many more companies can be seen to be vulnerable.

CREDIT MANAGEMENT APPLICATIONS

Developing sophisticated techniques to forecast likely outcomes would remain an academic exercise unless they had practical and readily understood applications for credit managers. Happily, Z-scores drop comfortably into the credit manager's array of usable information. By producing an objective and reliable measure of a company's chances of financial distress, the Z-score approach provides the credit manager with a sound basis for decision making. The fact that only a small percentage of companies, depending on the health of the economy, will have an 'at risk' profile, means that the credit manager has access to a reliable screening mechanism, directing attention to those customers or prospective ones requiring more in-depth analysis, with the risk rating helping to determine the actual degree of risk. Also, by periodically building up the customer's data on file, the system provides a ready means of monitoring a company's performance over time on an ongoing basis. Whether this is done by using annual, interim or even forecast accounting data will depend upon factors relevant to particular credit managers, but most would agree that there is very rarely such a thing as 'too much information' – more often the cry is 'too little'.

The system's facility for sorting and tabulating data means that the credit manager can obtain an overview of the PAS-score spread in the sales ledger and the display of customers with different levels of risk rating. This is particularly useful where the credit manager is in a position to take a strategic approach to the risk management of receivables.

It also gives marketing people a powerful aid. The system is linked to a large database of corporate accounting information, and builds up a large database in its own right. This gives marketing staff an insight into the highs and lows of risk in their own industry and market place, and can direct their efforts towards more profitable areas as and when required.

The Z-score approach to assessing company solvency is being increasingly used by credit managers in the UK. Using a number of items from a company's financial statements, the computer system automatically enters these into a formula, thus producing the Z-score for that particular company. This Z-score will then reveal whether the company is at risk or not and the degree of risk, and can then be further transformed into a PAS-score which will highlight that company's relative performance in its industry and compared to others. This analytical approach is a practical tool for assessing the risk contained in a sales ledger. Armed with such knowledge, the professional credit manager knows when to vary terms of trade, avoid or manage high risk business, apply restrictions or, conversely, relax previous restraints. The credit manager is also better equipped to point sales towards the healthier companies, that is, those with the scope for increased business in future, and can prioritize collection and related credit activities.

It is not the be-all and end-all. Nothing ever is – but it is yet another string to the credit manager's bow of useful expertise, helping to earn more profits for the company by making the right credit decisions.

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Though there is no exam question relating directly to Z-scores in the current ICM Education Syllabus, students are recommended to consider the possibility of analysis of customer accounts as they exist on ledgers under their control at present. The exercise should assist in understanding related factors which make up customer risk.